

**Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education**

BACHELOR OF BUSINESS ADMINISTRATION (BBA)

Course Co-ordinator: Dr. Santhosh. P. Thampi

Academic support by
**School of Management and Business Studies
Mahatma Gandhi University
Kottayam, Kerala**

BACHELOR OF BUSINESS ADMINISTRATION (BBA)

Programme Project Report (PPR)

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State had also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Conventional Graduate and Post Graduate Programmes in addition to Diploma and Certificate Programmes which are very relevant to contemporary society. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University.

1. Programme's mission & objectives

The broad objective of the Programme is to create professional managers, leaders and researchers in the field of Business Sectors. Specific objectives of the Programme include:

- i. To get a thorough understanding of the components of Business Sectors and to acquire knowledge and information pertaining to various industries in the manufacturing and Service sectors.
- ii. To help students acquire practical skills in all the major arenas of various industries.
- iii. To orient and equip students with Information Technology skills of the age.
- iv. To equip students with managerial skills and help in entrepreneurial development.
- v. To enhance the employability of students in accordance with the expectations of industries.

After the successful completion of the Programme, the students should be competent to work in companies in private sectors, Government agencies, Academics, Research, Consultancies, NGOs etc. Additionally, the Programme encourages entrepreneurship also.

2. Relevance of the programme with HEI's Mission and Goals

Business organisations require trained executives to take up their activities. The demand is on the rise, especially after liberalisation, privatisation and globalisation. But there exists a huge gap between the type and number of people required for organisations and their availability. A Degree Programme in Management at the UG level will help to cater the needs of Business Organisations. It would help students to build up their career in Managing business entities. The Bachelor of Business Administration Programme of Mahatma Gandhi University has been designed to bridge the gap of availability of trained manpower required for Business Organisations.

3. Nature of prospective target group of learners

This Programme mainly aims at those who are working and are willing to obtain a Degree, which would enable them to pursue higher studies. Those students who have passed the Plus Two Examination and are not able to take up full time courses can also benefit from this Programme. Another target group is Entrepreneurs. They can acquire insights about the theoretical concepts underlying business activities.

4. Appropriateness of Programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence

This Programme is designed in such a way that it can be conducted in the Open and Distance Learning mode to acquire specific skills and competencies. The Programme aims at inculcating Knowledge, Skills and Attitudes (KSA) in the students. Empowerment of students in various functional areas of business is the learning outcome envisaged in this Programme. The learning outcomes include the development of knowledge and understanding appropriate to the area of business and reflect academic, professional and occupational standards required by the business sector. The learning outcomes incorporate generic transferable skills and competencies, which can be acquired during the period of doing this Programme.

5. Instructional Design

Curriculum Design

Course Code	Title	Course Category	Credit	Contact Session (hrs)	Internal Marks	External Marks	Total Marks
FIRST SEMESTER							
DBA1CRT01	Principles and Methodology of Management	Core	4	12	20	80	100
DBA1CRT02	Business Accounting	Core	4	12	20	80	100
DBA1CMT03	Fundamentals of Business Mathematics	Complementary	4	12	20	80	100
DBA1CMT04	Fundamentals of Business Statistics	Complementary	4	12	20	80	100
DEN1CC01	English Paper –I	Common	4	12	20	80	100
Total			20	60	100	400	500
SECOND SEMESTER							
DBA2CRT05	Cost and Management Accounting	Core	4	12	20	80	100
DBA2CRT06	Business Communication	Core	4	12	20	80	100
DBA2CMT07	Mathematics for Management	Complementary	4	12	20	80	100
DBA2CMT08	Statistics for Management	Complementary	4	12	20	80	100
DEN2CC02	English Paper –II	Common	4	12	20	80	100
Total			20	60	100	400	500

THIRD SEMESTER							
DBA3CRT9	Human Resource Management	Core	4	12	20	80	100
DBA3CRT10	Marketing Management	Core	4	12	20	80	100
DBA3CRT11	Research Methodology	Core	4	12	20	80	100
DBA3CMT12	Business Laws	Complementary	4	12	20	80	100
DBA3PRP01	Personality Development and Management Skills (Minor Project)	Project	4	12	20	80	100
Total			20	60	100	400	500
FOURTH SEMESTER							
DBA4CRT14	Financial Management	Core	4	12	20	80	100
DBA4CRT15	Managerial Economics	Core	4	12	20	80	100
DBA4CRT16	Entrepreneurship	Core	4	12	20	80	100
DBA4CMT17	Basic informatics for Management	Complementary	4	12	20	80	100
DBA4CMT18	Corporate Law	Complementary	4	12	20	80	100
Total			20	60	100	400	500
FIFTH SEMESTER							
DBA5CRT19	Organisational Behaviour	Core	4	12	20	80	100
DBA5OPT20	Open Course	Optional Core	3	9	20	80	100
DBA5CRT21	Environment Science and Human Rights	Core	4	12	20	80	100
DBA5CMT22	Intellectual Property Rights and Industrial Laws	Complementary	4	12	20	80	100
DBA5CRT23	Operations Management	Core	2	6	20	80	100
DBA5CRT24	Industrial Relations	Core	3	9	20	80	100
Total			20	60	120	480	600
SIXTH SEMESTER							
DBA6OCT25	Optional-I	Optional Core	4	12	20	80	100
DBA6OCT26	Optional-II	Optional Core	4	12	20	80	100
DBA6CRT27	Strategic Management	Core	4	12	20	80	100
DBA6CRT28	Communication Skills and Personality development	Core	4	12	20	80	100
DBA6PRP02	Management Project	Project	4	12	20	80	100
Total			20	60	100	400	500
Grand Total			120	360	620	2480	3100

Duration of the Programme

The duration of the BBA Programme of study is three academic years with six semesters.

Faculty and support staff requirements

Course Co-ordinator

Dr. Santhosh. P. Thampi
Associate Professor
School of Management and Business Studies, Mahatma Gandhi University

Qualifications : Ph.D (Management),M.B.A, M.T.M, B.Tech, DRTM(Rail Transport Management)

Teaching faculty

The two Common Courses in English have to be taught by teachers with a Master's degree in English along with other qualifications prescribed by the University. The core courses and open course have to be taught by teachers with MBA / M.Com qualification and other qualifications prescribed by the University. The interdisciplinary core courses have to be taught by teachers with MBA/M.A Economics with the qualifications prescribed by the University.

Instructional Delivery Mechanism

In addition to provide SLMs prepared in line with the UGC guidelines on preparation of SLMs, students are being offered 60 contact hours for each semester. The personal contact Programmes are being taken using audio visual aids, and students are encouraged to use web resources such as books, notes, videos etc.

Student Support Service Systems at SDE

The SDE establishes Learner Support Centres for the students at different locations within the jurisdiction of the University to facilitate contact classes and practical sessions.

6. Procedure for Admissions, Curriculum Transaction and Evaluation

Qualification to get an admission for BBA Programme is a pass in Plus two.

▪ Verification of Documents:

1. Qualifying Certificates ie SSLC, Plus Two
2. Applicants possessing qualifications from Universities/Institutions other than Universities in Kerala should apply for recognition. Applications for Matriculation/ Recognition are also provided with the Application Form.
3. Candidates possessing qualifications from other Universities should also produce Migration Certificates / NOC from the Universities or Other Board of Examinations.
4. TC from the educational institution where the candidate last studied.

▪ Fees: **Rs.16,000/-** for Full Programme. The fees prescribed will be collected at the beginning of each year/semester.

- Evaluation
- Examinations
- Assignments
- Internals
- Test Papers
- Projects

Industrial Training Report

Students shall be required to undergo two to three weeks of practical training during the Fourth semester in any Business organization selected based on the guidelines provided by the University. They are required to submit a comprehensive report, as per the prescribed format, at the end fourth semester. The report will have an internal evaluation at the end of the semester.

7. Requirement of Laboratory Support And Library Resources

Mahatma Gandhi University Library and Information System consists of University Library, Libraries of the Schools and Libraries of the 4 Study Centres. The University Library was established in 1989. The University Library which is situated on the main campus and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area and consists of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library provides service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. Reading space is provided on all the three floors housing the various sections of the library. The library provides reading facility to visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016. The libraries of teaching departments are open during working hours of the Schools.

The University Library has a Library Advisory Committee. It is an 18 member committee with the Vice-Chancellor as Chairman and University Librarian as Convener. The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, Bi-monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as & DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its online thesis digital library. The various department libraries too have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	School of Management and Business Studies	7549

8. Cost Estimate of the Programme and the provision

Sl.No	Expenditure	Cost estimate for BBA Programme(1000 students)
01	Pay and Allowance	20,00,000
02	Contact classes and evaluation	15,00,000
03	Course materials	10,65,000
04	Advertisement charges	20,000
05	Postage and telephone	14,000
06	Books and Periodicals	40,000
07	Miscellaneous	20,000
	Total	46,59,000
	Provisions (10%)	4,65,900
	Total	Rs. 51,24,900/-
		Cost per student per year = Rs.5,125/-

9. Quality assurance mechanism and expected programme outcomes

The SDE has devised the following mechanism for monitoring the effectiveness of the BBA Programme to enhance its standards of curriculum, instructional design etc.

- Established a monitoring Committee at the University level to develop and put in place a comprehensive and dynamic internal quality assurance system to enhance the quality of the Programmes offered through distance mode as per the norms and guidelines of the University Grants Commission (Open and Distance Learning) Regulations, 2017.
- The SDE has an approved panel of experts for preparing SLM. The SLM prepared is being edited by the board of subject expert. The SLMs are developed with the approach of self explanatory, self-contained, self-directed, self-motivating and self-evaluating.
- The SDE of the University has full time faculty members exclusively for coordinating the Programme and also has a panel of qualified guest teachers for counselling students and engaging in personal contact Programmes.

The progress and the quality of the Programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

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BACHELOR OF BUSINESS ADMINISTRATION

**M.G. UNIVERSITY
KOTTAYAM**

(FACULTY OF BUSINESS STUDIES)

**REVISED SYLLABUS FOR THE ACADEMIC YEARS
STARTING 2017-18**

List of Expert Committee Members

1. Dr. Biju Pushpan (Chairperson)
Associate Professor
SAS SNDP Yogam College Konni
2. Dr. P N Harikumar
Associate Professor
Catholicate College
Pathanamthitta
3. Sooraj S
Assistant Professor
SAS SNDP Yogam College Konni
4. Dr. C.T. Francis Associate
Professor
St. Joseph's College
Mullamattom
5. Dr. Siby Zachariah
School of Management
MG University
6. Siby Joseph K
SB College
Changanassery
7. Suseel V Daniel
BPC College
Piravom
8. Veeva Mathew
Assistant Professor
Rajagiri Institute of Management
9. Tharthiose Paul
Associate Professor
BPC College Piravam
10. Sangita Kumari
Assistant Professor
SAS SNDP Yogam
College Konni

INTRODUCTION

The Bachelor of Business Administration course is a judicious mix of all functional elements of Business studies which provide participants with foundational knowledge on different aspects of the administration of a business concern. It include at one end the need to realize why an organization exist to the other were it shows the new frontiers to which it can be developed.

This course is designed to develop knowledge on the functional parkour of business administration. The disciplines it cover include, management, commerce, banking, economics, industrial psychology, law, mathematics, statistics, accounting, communication, computer application and accounting software.

At the under graduate level no other course provide the student a feel and basic understanding on such a variety of disciplines. These disciplines are not merely touched upon but are dealt taking the serious contributions it can provide to running business enterprises.

The course is designed in such a fashion to provide ample scope for practical exposure to the problems and opportunities of real business. The two project studies one theoretical (Minor) and other practical (Major) as well as the mandatory requirements of three industrial visit and resultant report presentation will provide a cutting edge to this under graduate programme over the other similar ones.

AIM AND OBJECTIVES

1. To train the students to be competent entry level management professionals.
2. To impart basic and operational knowledge on all functional areas of management.
3. To encourage young BBA'S to turn in to entrepreneurs.
4. To make young BBA'S a change agents in the society by fostering values which self-proclaim that “ *Turn to enterprising serve the society and the nation*”.

COURSE DESIGN				
Semester	Title	Course	Credit	Hours/week
<u>First semester</u>				
BA1CRT01	Principles and Methodology of Management	Core	4	6
BA1CRT02	Business Accounting	Core	4	6
BA1CMT03	Fundamentals of Business Mathematics	Complementary	4	4
BA1CMT04	Fundamentals of Business Statistics	Complementary	4	4
BA1CCT05	English Paper –I	Common	4	5
			20	25
<u>Second semester</u>				
BA2CRT06	Cost and Management Accounting	Core	4	6
BA2CRT07	Business Communication	Core	4	6
BA2CMT08	Mathematics for Management	Complementary	4	4
BA2CMT09	Statistics for Management	Complementary	4	4
BA2CCT10	English Paper –II	Common	4	5
			20	25
<u>Third Semester</u>				
BA3CRT11	Human Resource Management	Core	4	5
BA3CRT12	Marketing Management	Core	4	5
BA3CRT13	Research Methodology	Core	4	5
BA3CMT14	Business Laws	Complementary	4	5
BA3PRP15	Personality Development and Management Skills (Minor Project)	Core	4	5
			20	25
<u>Fourth Semester</u>				
BA4CRT16	Financial Management	Core	4	5
BA4CRT17	Managerial Economics	Core	4	5
BA4CRT18	Entrepreneurship	Core	4	5
BA4CMT19	Basic informatics for Management	Complementary	4	5
BA4CMT20	Corporate Law	Complementary	4	5
			20	25

<u>Fifth Semester</u>				
BA5CRT21	Organisational Behaviour	Core	4	6
BA5OPT22	Open Course	Open	3	4
BA5CRT23	Environment Science and Human Rights	Core	4	5
BA5CMT24	Intellectual Property Rights and Industrial Laws	Complementary	4	5
BA5CRT25	Operations Management	Core	2	2
BA5CRT26	Industrial Relations	Core	3	3
			20	25
<u>Sixth Semester</u>				
BA6OCT27	Optional-I	Optional (Core)	4	5
BA6OCT28	Optional-II	Optional (Core)	4	5
BA6CRT29	Strategic Management	Core	4	5
BA6CRT30	Communication Skills and Personality development	Core	4	5
BA6PRP31	Management Project	Core	4	5
			20	25
	Grand Total		120	150

LIST OF COURSES

Semester

Title

First semester

BA1CRT01

Principles and Methodology of Management

BA1CRT02

Business Accounting

BA1CMT03

Fundamentals of Business Mathematics

BA1CMT04

Fundamentals of Business Statistics

BA1CCT05

English Paper –I

Second

semester

BA2CRT06

Cost and Management Accounting

BA2CRT07

Business Communication

BA2CMT08

Mathematics for Management

BA2CMT09

Statistics for Management

BA2CCT10

English Paper –II

Third Semester

BA3CRT11

Human Resource Management

BA3CRT12

Marketing Management

BA3CRT13

Research Methodology

BA3CMT14

Business Laws
Personality Development and Management Skills (Minor Project)

BA3PRP15

Fourth

Semester

BA4CRT16

Financial Management

BA4CRT17

Managerial Economics

BA4CRT18

Entrepreneurship
Basic informatics for Management

BA4CMT19

BA4CMT20

Corporate Law

Fifth Semester

BA5CRT21	Organisational Behaviour
BA5OPT22	Open Course
BA5CRT23	Environment Science and Human Rights
BA5CMT24	Intellectual Property Rights and Industrial Laws
BA5CRT25	Operations Management
BA5CRT26	Industrial Relations

Sixth Semester

BA6OCT27	Optional-I
BA6OCT28	Optional-II
BA6CRT29	Strategic Management
BA6CRT30	Communication Skills and Personality development
BA6PRP31	Management Project

Open course

BA5OPT22 (a). Brand Management

BA5OPT22 (b) Entrepreneurial Leaders

Optional**Optional I**

BA6OCT27. (a) Healthcare Management

OR

BA6OCT27.(b) Introduction to Retail Management

OR

BA6OCT27. (c) Investment and Insurance Management

OR

BA6OCT27. (d) Event Management

Optional II

BA6OCT28. (a). Advertisement and Salesmanship

OR

BA6OCT28. (b). Supply-Chain Management

OR

BA6OCT28.(c). Principles of Tourism Management

FIRST SEMESTER

BA1CRT01. PRINCIPLES AND METHODOLOGY OF MANAGEMENT

Core Course
 No. of credit : 4
 No. of contact hour : 6

Aim of the course

Principles and Methodology of Management are the basic foundation for management studies. This course offers a methodological perspective about this subject.

Objective of the course

- Methodological Perspective of Management as a discipline
- Principles and functions of Management
- Process of decision making
- Modern trends in management process

MODULE I:

Nature and scope of management process, definition of management-management: a science, an art or profession?, scientific management, administrative management, human relations management. Contributions of Taylor, Fayol, Max Webber, Gilberth, Gantt, Chester Bernard, Elton Mayo, Peter Drucker

MODULE II: Planning

Definition, meaning, Importance, steps in planning, characteristics types of plans - objectives, strategies, policies, procedures, rules, programmes and Budgets, Relationship between planning and controlling, limitations of planning.

Decision making - definition, meaning, objectives, steps in rational decision making, Types of decisions, Difficulties in decision making

MODULE III: Organizing

Meaning importance, process of organizing, organizations structure, Types of organization structure - line organizations, line and staff organizations, Functional organization, committees.

Delegation of authority, significance of delegation, process of delegation. Centralisation & decentralisation of authority.

MODULE IV: Staffing

Meaning and importance only (This topic is covered in detail in HRM) Directing - Meaning, importance, elements of directing.

MODULE V: Controlling

Co-ordination, need for co-ordination, meaning and importance of controls, control process, budgetary and non-budgetary controls

Reference Books:

Sl No.	Title	Author	Publishing & Year
1	Principles of management	P.C. TRIPATHI &P.N. Reddy	Tata McGraw Hill publishing co.
2	Essentials of management	Harold Koontz &Wehrich	Tata McGraw Hill Publishing co. 2015
3	Fundamentals of Management Essential concepts and applications	Stephen P Robbins, Sangamitra Bhattacharya & et al.	Pearson 8 th edition 2015
4	Management Global Perspectives	Harold Koontz &Wehrich	Tata McGraw Hill Publishing co. 2015
5	Principles and Practice of Management	L M Prasad	Sultan Chand And Sons 8th Edition

BA1CRT02: BUSINESS ACCOUNTING

Core Course	
No. of credit	: 4
No. of contact hour	: 6

Aim of the course

To impart basic knowledge about the system of accounting

Objective of the course

On completion of this course students should be able

- To understand the basics of accounting
- To identify the basics principles of accounting
- To understand the systems /process for recording transactions
- To prepare the final accounts of sole trader
- To give a general awareness about depreciation accounting
- To know about the concept of bill of exchange in business

MODULE I

Introduction of accounting •Origin •meaning, definition-need importance-functions - limitations-accounting principles-Generally accepted accounting principles-accounting equation- double entry system.

MODULE II

Recording transactions •journal-ledger-trial balance-cash book (single column bank column, and with discount column) - bank reconciliation statement

MODULE III

Accounting for depreciation-meaning-importance-methods of providing depreciation (Straight line, diminishing, annuity)-reserves and provisions

MODULE IV

Final accounts of sole trader- manufacturing, trading, and profit and loss account and balance sheet

MODULE V

Bill of exchange •meaning, definition- importance promissory note-recording bill transaction (honouring, dishonouring, discounting)

Note: on course work every lecture should be complemented by an appropriate activity
examples: practical problem collection of accounting data from sole proprietors,
preparation of accounting records of a sole trader

Core text:

Business accounting- Jain and Narang

Reference text

Advanced accounting -Jain and Narang

Advanced Accountancy, MA Arulanandam and KS Raman, Himalaya Publications, Mumbai

BA1CMT03 FUNDAMENTALS OF BUSINESS MATHEMATICS

NPC and logarithm tables permitted

Complementary Course

No. of credit : 4

No. of contact hour: 4

Aim of the course

To develop analytical and critical thinking skills in students to prepare them to logically analyse and critically evaluate problem situation through basic mathematics.

Objectives of the course

- Develop scientific ability
- Critically evaluate mathematical problems
- To have fundamental touch with industrial and commercial problems
- To know about modern trends in mathematics
- To prepare them for management studies.

Course outline

MODULE-I: Set theory

Modern theory in mathematics, Definition, elements and types of sets, operations on sets and Cartesian product of two sets.

MODULE-II: Algebra-1

Number system-Natural numbers, prime numbers, integers, rational and irrational numbers, Ratio, proportion and variation Sequences - Arithmetic progression ,nth term and sum to n terms of A.P.

- Geometric progression, nth term, sum to n terms and sum to infinity of G.P

MODULE-III: Algebra-2

Permutations and combinations, Logarithm, Compound interest and depreciation.

MODULE-IV: Matrices

Matrices, matrix operations, Determinant of a square matrix (expansions only) and Rank of a matrix.

MODULE-V: System of linear equations

Inverse of square matrix (problems only). Solution of system of linear equations using matrices.

Note on course work.

This subject being pure science subject, this is taught directly in classrooms as lecture. Students are requested to give suggestion and ask doubt for critical evaluation. Proof of theorems and derivations are excluded, as it is beyond the scope of a B.B.A student. Basic mathematics is required for all subjects under commerce.

Ref.Texts: 1) Business Mathematics - S.Saha

2) Business mathematics -D.C. Sanchet& V.K Kapoor (Sultan Chand & Sons)

BA1CMT04 FUNDAMENTALS OF BUSINESS STATISTICS

(Use of scientific calculators is permitted)

Complementary Course
No. of credit : 4
No. of contact hour: 4

Aim of the course

To provide a reasonable idea of basic statistical methods needed for a statistical investigation and forecasting.

Objective of the course

On completion of the course, student should be able

- To present a broad overview of statistics as a subject.
- To organize a statistical survey.
- To understand the importance of summary measures to describe the characteristics of data set.
- To analyse the relationship between two variables.
- To use various forecasting techniques.

Course Outline

MODULE I: Introduction

Origin, Meaning, Scope and limitations of statistics. Relationship with business and industry.

MODULE II: Collection of data

Collection, classification and tabulation of statistical data. Pie diagrams. Graphic representation.

MODULE III: Measures of central tendency and dispersion

Mean, Median and Mode. Measures of dispersion- standard deviation. Coefficient of variation.

MODULE IV: Simple correlation and Regression.

Meaning, Karl Pearson's Correlation, Rank correlation, Computations. Uses, Regression equations - Forecasting.

MODULE V: Time series analysis:

Components of time series - Definition, Computation of Trend. Computation of seasonal variation (Simple average method only)

Note on course work:-

This course should not be taught in the conventional lecture method alone. It should be supported by a statistical study based on real life situations.

Texts:-

1. Statistical methods: - S.P. Gupta
2. Fundamental of Mathematical statistics - S.C. Gupta & V.K. Kapoor
3. Basic Statistics: B.L. Agarwal.
4. An introduction to statistical methods: - C.B. Gupta.
5. Gupta, S.C., Fundamentals of Statistics, *Himalaya Publishing House*.

BA1CCT05. ENGLISH PAPER I

Common Course

No. of credit : 4

No. of contact hour : 5

SECOND SEMESTER

BA2CRT06. COST AND MANAGEMENT ACCOUNTING

Core Course
 No. of credit : 4
 No. of contact hour : 6

MODULE I

Cost Accounting- Meaning, Definition, Scope, Objectives- Distinction between Cost and Financial Accounting- Preparation of Cost Sheets.

MODULE II

Material Cost- Purchasing Procedure- Stores Control- E.O.Q, Stock Levels- Pricing of Material Issues- Labour Cost- Labour Turnover- Methods of Wage Payment.

MODULE III

Overhead Cost- Allocation and Apportionment- Reconciliation of Cost and Financial Accounts

MODULE IV

Management Accounting- Meaning, Definition, Scope, Objectives-Management Accounting as distinct from Cost Accounting and Financial Accounting- Budgetary Control- Classification of Budgets(Emphasis on theory).

MODULE V

Cost- Volume- Profit Analysis- Standard Costing- Analysis of Material and Labour Variances.

Reference

SI No.	Title	Author	Publishing & Year
1	Cost and Management Accounting	Debarshi Bhattacharyya(Ratul)	Pearson
2	Advanced Management Accounting	J Madegowda	Himalaya Publishing House, Mumbai

BA2CRT07 BUSINESS COMMUNICATION

Core Course

No. of credit : 4

No. of contact hour : 6

Aim of Course

To understand the nuances of business communication

This course should be taught by providing group discussion and seminars.

MODULE- I **Basis of communication**

Meaning, importance & process, Need & objectives of communication, 7c's of communication, Barriers of communication, How to overcome communication Barrier. (Practical exercises in communication)

MODULE- II

Means /Media of communication - verbal & Non-verbal communication channel of communication formal & informal communication.

Types of communication. Downward, upward, Horizontal or lateral, Diagonal or cross

MODULE- III **Listening as a communication Tool**

Importance types of listening, Barriers to effective Listening. How to make listening effective.

MODULE- IV **Groups**

Business Letter Writing: - Need, Functions and kinds, Letters, Request Letters, Sales Letters, Complaints and adjustments, Departmental Communication: Meaning, Need and Types, Interview Letters, Promotion Letters, Resignation Letters, News Letters, Circulars, Agenda, Notice, Office Memorandums, Office Orders.

MODULE-V. **New Trends in Business communication.**

E mail, Teleconferencing, video conferencing, SMS

References

SI No.	Title	Author	Publishing & Year
1	Business communication	R.C. Bhatia.	Ane Books Pvt. Ltd.
2	Business communication	R.K. Madhukar	Vikas Publishing House Pvt Ltd
3	Effective Technical communication	<u>Ashraf Rizvi</u>	McGraw Hill Education (India) Private Limited
4	Business communication essentials	Courtland Bovée And John Thill	Pearson,2015
5	Fundamentals of business communication	P D Chaturvedi, MukeshChaturvedi	Pearson, 2012

BA2CMT08 MATHEMATICS FOR MANAGEMENT

Complementary Course

No. of credit : 4

No. of contact hour: 4

Aim of the course

To develop analytical and critical thinking skills and to analyse managerial problems in the light of mathematics and solving in such situations.

Objectives of the course

- To develop scientific ability
- To know about modern trends in mathematics
- To know about problems in industry and management and to learn how to solve the problem
- To have research in Managerial Sciences.

Course outline

MODULE I: Plane Analytic Geometry -1

This module consists of Cartesian coordinate system, Length of line segment, Section formulae, area of a triangle and collinearity of three points.

MODULE II: Plane Analytic Geometry -2

Gradient of a straight line, different equations of straight lines, parallelism and perpendicularity and concurrency of three lines.
(All derivations in analytic geometry excluded)

MODULE III:

Arithmetic Progression, sum of the series in AP

MODULE IV:

Geometric Progression, Sum of series in GP

MODULEV:

Calculation of interests and discounts, Present value and annuities, Computing present value of money, Computing present value of annuities.

Note on course work.

This is basically a pure science subject and taught directly in classrooms. Students' participation in various fields of applicability is needed for this course. Proof of theorems and derivations are excluded, as it is beyond the scope of a B.B.A student. But applications in business are to be highlighted.

Ref.Texts:

1. Business Mathematics -S.Saha
2. Business Mathematics -D.C. Sanchet& V.K Kapoor (Sultan Chand & Sons)
3. Business Mathematics –Lloyd D Brooks, AITBS Publishers and distributors, New Delhi

BA2CMT09 STATISTICS FOR MANAGEMENT

(Use of Statistical Tables & Scientific calculators are permitted)

Complementary Course

No. of credit : 4

No. of contact hour: 4

Aim of the course

To provide a general outlook of certain statistical test which are useful to researchers in various fields.

Objective of the course

On completion of the course, a student should be able

- To have some idea about probability and probability distributions
- To develop the concept of a sampling distributions.
- To formulate hypothesis about various population parameters.
- To conduct various statistical tests.

Course Outline**MODULE I: Probability Theory**

Basic concepts in probability, Addition theorem and Multiplication theorem (Two events), conditional probability, Baye's Theorem (without proof)

MODULE II: Random variables and Theoretical distributions

Random variables, Discrete and continuous random variables (Definition), Binomial, Poisson and Normal Distributions- Definition-Mean and variance (without derivation), Properties.

MODULE III: Sampling

Introduction, Methods of sampling, Statistics and Parameters. Sampling distribution, standard error, central limit theorem (statement only)

MODULEIV: Large sample tests

Introduction, procedure of testing Hypothesis, Test of significance for attributes. Test of significance for mean. (Single sample only)

MODULE V: Chi - square Test & Goodness of fit.

Introduction, Definition, chi-square test of goodness of fit (Fitting of distributions is excluded), chi-square test of independence. Uses, limitations.

Note on course work:-

On completion of this course, student should be able to apply various statistical tests in research work.

References:

1. Statistical methods: - S.P. Gupta- Sultan Chand & sons, Revised edition 1995
2. Basic Statistics:- B.L Agarwal
3. Fundamentals of mathematical Statistics: - S.P. Gupta and V.K. Kapoor, Sultan Chand & sons, Revised edition 1989
4. Statistics for Management, Sharma Ananad, *Himalaya Publishing House, Mumbai*
5. Statistics for management: - Richard Levin and David S Rubin

BA2CCT10 ENGLISH PAPER II

Common Course

No. of credit : 4

No. of contact hour: 5

THIRD SEMESTER

BA3CRT11 HUMAN RESOURCE MANAGEMENT

Core Course
No. of credit : 4
No. of contact hour: 5

MODULE- I

Definition, Nature, scope, role, objective of Personnel management, level of management, Organisation of Personnel Dept. its functions, Ergonomics, Challenger and relevance of HRM. Manpower planning.

MODULE- II

Recruitment - Sources of recruitment, Selection- Selection process, Training - Definition. Types of training Executive Development.

MODULE- III

Performance Appraisal, techniques Promotion, Career Planning.

MODULE- IV

Job analysis, Job Design, Job Evaluation Wage. Definition, Factors affecting wage policy, Wage Boards Fringe Benefits, Prerequisites, Incentives, Bonus, Profit sharing, VRS, Maintenance of service files pension.

MODULE- V

Drafting charge sheets, Model standing orders, code of conduct, Bond of service, wage & salary records, E.S.I, P.F. Gratuity, pension and bonus records.

Reference text:

Sl No.	Title	Author	Publishing & Year
1	Human Resource Management	Pravin Durai	Pearson
2	Personnel management	Edwin Philipo	
3	Personnel management	Mammoria&Mammoria	<i>Himalaya Publishing House, Mumbai</i>
4	A frame work for human resource management	Gary Desseler	
5	Human resource and personnel management	K. Aswathappa	
6	Personnel HRM	Subba Rao	<i>Himalaya Publishing House, Mumbai</i>

BA3CRT12 MARKETING MANAGEMENT

Core Course

No. of credit : 4

No. of contact hour: 5

Aim of the course

The aim of this course is to provide the students with a conceptual base on marketing management and also to equip them with the necessary skills for employment in the middle level cadre.

Objective of the course

On completion of the course students should be able:

- To have an awareness on market , market segments and consumer behaviour
- To know the meaning and importance of product mix.
- To understand pricing policies and the applicability of different pricing strategies
- To know the scope of advertising and sales promotion
- To identify and develop salesmanship in them

Course Outline

MODULE I

Introduction

Meaning and definition of different marketing concepts ♦ functions of marketing - environmental factors - market segmentation - buying motive and process ♦ consumer and customer - factors affecting consumer behaviour - marketing plan

MODULE II

Marketing mix

Marketing mix: meaning - product, product mix- - product life cycle - importance of branding -packaging and labelling

MODULE III

Pricing

Pricing policies ♦ objectives ♦ factors influencing pricing decisions - different pricing strategies: skimming- penetration
Market structure ♦channel of distribution and its importance

MODULE IV

Promotion

Advertising ♦ objectives and functions - types of advertising - personal selling and direct marketing - sales promotion

MODULE V

Marketing research ♦definition, scope and process.
Marketing risk and marketing audit

Note on course work:

Module 1 and Module 2 should definitely follow text Marketing-Planning implementation and control by Philip Kotler and Marketing Management by Ramaswami& Namakumary. Every lecture should be complemented by case studies, group discussions and seminars.

Reference Books:

Sl. No	Title	Author	Publisher
1	Marketing Management:	Philip Kotler, Jha& Koshy	Pearson Education, New Delhi
2	Marketing-Planning implementation and control	Philip Kotler	Prentice Hall
3	Marketing Management Text and Cases	SHH Kazmi	Excel Books, New Delhi
4	Marketing Management	V. S Ramaswami S. Namakumary	MacMillan Publishers, New Delhi
5	Marketing Management	Cranfield	Ane Books, New Delhi
6	Marketing Research	D. D Sharma	Sultan Chand And Sons
7	A Framework for Marketing management	Philip Kotler &Kevin Keller	Pearson, 5 th edition
8	Marketing management	Biplab S Bose	Himalaya Publishing House, Mumbai

BA3CRT13 RESEARCH METHODOLOGY

Core Course

No. of credit : 4

No. of contact hour: 5

MODULE I

Research methodology- meaning. Research, meaning, objectives, significance.
Research process- different steps, criteria for good research. Types of research-
descriptive, analytical, applied, fundamental, quantitative, qualitative, empirical and
conceptual.

MODULE II

Selection of research problem-sources-technique involved in defining a problem.

MODULE III

Research design-meaning-need, concepts-elements Sampling design-steps-
criteria of selecting a sampling procedure-sampling process

MODULE IV

Types of data-primary data -meaning-advantages-disadvantages-methods of
collecting primary data-sources. Secondary data- meaning, advantages-
disadvantages-sources.

MODULE V

Interpretation-meaning-techniques-of interpretation. Report writing-significance-
types of reports; (technical and popular) steps-layout-oral presentation.

Note on course work.

This course should not be taught in the conventional lecture method alone. Every
lecture should be complemented by an appropriate activity (For example,
reference, assignments, project reports etc.).

References:-

Research methodology, OR Krishnamoorthi, Himalaya publishing house, Mumbai

Sl No.	Title	Author	Publishing & Year
1	Research Methodology	Ranjith Kumar	Pearson, 2 nd edition
2	Research Methods for management	Dr S.Shajahan	Jaico Publishing House
3	Research Methodology. methods and techniques	C.R.Kothari	New Age International publishers
4	Research Methods	Ram Ahuja	Rawat publications
5	Research Methodology	K.R.Sharma	National Publishing House

BA3CMT14 BUSINESS LAWS

Complementary Course

No. of credit : 4

No. of contact hour: 5

Aim of the course

To build a general awareness about the principles behind contract law and to introduce various types of special contracts

Objective of the course

On completion of the course, student should be able

- To identify the principles behind law of contract
- To equip students to identify the validity of contracts
- To create awareness about various special contracts

MODULE I: General principles of law of contract

Law of contracts; Definition-essentials of a valid contract-kinds of contracts-Offer and acceptance- revocation-communication-consideration. Doctrine of privity of contract-capacity to contract-contract- coercion-undue influence-misrepresentation-fraud-mistake-performance-discharge of contract-breach of contract-remedies for breach of contract.

MODULE II: Contracts of indemnity and guarantee

Definition of indemnity—essential elements-rights of parties-definition of guarantee —essential elements- rights of surety-nature of surety's liability-discharge of guarantee

MODULE III: Contract of bailment and pledge

Definition —essential elements- rights and duties of bailor and bailee-termination of bailment- finder of goods-Pledge-definition-rights and duties of pawnor and pawnee.

MODULE IV: Contract of agency

Definition- essentials-types of agency-mercantile agents-extent of agent's authority-delegation of authority- personal liability of agent- liability of agent to third parties- termination of agency.

MODULE V: Contract of sale of goods

Sale of goods Act; Contract of sale and agreement to sell-conditions and warranties- transfer of property- title of goods-rights and duties of seller and buyer- rights of an unpaid seller.

References

1. Aswathappa, K., Business Laws, *Himalaya Publishing House, Bengaluru.*
2. Kapoor, N.D., Business Laws, *Sultan Chand publications New Delhi.*
3. Sharma, S.C., Business Law, *International Publishers, Bengaluru*
4. Tulsian, Business Law, *McGraw-Hill Education Mumbai.*

BA3PRP15 PERSONALITY DEVELOPMENT AND MANAGEMENT SKILLS**(Minor Project)**

Core Course

No. of credit : 4

No. of contact hour: 5

Objectives:

The students will have the opportunity to explore current management literature so as to develop an individual style and sharpen his skills in the area of leadership, communication, decision making, motivation and conflict management.

Minor Project and Presentation

Minor projects are taken that added to the knowledge of the students. A topic shall give each student in the beginning of the semester in various areas of management. The presentation Project either comprises of either the following.

Project Presentation**OR****Case study Presentation***

Suggested Topics for Minor Projects:

1. Goals of an Organization
2. Work values
3. Character Ethics
4. Working Conditions
5. Decision Making Strategies
6. Goal Setting
7. Customer Satisfaction and
8. Any other relevant topic chooses by the student or assigned by the college.

* Case study can be chosen by the students in this respective area of interest.

Text Books

1. Lather, A.S. Handa, M (2009). Cases in Management. Wisdom Publications.
2. M C Garth (2009). Basic Managerial skills for All, 5thed. Prentice Hall India.

Reference Book

1. Ellis (2009). Management Skills for New Managers.

FOURTH SEMESTER
BA4CRT16 FINANCIAL MANAGEMENT

CORE COURSE	
NO. OF CREDIT	: 4
NO. OF CONTACT HOUR:	5

MODULE- I

Finance Functions - Definition and scope of finance functions - Profit maximization v/s wealth maximization goal - Organisation of Finance Function.

MODULE- II

Sources of finance - short term - Bank sources - Long term - shares - debentures, preferred stock – debt

MODULE – III

Working capital management - concept - Determinants - cash management - Receivables management (Basic problems only).

Module - IV

Financing Decisions. Cost of Capital - cost of specific source of capital - Equity - preferred stock - debt - reserves - weighted average cost of capital. Capital structure - factors influencing capital structure capital optimum capital structure - Theories of capital structure – Leverage, meaning and types (Basic problems only).

MODULE V

Dividend decision - meaning and significance of dividend decision - Modigliani and Miller Approach - theory of relevance – Walter’s model – Gordon’s model - Corporate Dividend practice in India (Avoid problems).

Note on course work:

The course should be taught in a participate style. Lecture sessions should be supplemented by seminars and group discussions. After each module surprise tests and quizzes should be administered to ensure the participants’ clarity in core concepts.

References:

1. Pandey, I. M., Financial Management, Vikas publishing House Pvt. Ltd. New Delhi.
2. Khan, M.Y. & Jain, P.K., Financial Management, McGraw Hill (India) Private limited; New Delhi.
3. OP Agarwal, Financial Management, Himalaya Publishing House, Mumbai

BA4CRT17 MANAGERIAL ECONOMICS

Core Course No. of credit : 4 No. of contact hour: 5
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MODULE -I

Introduction, Definition, Scope and uses of Managerial Economics. Role of a managerial economist. Difference between managerial economics and pure economics.

MODULE -II

Business cycles- Phases of a business cycle. Economic systems- Capitalist, Socialist, Mixed economy. Inflation: Definition, Courses of inflation, Control of inflation. Banking: Functions of Central Banks, Functions of Commercial Banks. Monetary Policy, Fiscal Policy.

MODULE - III

Demand Analysis, Meaning of demand, the law of Demand, Determinants of demand, Types of demand, Law of Diminishing Marginal Utility, Consumer Surplus. Elasticity of demand, Price elasticity of demand, Income elasticity of demand, cross elasticity of demand.

MODULE-IV

Production function, Managerial use of Production function, Law of diminishing returns, Law of returns to scale, Economies of scale, Diseconomies of scale

Isoquants, Isocost curve, Optimum combination of inputs.

Pricing, Pricing policy and Practises, Cost plus pricing, rate of return pricing, pricing of competing firms, pricing of new products, price leadership, price discrimination.

MODULE-V

Market structure, Perfect competition, Monopoly, Monopolistic competition and oligopoly

Reference texts

1. Dean, Joel Managerial economics- Prentice Hall of India
2. Varshney, R.L., & Maheshwari, K.L., Managerial Economics, Sultan Chand & Sons Private Ltd., New Delhi
3. Kasi Reddy M., & Saraswathi, S., Managerial Economics and Financial Accounting, PHI Learning, New Delhi.,
4. DM Mithani, Managerial economics, Himalaya Publishing House Mumbai.
5. Mehta, P. L., Managerial Economics, Sultan & Chand, New Delhi
6. Trivedi, M.L., Managerial Economics Theory and Applications, McGraw Hill Education Private Ltd, New Delhi.
7. Dwivedi, D. N., Managerial Economics, Vikas Publishing House Private Limited, New Delhi.
8. Gopalkrishna, Managerial Economics, Himalaya Publishing House, Mumbai
9. Craig H Petersen, W Cris Lewis & Sudhir K Jain, Managerial Economics, Pearson, 4th edition

BA4CRT18 ENTREPRENEURSHIP

Core Course

No. of credit : 4

No. of contact hour: 5

MODULE I

To make the students understand about entrepreneurs and different classifications. Entrepreneur and entrepreneurship - Definition; traits and features; classification; Entrepreneurs; Women entrepreneurs; Role of entrepreneur in Entrepreneurs in India.

MODULE- II

Create an awareness about EDP. Entrepreneurial development programme concept; Need for training; phases of EDP; curriculum & contents of Training Programme; Support systems, Target Groups; Institutions conducting EDPs in India and Kerala.

MODULE- III

General awareness about identification of project financing new enterprises. Promotion of a venture; opportunity Analysis Project identification and selection; External environmental analysis economic, social, technological and competitive factors; Legal requirements for establishment of a new unit; loans; Overrun finance; Bridge finance; Venture capital; Providing finance in Approaching financing institutions for loans.

MODULE- IV

To identify different Discuss opportunities in small business. Small business Enterprise - Identifying the Business opportunity in various sectors - formalities for setting up of a small business enterprise - Institutions supporting small business enterprise - EDII (Entrepreneurship Development Institute of India), O SLDO (Small Industries Development Organization NSIC (National small Industries Corporation Ltd. (CNSIC) NIESBUD (National Institute for Entrepreneurship and small Business Development) Sickness in small business enterprise causes and remedies.

MODULE V

To understand about a project report relating to a small business. Project formulation - Meaning of a project report significance contents formulation planning, commission's guidelines for formulating a project report - specimen of a project report, problems of entrepreneurs case studies of entrepreneurs

Reference texts:

SI No.	Title	Author	Publishing & Year
1.	Entrepreneurship Development	Dorden and Natarajan	Himalaya Publishing House, Mumbai
2.	Entrepreneurship Development and Small Business Enterprises	Poornima M.Charantimath	Pearson, 2 nd edition

BA4CMT19 BASIC INFORMATICS FORMANAGEMENT

Complementary Course

No. of credit : 4

No. of contact hour: 5

AIM OF THE COURSE

To make a student competent to handle and scientifically analyse the various aspects of his business while he commence a business.

COURSE OBJECTIVE:-

- To have through knowledge in Excel.
- To get adequate knowledge in Excel to use it in their Research Work.
- To become Computer proficient.
- To get enough knowledge in Computerized Accounting.
- Should be able to scientifically analyse the financial position of a firm.

MODULE - I: EXCEL BASICS (Based on XP)

OBJECTIVES:-

- Understand the basics of Excel.
- To learn Formatting Techniques in Excel

Introduction ❖ Components of Excel Window ❖ Cell ❖ Cell Address ❖ Frame - Worksheet - Work Book ❖ Formatting Techniques (Cell, Page, Printing).

MODULE II: FORMULAS AND FUNCTIONS AND CHARTS IN EXCEL

OBJECTIVES:-

- Create Formulae
- Work with different Addressing Modes.
- Work with different Functions.

Inserting a formula ❖ Addressing Modes ❖ Relative ❖ Absolute ❖ Mixed ❖ Inter Sheet Referencing. Functions ❖ Financial Functions (NPV, PMT) ❖ Mathematical Functions (SUM, ROUND, FACTORIAL) ❖ Statistical Functions (AVERAGE, COUNT, MEDIAN, MODE, STDDEV) ❖ Logical Functions (IF, AND, FALSE, NOT, OR, TRUE). Macros ❖ Goal Seek - Charts - Types of Charts ❖ Preparing Charts.

MODULE III: COMPUTERIZED ACCOUNTING - TALLY

OBJECTIVES:-

- Understand the features of computerized accounting
- Understand the basic and advanced features of Tally.

Introduction - Features of Computerized Accounting ❖ Advantages of Computerized Accounting ❖ Limitations of Computerized Accounting - Features of Tally ❖ Need for Tally - Technological Advantages.

MODULE IV: TALLY FUNDAMENTALS AND PROCESSING TRANSACTIONS

OBJECTIVES:-

- Identify the key components of Tally.
- Create a Company
- Define Various Fields
- Determine the Valid Inputs
- Understand F11 : Features
- Understand F12: Configure.
- Create Ledgers
- Record Transactions using Accounting Vouchers

Getting functional with Tally ❖ Tally Start-up ❖ Tally screen components ❖ Mouse / Keyboard Conventions ❖ The Tally clock ❖ Switching between Screen Areas ❖ Quitting Tally. Creation / Setting up of a Company in Tally ❖ Creation of a Company. F11: Features - F12: Configure ❖ Master Configuration ❖ Voucher Configuration.

Processing Transactions in Tally ❖ Ledgers and Groups ❖ Accounting Vouchers ❖ Contra Voucher ❖ Payment Voucher ❖ Receipt Voucher ❖ Journal Voucher ❖ Sales Invoice. Recording Transactions of Sample Data (Transactions for April ❖ Trial Balance ❖ Backup ❖ Transactions for May ❖ Transactions for June).

MODULE V: GENERATING AND PRINTING OF ACCOUNTING REPORTS

OBJECTIVES:-

- Generate Accounting Records and Statement of Accounts.
- Print Accounting Records and Statement of Accounts.

Introduction ❖ Financial Reports in Tally ❖ Balance Sheet ❖ Profit and Loss Account ❖ Account Books ❖ Group Summary ❖ Group Vouchers ❖ List of Accounts.

Note:-

- ◆ Answers with Appropriate Screen Shots (windows) will decide higher grades.

DISTRIBUTION OF WORKING HOURS

- ◆ Out of 5 Hours, 3 Hours for Theory and 2 Hours for Practical.
- ◆ Practical hours required for Unit-I is 8 hours and for Theory 14 hours.
- ◆ Practical hours required for Unit-II is 16 hours and for Theory 30 hours.
- ◆ Theory hours required for Unit III is 5 hours.
- ◆ Practical hours required for Unit IV & V together is 12 hours and for Theory 3 hours.

COURSE WORK (PRACTICALS):-**MODULE I**

- Draw the Excel Screen and Identify its Components.
- Make a presentation based on the use of frame.
- Make a presentation based on Cell formatting.
- Prepare a sample SGPA Card and take a Printout.
- Make a presentation based on Page Formatting.
- Use of mail merge, preparation of a sample mail merge.

MODULE - II

- Give a problem to compare & differentiate various Addressing Modes.
- Give problems based on NPV and PMT (Financial Functions).
- Give problems based on SUM, ROUND and Factorial (Mathematical Functions).
- Give problems based on AVERAGE, COUNT, MEDIAN, MODE, STDEV (Statistical Functions).
- Give problems based on Logical Functions. Prepare an Electricity Bill.
- Create a Macro to set all the margins of a page to 1 inch.
- Write the procedure for creating a Macro.
- Apply Goal seek to set the value of a cell by changing the value of other cells.
- Give data to prepare different charts.
- Draw and differentiate types of charts.
- Write the steps for creating a chart with appropriate screen shots.

MODULE - III

- Use OHP foils or LCD projector to take sessions.
- Make a note on computerized accounting.

MODULE IV

- Identify the screen components by drawing diagram.
- Explain the procedure of creating a company with appropriate screens.
- Create a company
- Explain the procedure for voucher entry with appropriate screen.

MODULE V

- Create Financial Reports in Tally.
- Give 5 sample Problems to prepare various Financial Reports.

REFERENCE BOOKS

Sl. NO	Title	Author	Publisher & Year
1	Learning MS-Office XP	Weixel	BPB 1st Edition
2	Office XP Simply Visual	Sybex	BPB 1st Edition
3	MS-Office XP 8 in 1	Habraken	Tech Media
4	Simply Tally 9.0	Ashok K. Nandhani	BPB 1st Edition
5	Tally 9 Training Guide	Ashok K. Nandhani	BPB 1st Edition
6	Computerized Accounting	Basheet	BPB 1st Edition

BA4CMT20 CORPORATE LAWS

Complementary Course No. of credit : 4 No. of contact hour: 5

Aim of the course

To build a general awareness about the principles behind, companies and partnerships.

Objective of the course:

On completion of the course, the student should be able

- To identify the various steps in the formation of a company
- To specify the basic principles of corporate laws
- To clarify the basic principles of partnership law
- To understand the basic features of limited liability partnership

MODULE I: Formation and incorporation of a company (The Companies Act, 2013)

Formation and incorporation of a company; characteristics and types of companies;

Promoters; corporate veil; pre-incorporation and preliminary contracts.

Memorandum of association – articles of association- doctrine of ultra vires- doctrine of constructive notice- indoor management-prospectus and statement in lieu of prospectus-deemed prospectus-shelf prospectus-abridged prospectus- red-herring prospectus and information memorandum- liability for misstatement of prospectus.

MODULE II: Management of companies and Company meetings

Qualification and appointment of directors; powers, duties and liabilities of directors; kinds of company meetings; requisites of a valid meeting; Chairman-agenda-minutes-quorum; Motions and resolutions –proxy-ascertaining the sense of a meeting.

MODULE III: Winding up of companies:

Modes of winding up; compulsory winding up- grounds and procedure; voluntary winding up-types-procedure-effects of winding up-liquidator-powers and functions- contributories; defunct companies.

MODULE IV: The Law Relating to Partnership and limited liability partnership

Nature, test and types of partnership- partnership deed- rights and liabilities of partners- relations of partners to one another and to third parties- incoming and outgoing partners- Retirement- Registration and dissolution of partnership- limited liability partnerships.

MODULE V: Pollution control Act

Definitions- Air- water and sound pollution- pollution control measures.

References

1. Shukla, M.C., & Gulshan, Principles of Company Law, *S.Chand, New Delhi.*
2. Venkataramana, K., Corporate Administration, *Seven Hills Books Publications.*
3. Kapoor, N.D., Company Law and Secretarial Practice, Sultan Chand, *New Delhi.*
4. Elements of corporate Law, SN Maheswari and SK Maheswari, Himalaya Publications, Mumbai.
4. Bansa, I.C.L., Business and Corporate Law, *Vikas Publishers, New Delhi.*

FIFTH SEMESTER

BA5CRT21 ORGANISATIONAL BEHAVIOUR

<p>Core Course</p>
<p>No. of credit : 4</p>
<p>No. of contact hour: 6</p>

Course Objectives

- Understand the implications of individual and group behaviour in organisational context.
- Understand the concept of organisational behaviour, social organisation and the diverse environment alongside with the management of groups and teams
- Appreciate the culture of organisational culture

Learning Outcome

- Manage conflict amongst groups in business environment
- Comprehend and apply motivational theories in the workplace
- Identify changes within organisations and power and politics in organisations

MODULE- I:

Introduction to Organisational Behaviour- Various discipline contributing to OB- Hawthorne experiment- foundation of individual behaviour- need and importance of organisational behaviour-nature and scope- framework of organisational behaviour

MODULE- II:

Personality-types-factors affecting personality-perception-importance-factors influencing perception-learning-types of learning styles-the learning process

MODULE- III:

Motivation-theories-importance –types –values and attributes-characteristics-components-formation and measurement-group dynamics group behaviour-formation-types of groups-stages of group development-conflict management-nature of conflict-types of conflict

MODULE-IV:

Leadership-meaning-importance-leadership styles-leaders Vs. managers-power and politics-sources of power

MODULE-V:

Organisational structure and design-organisational climate- factors affecting organisational climate- organisational development-organisational culture-organisational change- current trend in OB

Core texts

Sl No.	Title	Author	Publishing & Year
1	Essentials of Organisational Behaviour	Stephen P Robbins, Timothy A. Judge & Seema Sanghi	Pearson, 10 th edition
2	Organizational behaviour	Bhattacharya	Oxford university Press
3	Organization behaviour	LM Prasad	Sultan Chand & Sons 2005

BA5OPT22 OPEN COURSE

Open Course

No. of credit : 3

No. of contact hour: 4

BA5CRT23 ENVIRONMENT SCIENCE AND HUMAN RIGHTS

Core Course

No. of credit : 4

No. of contact hour: 5

MODULE I**Multidisciplinary nature of environmental studies**

Definition, scope and importance Need for public awareness.

Natural Resources : Renewable and non-renewable resources : Natural resources and associated problems.

a) Forest resources : Use and over-exploitation, deforestation, case studies.

Timber extraction, mining, dams and their effects on forest and tribal people.

b) Water resources : Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.

c) Mineral resources : Use and exploitation, environmental effects of extracting and using mineral resources, case studies.

d) Food resources : World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.

e) Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources, Case studies.

f) Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification

- Role of individual in conservation of natural resources.
- Equitable use of resources for sustainable life styles.

Ecosystems

- Concept of an ecosystem
- Structure and function of an ecosystem
- Producers, consumers and decomposers
- Energy flow in the ecosystem
- Ecological succession
- Food chains, food webs and ecological pyramids.
- Introduction, types, characteristic features, structure and function of the given ecosystem:- Forest ecosystem

MODULE II**Biodiversity and its conservation**

Introduction, Biogeographical classification of India ,Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values. India as a mega-diversity nation, Hot-spots of biodiversity, Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts, Endangered and endemic species of India

Environmental Pollution

Definition, Causes, effects and control measures of: -

- a. Air pollution
- b. Water pollution
- c. Soil pollution
- d. Marine pollution
- e. Noise pollution
- f. Thermal pollution
- g. Nuclear hazards

Solid waste Management: Causes, effects and control measures of urban and industrial wastes, Role of an individual in prevention of pollution, Pollution case studies, Disaster management: floods, earthquake, cyclone and landslides

Social Issues and the Environment- Urban problems related to energy, Water conservation, rain water harvesting, watershed management, Resettlement and rehabilitation of people: its problems and concerns, Case studies, Environmental ethics: Issues and possible solutions, Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust, Case studies, Consumerism and waste products, Environment Protection Act , Air (Prevention and Control of Pollution) Act, Water (Prevention and control of Pollution) Act, Wildlife Protection Act, Forest Conservation Act, Issues involved in enforcement of environmental legislation

MODULE III**Introduction to Environment and Business**

Introduction of ways in which business has and is responding to environmental and business issues; business and sustainable development; issues of corporate/business greening.

MODULE IV**Green entrepreneurship**

What is green entrepreneurship, definition, meaning, scope, nature and characteristics. Green entrepreneurship in India. Difference between conventional and green entrepreneurship.

MODULE V

Human Rights– An Introduction to Human Rights, Meaning, concept and development, Three Generations of Human Rights (Civil and Political Rights; Economic, Social and Cultural Rights).

Human Rights and United Nations – contributions, main human rights related organs - UNESCO, UNICEF, WHO, ILO, Declarations for women and children, Universal Declaration of Human Rights.

Human Rights in India – Fundamental rights and Indian Constitution, Rights for children and women, Scheduled Castes, Scheduled Tribes, Other Backward Castes and Minorities
 Environment and Human Rights - Right to Clean Environment and Public Safety:
 Issues of Industrial Pollution, Prevention, Rehabilitation and Safety Aspect of New
 Technologies such as Chemical and Nuclear Technologies, Issues of Waste Disposal,
 Protection of Environment

Conservation of natural resources and human rights: Reports, Case studies and policy formulation. Conservation issues of western ghats- mention Gadgil committee report, Kasthuriengan report. Over exploitation of ground water resources, marine fisheries, sand mining etc.

Internal: Field study

- Visit to a local area to document environmental grassland/ hill /mountain
- Visit a local polluted site – Urban/Rural/Industrial/Agricultural Study of common plants, insects, birds etc
- Study of simple ecosystem-pond, river, hill slopes, etc

(Field work Equal to 5 lecture hours)

REFERENCES

1. Bharucha Erach, Text Book of Environmental Studies for undergraduate Courses. University Press, IInd Edition 2013 (TB)
2. Clark.R.S., Marine Pollution, Clanderson Press Oxford (Ref)
3. Cunningham, W.P.Cooper, T.H.Gorhani, E & Hepworth, M.T.2001 Environmental Encyclopedia, Jaico Publ. House. Mumbai. 1196p .(Ref)
4. De A.K.Environmental Chemistry, Wiley Eastern Ltd.(Ref)
5. Down to Earth, Centre for Science and Environment (Ref)
6. Heywood, V.H & Watson, R.T. 1995. Global Biodiversity Assessment, Cambridge University Press 1140pb (Ref)
7. Jadhav.H & Bhosale.V.M. 1995. Environmental Protection and Laws. Himalaya Pub. House, Delhi 284p (Ref)
8. Mekinney, M.L & Schock.R.M. 1996 Environmental Science Systems & Solutions. Web enhanced edition 639p (Ref)
9. Miller T.G. Jr., Environmental Science, Wadsworth Publishing Co. (TB)
10. Odum.E.P 1971. Fundamentals of Ecology. W.B. Saunders Co. USA 574p (Ref)
11. Rao.M.N & Datta.A.K. 1987 Waste Water treatment Oxford & IBII Publication Co.Pvt.Ltd.345p (Ref)
12. Rajagopalan. R, Environmental Studies from crisis and cure, Oxford University Press, Published: 2016 (TB)
13. Sharma B.K., 2001. Environmental Chemistry. Geol Publ. House, Meerut (Ref)
14. Townsend C., Harper J, and Michael Begon, Essentials of Ecology, Blackwell Science (Ref)

15. Trivedi R.K., Handbook of Environmental Laws, Rules Guidelines, Compliances and Standards, Vol I and II, Enviro Media (Ref)
16. Trivedi R. K. and P.K. Goel, Introduction to air pollution, Techno-Science Publication (Ref)
17. Wanger K.D., 1998 Environmental Management. W.B. Saunders Co. Philadelphia, USA 499p (Ref)
18. (M) Magazine (R) Reference (TB) Textbook

Human Rights

1. Amartya Sen, The Idea Justice, New Delhi: Penguin Books, 2009.
2. Chatrath, K. J.S., (ed.), Education for Human Rights and Democracy (Shimla: Indian Institute of Advanced Studies, 1998)
3. Law Relating to Human Rights, Asia Law House,2001.
4. Shireesh Pal Singh, Human Rights Education in 21st Century, Discovery Publishing House Pvt.Ltd, New Delhi,
5. S.K.Khanna, Children And The Human Rights, Common Wealth Publishers,1998. 2011.
6. Sudhir Kapoor, Human Rights in 21st Century,Mangal Deep Publications, Jaipur,2001.
7. United Nations Development Programme, Human Development Report 2004: Cultural Liberty in Today's Diverse World, New Delhi: Oxford University Press, 2004.

BA5CMT24 INTELLECTUAL PROPERTY RIGHTS AND INDUSTRIAL LAWS

Complementary Course No. of credit : 4 No. of contact hour: 5

Aim of the course

To build a general awareness about the principles behind, intellectual property legislations and three important industrial laws.

Objective of the course:

On completion of the course, student should be able

- ☐ To appreciate the concepts of patent and trademark protection.
- ☐ To specify the various legal provisions in the Factories Act and Industrial Disputes Act.
- ☐ To identify the benefits offered by ESI Act.

MODULE - I Introduction to Intellectual property Rights

Concept; patents; term and registration of patents; Rights of patent holder; infringement of patents; Trademark: Meaning; procedure for registration; infringement of registered trademark; Collective marks - certification trademarks-well known trade mark.

MODULE - II: Law relating to factories

Approval, licensing and registration of factories; provisions regarding health, safety and welfare of workers; working hours; employment of women and young persons. Annual leave with wages.

MODULE -III: Law relating to Industrial Disputes

Meaning of industry; machinery for the prevention and settlement of industrial disputes. Provisions relating to strikes, lay off, retrenchment, lock out, closure and transfer of undertakings.

MODULE - IV: Law relating to employees' state insurance

Applicability of the Act- administration of the scheme- ESI corporation-standing committee and medical benefit council- inspectors- contributions-benefits under the Act – adjudication of disputes.

MODULE -V: Consumer Protection Act

Definitions- Consumer Protection Councils- central and state consumer protection councils-objects-consumer disputes redressal agencies-composition of the District Forum- Jurisdiction of the District Forum-procedure for filing complaints- composition and jurisdiction of State Commission-composition ,jurisdiction and powers of the National Commission-procedure applicable to state and national commission-Appeal-Dismissal of frivolous or vexatious complaints-penalties.

BA5CRT25 OPERATION MANAGEMENT

Core Course

No. of credit : 2

No. of contact hour: 2

MODULE I

Production/ operation function- Production system-Objectives of production in management- the five P's of production- Types of production- production systems-Job shop- Batch continuous and cellular.

MODULE II

Production planning and control- Functions of production planning and control – characteristics- steps involved- objectives of production-objectives of production planning-Importance-prerequisites of production planning and control- production control- objective and control-objectives and advantages.

MODULE III

Materials management- Scope and important methods of purchasing-Inventory control- objectives, functions and importance.

MODULE IV

Work improvement- and work measurement- motion study- work place lay out-plan lay out- types of lay out- factors influencing plant lay out-fundamentals of time study.

MODULE V

Quality control – Importance and objectives.

Reference:

SI No.	Title	Author	Publishing & Year
1	Production and Operations Management	Alan Muhlemann, John Oakland et al.	Pearson, 6 th edition
2	Operations Management, Theory and practice	B Mahadevan	Pearson, 2 nd edition
3	Operations Management	KS Chandrasekar	<i>Himalaya Publishing House, Mumbai</i>

BA5CRT26 INDUSTRIAL RELATIONS

Core Course

No. of credit : 3

No. of contact hour: 3

Aim of the course:

To make an awareness about relations between labour and management in an industry.

Objectives of the course:

Is to enable the student

- To have a basic idea regarding industrial relations.
- To understand various prospect of workers and employers
- To understand more about the employees performance and their carrier planning.
- To know how theare made in industries between workers and management.
- To know how the workers are participating in daws making programmes.
- To understand various welfare facilities of education programmes provided by employers to their employees.

MODULE I: Introduction

Nature of Industrial relations- meaning and importance- Industrial labour in India,- an overview of industrial growth- Private and Public Sector Employment trends- Industrial Labour force.

MODULE II: Bargaining agents

Workers Organization: Role of Trade Union in Industries- Multiplicity of trade unions- inside and outside leadership. Employers Organization-Role of Employers Organization in maintaining industrial relations, Recognition of trade Unions.

MODULE III: Industrial Unrest

Concepts- Causes- Problems- handling techniques and procedures relating to –go-slow-work –stoppage-gherao-retrenchment-lay –off.

MODULE IV: Settlement of Industrial Disputes

State Policy- need and nature of state labour policy and intervention-ILO Statutory Measures: Holding Negotiations-bipartite-tripartite negotiations-mediation-conciliation-arbitration-adjudication.

MODULE V: Promotion of Industrial Peace

Collective bargaining-works participation in management-works education-workers welfare-Industrial truce

Reference text:

1. Industrial relations, trade unions and labour registration

-P.R.N. Sinha & InduBala Sinha &
SeemaPriyadarshini Shekhar

2. Industrial relations

-C.B. Mamoria

SIXTH SEMESTER**BA6OCT27 OPTIONAL 1**

Optional Course

No. of credit : 4

No. of contact hour: 5

BA6OCT28 Optional II

Optional Course

No. of credit : 4

No. of contact hour: 5

BA6CRT29 STRATEGIC MANAGEMENT

Core Course

No. of credit : 4

No. of contact hour: 5

MODULE I

Introduction to Strategic Management, Concept of Corporate Strategy, Strategic Management Process, The 7-S Framework, Corporate Policy and Planning in India.

MODULE II

Environmental Scanning, Industry Analysis, The synthesis of External Factors, External Factors Analysis Summary (EFAS), Internal Scanning, Value Chain Analysis, Synthesis of Internal Factors, Internal Factors Analysis Summary (IFAS)

MODULE III

Strategy Formulation, Strategic Factors Analysis Summary (SFAS), Business Strategy, Corporate Strategy, Functional Strategy, Strategic Choice.

MODULE IV

Strategy Implementation, Organization Structure, Corporate Culture, Diversification, Mergers and Acquisitions, Turnaround strategies, Portfolio strategy (concepts only)

MODULE V

Evaluation and control of strategies-strategic control-standard-benchmarking-cost benefit analysis-performance gap analysis-responsibility centres.
Other Strategic Issues, Small and Medium Enterprises, Non- Profit Organizations.

REFERENCES

- Robert A Pitts and David Lei, Strategic Management, 4th Edition Cengage Learning, 2006.
- Francis Chrunilam, Strategic Management, Himalaya publications, Mumbai.
- K.Govindabhat, Strategic Management, Himalaya Publications, Mumbai.

BA6CRT30 COMMUNICATION SKILLS AND PERSONALITY DEVELOPMENT

CORE COURSE

NO. OF CREDIT : 4

NO. OF CONTACT HOUR : 5

MODULE I: Speeches & Presentation

Speeches - Characteristics of a good speech, How to make speech effective

Presentation - Planning, preparation, organising, rehearsing & Delivery. How to make Presentation, The various presentation tools along with guidelines of effective presentation, Boredom factors of presentation and How to overcome them, Interactive Presentation and Presentation as a part of job Interview.

MODULE II: Brief business messages

Crafting messages for electronic media, choosing media for brief messages- email, instant messaging, text messaging, blogs, and wikis. creating effective email messages, instant messages, text messages, business blogs.

MODULE III: Employment messages and Job interviews

Resume Writing skills, Guide lines for good Resume, Writing application letters and other employment messages, application follow-ups, understanding the interviewing process, common types of interviews, preparing for a job interview, stages of every interview-warm-up, question answer session and close. Follow-up after an interview.

MODULE IV: Group Discussion

GD Leadership, GD protocol, Guidelines for GD participants, debate and extempore.

MODULE V

Audio video recording and Dialogue session on current topics- economy-education system- environment-politics.

References

SI No.	Title	Author	Publishing & Year
1	Business communication essentials	Courtland Bovée And John Thill	Pearson,2015
2	Fundamentals of business communication	P D Chaturvedi, MukeshChaturvedi	Pearson, 2012
3	Basic Managerial Skills for All	<u>McGrath E.H. S.J.</u>	PHI; 9 edition (2011)
4	Essentials of Business Communication	<u>Rajendra Pal , J. S. Korlahalli</u>	Sultan Chand And Sons
5	Basic Managerial Skills for All	McGraw, S. J	8th edition, Prentice Hall of India.

BA6PRP31 Management Project

Core Course

No. of credit : 4

No. of contact hour: 5

OPEN COURSES
BA5OPT22 (A). BRAND MANAGEMENT

Open Course
 No. of credit : 3
 No. of contact hour: 4

Course Objectives

- To understand the concept-Brand
- To understand the process of Brand Building
- To understand the value of Brand to an organisation

Learning outcome

To develop and implement strategies for successful brand portfolio management.

MODULE I

Product- Meaning and Definition, Types of product.

Brand- Meaning and Definition, Importance of branding, process of branding, circular process, Types of Brands.

MODULE II

Brand Identity- Meaning and Definition,

Brand Name- Attributes of a brand name, Brand name protection.

Promoting your Brand-Objectives, different media.

MODULE III

Logo- Meaning and Definition.

Logo design- Do's & Dont's ingredients. Word mark, Brand mark, Trademark.

Tag line- Meaning and Definition, Functions.

MODULE IV

Brand positioning- Concept, advantages, process.

Brand Equity- Meaning & Definition, advantages, factors contributing to brand equity, measurement of brand equity.

MODULE V

Brand extension- Meaning, advantages.

Brand licensing- Meaning and benefits.

Co-branding- Meaning and benefits.

References:

- Brand Management-Moorthi, Vikas Publications
- Brand Management- Harsh V Verma, Excel Books
- Marketing Management- Philip Kotler, Jha & Koshy Pearson Education

BA5OPT22(B) ENTREPRENEURIAL LEADERS

Open Course

No. of credit : 3

No. of contact hour: 4

MODULE I

Muhammad Yunus

MODULE II

Steve Jobs

MODULE III

N. R. Narayana Murthy

MODULE IV

Kochouseph Chittilappilly

MODULE V

Women entrepreneur- Beena Kannan

OPTIONALS**OPTIONAL I****BA6OCT27 (a) HEALTH CARE MANAGEMENT**

Optional Course
No. of credit : 4
No. of contact hour: 5

Aim

The aim of this subject is to create awareness among the students and equip them with the necessary skills for employment in the middle level cadre.

Objectives

- ☐ To orient students in health care
- ☐ To enhance knowledge in the health care industry
- ☐ To familiarize the students about the various services
- ☐ To familiarize the students with office management

MODULE I

Role of Hospitals in Health Care

Role of Hospitals in development of society

Types of Hospital ◆ Ownership (Private, Government), Specialization (Nursing Homes,

Diabetic clinic, General Hospital) and Service (Homeopathy, Ayurveda)

MODULE II

Management of Hospitals ◆ Importance of HRM and Staffing Financial

Management ◆ Budget Allocation

MODULE III

In patient and out patient

A study on Private and Government health care units Role of Government in health care sectors

MODULE IV

Hospital Services ◆ Clinical Services ◆ X-ray department, Lab Services.

Department in Hospitals ◆ Paediatric, Orthopaedic, Pathology etc.

MODULE V

Maintenance of different types of records.

New avenues of Health Care management - tourism

BA6OCT27. (b) INTRODUCTION TO RETAIL MANAGEMENT

Optional Course

No. of credit : 4

No. of contact hour: 5

Objective:

The aim of the paper is to know how a logistic strategy fits into an organisation's broader decisions, understand the role of logistic providers, and realize the meaning of customer service and understand its importance to logistics management.

Module I

Logistics- Definition History and Evolution- Objectives-Elements-activities importance- The work of logistics-Logistics interface with marketing-retails logistics-Emerging concept in logistics.

Module II

Retail Management-Definition-Achievement of competitive advantage through logistics Framework-Role of Retail Management-Integrated Logistics Management- Evolution of the concept- model - process-activities (in brief)

Module III

Outsourcing logistics-reasons-Third party logistics provider-Fourth party Logistics providers -Stages-Role of logistics providers

Module IV

Logistics Strategy-Strategic role of logistics-Definition- role of logistics managers in strategic decisions-Strategy options, lean strategy, Agile Strategies &Other strategies- Designing &implementing logistical strategy

Module V

Quality customer service &integrated logistics-customer service-importance elements-the order cycle system-distribution channels -Functions performed-Types-designing.

REFERENCE BOOKS

Sl. No	Title	Author	Publisher
1	Logistics	David J Bloomberg, Stephen LeMay	Prentice Hall of India PVt Ltd.
2	Logistical Management	Donald J Bowersox& David J Closs	Tata McGraw Hill Publishing Co Ltd
3	Logistical Management	Satish C Ailawadi&Rakesh Singh	Prentice Hall of India PVt Ltd.
4	Logistics	Donald Waters	Palgrave Macmillan, New York, 2009
5	Retail Management &World Sea borne Trade	KrishnaveniMuthiah	Himalaya Publishing House, Mumbai

BA6OCT27. (c). INVESTMENT & INSURANCE MANAGEMENT

<p>Optional Course</p> <p>No. of credit : 4</p> <p>No. of contact hour: 5</p>

Module I

Nature and scope of investment management – Financial and economic – Meaning of investment – Importance of investments – Factors favourable for investments – Investment media – Features of investment programme – risk – Different types of risk.

Module II

Financial institutions and markets in India – Development of financial securities – Structure of financial markets – Money market – Capital market – Primary market – market securities.

Module III

Stock market in India – Regulatory frame-work – Role or functions – Procedure for trading in securities – Kinds of brokers – OTCEI-NSE.

Module IV

Alternative forms of investment – Government securities – types – Life insurance – Kinds of policies – Procedure for taking of policies – investment in units – Different schemes – Objectives of investment units – Different schemes

– Tax benefits – Provident funds – National savings schemes – Post office savings – Investment in land, gold, silver, diamonds, stamps, antiques, banks.

Module V

Insurance; Definition – Characteristics – Benefits and importance – Types of insurance. IRDA – Meaning and functions

BOOKS RECOMMENDED

1. Preethi Singh – Investment management
2. V.K.Bhalla – Investment management. S.Chand, New Delhi, 13th Edition, 2007
3. John Bowyer – Investment analysis management
4. Neelam.C.Gulati – Principles of insurance management
5. Karampal, B.S.Bodla, M.C.Garg – Insurance management, principles and practices.

BA6OCT27. (d). EVENT MANAGEMENT

Core Course

No. of credit : 4

No. of contact hour: 5

Module I

Why Event Management, Requirement of Event Manager, Analysing the events, Scope of the Event

Module II

Decision makers, Technical Staff, Developing Record-Keeping Systems, Establishing Policies & Procedures

Module III

Preparing a Planning Schedule, Organizing Tasks, Assigning Responsibility, and

Communicating. Using the Schedule Properly, The Budget, Overall Planning tips, Checklists, Expert Resources, and Computer Software Required.

Module IV

Who are the people on the Event, Locating People, Clarifying Roles, and Developing content Guidelines. Participant Tips. Reference Checks, Requirement Forms, Introduction, Fees &

Honorariums, Expense Reimbursement. Travel Arrangements, Worksheets.

Module V

Type of Events. Roles & Responsibilities of Event Management in Different Events, Scope of the Work. Approach towards Events

REFERENCE BOOKS

1. Event Management: A Blooming Industry and an Eventful Career by Devesh Kishore, Ganga Sagar Singh - Har-anand Publications Pvt.Ltd
2. Event Management by Swarup K. Goyal - Adhyayan Publisher – 2009
3. Event Management & Public, Relations by Savita Mohan - Enkay Publishing House.

OPTIONAL II**BA6OCT28. (a) ADVERTISING AND SALESMANSHIP**

Optional Course
No. of credit : 4
No. of contact hour: 5

Aim

The aim of this subject is to create awareness among the students and equip them with the necessary skills for employment in the middle level cadre.

Objectives

To orient students in Marketing Management.

To encourage entrepreneurial skills.

To meet the demand of the various industrial sectors.

MODULE I

Advertising ♦ definition, objectives. Types of Advertising ♦ Newspaper, Magazines, Journals. Outdoor Ads, Theatre Ads. Radio, TV Advertisement. Product placement

MODULE II

Ad Agencies ♦ Its Types and functions. Ethics in Advertisement.

Advertisement Budget

MODULE III

Element of Advertisement ♦ Copy Writing. Advertisement lay out, Proof reading, Typography, Lithography. Use of Symbols, Slogans Caption Catch Phrase.

MODULE IV

Salesmanship ♦ Importance of Salesman, Steps in selling. Direct Marketing. Different

Salesman ♦ retailer, wholesaler etc. Negotiation

MODULE V

Knowledge, Skills and Qualities required in salesmanship. Training and supervising the salesman. Motivating the salesman ♦ perks, commission, incentives, remuneration, awards and rewards

Note on Course

Every lecture should be complemented with Case studies, Group Discussion, Seminars

REFERENCE BOOKS:

Sl No.	Title	Author	Publishing & Year
1	Advertising Management	Rajeev Batra, John G Myers, David A Aaker	Pearson, 5 th edition
2	Salesmanship and Advertisement	Dawar S.R	
3	Sales Promotion	Cummins. J	Kogan Page; 5 edition
4	New patterns in Sales Management	Birth and Boyd	
5	Marketing	Debbie Gilliland	

BA6OCT28 (B) SUPPLY CHAIN MANAGEMENT

Optional Course

No. of credit : 4

No. of contact hour: 5

Objective

The paper aims to educate students on stages of supply chain management and new opportunities in SCM.

MODULE I

SCM, Definition, Objectives, Evolution, need, issues involved in developing SCM framework, Types. SCM activities, constituents, organisation.

MODULE II

Supply chain integration, stages, barriers to internal integration, achieving excellence in SCM, dimensions of supply chain excellence, forces influencing SCE Emotions, physical and financial supply chains, checklist for excellence.

MODULE III

Purchasing and supply management, introduction, importance, objectives, purchasing process, purchasing and other functions, purchasing and integrated logistics, interfaces, types of purchases, purchasing partnerships, material sourcing, just in time purchasing.

MODULE IV

Outsourcing in SCM, meaning, need, outsourcing risks, outsourcing process, outsourcing in SCM, new opportunities in SCM outsourcing, myths of SCM outsourcing.

MODULE V

Performance measurement in SCM, meaning, advantages of performance measures, the benefits of performance measurement, measuring SCM, supplier performance measurement, parameters choosing suppliers.

REFERENCES

<i>Sl. No</i>	<i>Title</i>	<i>Author</i>	<i>Publisher</i>
1	Logistics	David J Bloomberg, Stephen LeMay	Prentice Hall of India PVt Ltd.
2	Logistical Management	Donald J Bowersox& David J Closs	Tata McGraw Hill Publishing Co Ltd
3	Logistical Management	Satish C Ailawadi&Rakesh Singh	Prentice Hall of India PVt Ltd.
4	Supply Chain Management	Janat Shah	Pearson

BA6OCT28. (C) PRINCIPLES OF TOURISM MANAGEMENT

<p>Optional Course</p> <p>No. of credit : 4</p> <p>No. of contact hour: 5</p>

Aim of the course

The aim of this course is to provide a fundamental knowledge on the principles of tourism management.

Objective of the course

On completion of the course, student should be able!

- To get a conceptual base on tourism
- To understand the need for developing tourism
- To identify the motivating factors of tourism
- To evolve plans for new and existing tourism destinations
- To understand the database for tourism planning.

Course Outline

Module I

Meaning of Tourism, Excursion, Leisure, Recreation, Tourist, Visitor and traveller

Types of Tourism : Domestic and international Tourism, Holidaying and sight - seeing Tourism, Business Tourism, Pilgrim Tourism, Rural Tourism, Cultural Tourism, Adventure Tourism. Farm Tourism, Dark Tourism, Eco Tourism, Responsible Tourism ❖ Modern Trends in Tourism

Tourism Industry: Meaning and features

Module II

Impact of Tourism: Economic, Psychological, political, Cultural and social significance of Tourism,

Economic significance: Foreign Exchange Benefits, Employment Generation, Tax Revenue, Multiplier effects.

Adverse Effects of Tourism

Module III

Components of Tourism: Tourist attractions Natural, cultural, Religious, Adventurous, etc.

Supplementary Attractions: Amusement parks, Film cities, fairs and festival etc.

Tourist facilities and services: Hotels, Travel Agencies, Tour Operators, Home stays, Retailers, Transportation: Airways, Roadways, Railways, and waterways.

(With examples in Indian perspective)

Module IV

Planning and Development of Tourism: Development of Tourism Potential, Scope for Development, Planning Process, Environmental Planning - Tourism and environmental Linkage, Carrying capacity and Types, Factors affecting carrying capacity.

Threats in planning: War, Natural Calamities Epidemic etc.

Module V

Measurement of Tourism: Need and General Problems of measurement, Types of tourist statistics, Methods of measurement of domestic and international tourist arrivals (in Indian perspective only)

Note on course work

Apart from the traditional lecture method, interactive sessions can be arranged with tourists, tour operators etc. Study tour may be conducted to developed and tourist destinations.

Activities

The programme envisages the following activities.

1. **Minor project (Group)** in the third semester (details given along with the syllabus) the viva-voce examination and dissertation valuation shall be done internally for 50 marks each.

2. **Management Projects individually** in the sixth semester. This is a one month implant training and project study to be conducted in the month of December. Each individual student has to undergo one month implant training plus project study in a reputed organization (with established functional departments). 30 day implant training certificate is mandatory with the project report. Project study on a selected management topics need to be conducted during this period in the contest of the organization. Project dissertation and report writing (minimum 40 pages) at the conclusion of the study. The project report should satisfy all the requisite of the research methodology theory. There will be two examinations one internal (20 marks) and another external (80 marks) based on the report.

3. Evaluation of Project , assignment, seminar, viva, internal assessment, test paper.

1. For projects

Group project for minor project . Individual project for management project.

a. Marks for external examination: 80

b. Marks for internal evaluation : 20

Components of management project evaluation (External)	Marks
Dissertation (external)	50
Viva-voce (external)	30
Total	80

Components of management project evaluation (internal)	Marks
Dissertation (internal)	10
Viva-voce (internal)	10
Total	20

Components of minor project evaluation (internal) third semester	Marks
Dissertation (internal)	80
Viva-voce (internal)	20
Total	100

4.INDUSTRIAL VISIT

The programme makes it mandatory in three semesters namely third, fourth and fifth to organise an industrial visit each. Preferably one to a manufacturing unit, another to a service sector and still another to a start-up village. Individual reports including photographs and illustration of the visit certified by the faculty in charge need to be prepared and submitted. These three reports are submitted to the external examiner for the sixth semester project viva-voce for the successful completion of the programme. The student who fail to submit satisfactory report will be consider as not completed the programme successfully.

Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

First Degree Programme in Commerce with Computer Application
(B. Com. CA)

Course Co-ordinator: Shri. Benson Kunjoonju

Academic support by
School of Management and Business Studies
Mahatma Gandhi University
Kottayam, Kerala

First Degree Programme in Commerce with Computer Application (B. Com. CA)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State had also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all its Off Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new Endeavour of the School to revamp its functioning by offering different types of Conventional Graduate and Post Graduate Programmes in addition to Diploma and Certificate Programmes which are very relevant to contemporary society. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University.

1. Programme's Mission & Objectives

In line with the mission of the University to provide flexible learning opportunities to all, particularly to those who could not join regular colleges or universities owing to social, economic and other constraints, the first degree Programme in Commerce with Computer Application (B.Com. CA) aims at providing holistic and value based knowledge and guidance that they need to become worthy accounting and management professionals.

The Programme aims at the following objectives:

1. To provide a sound academic base from which an advanced career in Computer Application can be developed.
2. To provide basic understanding about Commerce and Management Education among students.
3. To develop academically competent and professionally motivated personnel, equipped with objective, critical thinking, right moral and ethical values that compassionately foster scientific temper with a sense of social responsibility.
4. To develop students to become globally competent.
5. To inculcate entrepreneurial skills among students.

2. Relevance of the Programme with HEI's Mission and Goals

The career related First Degree Programme in Commerce with Computer Application is designed with the objective of equipping students to cope with the emerging trends and challenges in the industrial and business world. In congruence with goals of the university the Programme also envisages to provide skilled manpower to the professional, industrial and service sectors in the country so as to meet global demands. The Programme is designed with three major subjects

so that a successful candidate can go for higher studies in any one of the major subjects of his/ her choice. The Programme also aims at making the students fit for taking up various jobs and to initiate and run self employment ventures.

3. Nature of Prospective Target Group of Learners:

B.Com (CA) is a three year Programme consisting of six semesters designed to bridge the gap between the industry and the academia. The Programme offers courses which are a blend of management, commerce and computer applications. This Programme aims at inculcating essential skills as demanded by the global software industry through an interactive learning process. The curriculum has been designed to cater to the ever changing demands of information technology along with necessary inputs from the Industry. B.Com. (CA) Programme is meant to heighten technological know-how, to train students to become industry specialists, to provide research-based training and to encourage software development. As only a small percentage of the B.Com aspirants in Kerala are being accommodated in the regular mode through colleges it is hoped that the Programme offered through the Distance Mode of the university will be a boon for those who could not join regular colleges owing to social, economic and other constraints such as eligibility for enrolment, age of entry, time and place etc.

4. Appropriateness of Programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence

The Self Learning Material (SLM) for the Programme has been developed keeping in mind the said categories of learners with the approach of self-explanatory, self-contained, self-directed, self-motivating and self-evaluating. The norms and guidelines suggested in the University Grants Commission (Open and Distance Learning) Regulations, 2017 such as the background of the learner and his/her learning needs, learning experiences and support and preparation in adapting to flexible learning were strictly adhered to during the planning period of developing SLM. The ingredients considered while developing SLMs include: (a) learning objectives (b) assessment of prior knowledge (c) learning activities (d) feedback of learning activities (e) examples and illustrations (f) self-assessment tests (g) summaries and key points (h) study tips etc.

The Programme could be considered appropriate to be conducted in the ODL mode to acquire specific skills and competence for the following reasons:

1. The specific skill and competencies required for a B.Com graduate can be imparted to a great extent through SLMs prepared with the approach of self-explanatory, self-contained, self-directed, self motivating and self-evaluating.
2. Availability of large volumes of study material on the various courses under the B.Com Programme in the Internet or Websites of the UGC or Universities in the form of notes in Word/PDF format, PPTs, Videos etc, and the counselling hours earmarked per course are considered sufficient to impart the required skill and competencies for the Programme.
3. The Programme stresses the application of theory and computing principles through project work, case studies, presentations and practical assignments
4. State-of-the-art computer labs and latest software's available to facilitate hands on experience at Learner Support Centres of the University

5. Instructional Design

5.1 Curriculum Design

The University is revising the curriculum and syllabi of its B.Com (CA) Programme once in every three years to ensure that the content is updated to reflect current academic knowledge and practice, and also to ensure that the University used to provide the best learning experiences possible for students. As part of curriculum design, the curriculum and syllabus revision workshop considered curriculum analysis of social needs, translating the needs into course, splitting the objectives into specific objectives, grouping the specific objectives into subjects, deriving the subjects from the classification, specifying enabling objectives, unitizing each subject matter, specification of required time and syllabus formulation. The curriculum of B.com (CA) has been prepared by considering the challenges of offering the Programmes through Distance Mode. The Curriculum and syllabus of B.com (CA) Distance mode is same as the Programme of Regular Course.

5.2 Programme Details

SEM	Course Code	Course Title	Course Type	Number of Credits	Contact Session (Hrs)	CE (Marks)	ESE (Marks)	Total
I	DEN1CC01	Language- English- I	Common	3	9	20	80	100
	*DML1CC01 **DHN1CC01	Second Language Course-I	Common	2	6	20	80	100
	DCO1CRT01	Dimensions and Methodology of Business Studies	Core	2	6	20	80	100
	DCO1CRT02	Financial Accounting	Core	4	12	20	80	100
	DCO1CRT03	Corporate Regulations and Administration	Core	3	9	20	80	100
	DCO1CMT01	Banking and Insurance	Complementary	2	6	20	80	100
		TOTAL		16	48	120	480	600
II	DEN2CC02	Language- English-II	Common	3	9	20	80	100
	*DML1CC02 **DHN1CC02	Second Language-II	Common	2	6	20	80	100
	DCO2CRT04	Financial Accounting	Core	3	9	20	80	100
	DCO2CRT05	Business Regulatory Framework	Core	3	9	20	80	100
	DCO2CRT06	Business Management	Core	3	9	20	80	100
	DCO2CMT02	Principles of Business Decisions	Complementary	2	6	20	80	100
		TOTAL		16	48	120	480	600
	DEN3CC03	Language- English-III	Common	3	9	20	80	100
	DCO3CRT07	Corporate Accounts	Core	3	9	20	80	100
III	DCO3CRT08	Quantitative Techniques for Business	Core	3	9	20	80	100
	DCO3CRT09	Financial Markets and Operations	Core	2	6	20	80	100
	DCO3CRT10	Marketing Management	Core	2	6	20	80	100
	DCO3OCT01	Computer Application- Information Technology for Business (Theory)	Optional Core	2	6	15	60	75
	DCO3OCP01	Computer Application- Information Technology for Business(Practical)	Optional Core	1	30	10	40	50
		TOTAL		16	69	125	500	625

IV	DEN4CC04	Language- English-IV	Common	3	9	20	80	100
	DCO4CRT11	Corporate Accounts II	Core	3	9	20	80	100
	DCO4CRT12	Quantitative Techniques for Business- II	Core	3	9	20	80	100
	DCO4CRT13	Entrepreneurship Development and Project Management	Core	3	9	20	80	100
	DCO4OCT02	Computer Application- Information Technology for Office (Theory)	Optional Core	3	9	15	60	75
	DCO4OCP02	Computer Application- Information Technology for Office (Practical)	Optional Core	1	30	10	40	50
		TOTAL		16	75	105	420	525
V	DCO5CRT14	Cost Accounting - 1	Core	4	12	20	80	100
	DCO5CRT15	Environment and Human Rights	Core	3	9	20	80	100
	DCO5CRT16	Financial Management	Core	3	9	20	80	100
	DCO5OCT03	Computer Application- Computerised Accounting(Theory)	Optional Core	3	9	15	60	75
	DCO5OCP03	Computer Application- Computerised Accounting (Practical)	Optional Core	1	30	10	40	50
		Open Course		2	6	20	80	100
		TOTAL		16	75	105	420	525
VI	DCO6CRT17	Cost Accounting - 2	Core	3	9	20	80	100
	DCO6CRT18	Advertisement and Sales Management	Core	2	6	20	80	100
	DCO6CRT19	Auditing and Assurance	Core	2	6	20	80	100
	DCO6CRT20	Management Accounting	Core	3	9	20	80	100
	DCO6OCT04	Computer Application- Software for Business and Research (Theory)	Optional Core	3	9	15	60	75
	DCO6OCP04	Computer Application- Software for Business and Research(Practical)	Optional Core	1	30	10	40	50
	DCO6PR01	Project and Viva		2	6	20	80	100
		TOTAL		16	75	125	500	625
		GRAND TOTAL		120	390	700	2800	3500

Second language *Malayalam ** Hindi

OPEN COURSES OFFERED*

Course Code	Course Title	Course type	Number of Credits	Contact session Hrs	CE (Marks)	ESE (Marks)	Total
DCO5OPT01	Fundamentals of Banking and Insurance	Open	2	6	20	80	100
DCO5OPT02	Capital Market and Investment Management	Open	2	6	20	80	100
DCO5OPT03	Fundamentals of Accounting	Open	2	6	20	80	100

*as decided by School of Distance Education

5.3 Duration of the Programme

The normal duration of the Programme shall be three years consisting of six semesters

5.4 Faculty and Support Staff Requirement

Course Co-ordinator

Shri. Benson Kunjoonju
Faculty Member,
Centre for Professional and Advanced Studies
College of Arts & Science

Qualification:M.com

Teaching Faculty

The two Common Courses (Languages) will be taught by teachers with a Master's degree in the relevant disciplines along with other qualifications prescribed by the University. The Core Courses including all practical papers, and Open Course have to be taught by teachers with M.Com qualification along with other qualifications prescribed by the University.

Instructional Delivery Mechanisms

In addition to provide SLMs prepared in line with the UGC guidelines on preparation of SLMs, the students are offered contact classes at the head quarters of the School of Distance Education and at the Learner's Support Centers during the weekend.

Student Support Service Systems at SDE

The SDE establishes Learner Support Centres for the students at different locations within the jurisdiction of the University to facilitate contact classes and practical sessions.

In addition to this, the university has centralized resources to enable the student support activities in respect of Information Centre, Library with good collection of books and journals, Wi-Fi connectivity, Counselling, Students Grievance Redressal Cell, Post Office , Snack bar and Refreshment Centre, Reprographic centre, Drinking water etc.

6. Procedure for Admissions, Curriculum Transaction and Evaluation

Admission

The admission notifications for B.Com Programme among others are being issued in leading national and regional dailies during June-July. The detailed information regarding admission is being given on the SDE website and on the Admission website.. Students seeking admission shall apply online.

Minimum Eligibility for Admission

Eligibility for admission to the Programme is a pass in Higher Secondary Examination of the State or an examination accepted by the University as equivalent thereto. Candidates coming from Non-Commerce group should have at least 45% of the aggregate marks.

Fee Structure

B.Com (Computer Application) **Rs.15,000/-** for Full Programme.

Programme Delivery

The Programme is being delivered with the help of SLM and Personal Contact programmes. The SLM will be despatched to the students during each semester by hand or by post. And at the end of each semester assignments are given and the marks are included in the ESA.

Evaluation

The evaluation of the Programme will consist of two parts: a) Continuous Evaluation (CE) b) End Semester Evaluation (ESE) The external theory examination of all semesters shall be conducted by the University at the end of each semester/year. Internal evaluation is to be done by continuous assessment. For all courses without practical total marks of external examination is 80 and total marks of internal evaluation is 20. Marks distribution for external and internal assessments and the components for internal evaluation with their marks are shown below:

Components of Internal Evaluation of theory Marks

Attendance	5
Assignment /Seminar/Viva	5
Test papers (2x5=10)	10
Total	20

For all courses with practical total marks for external evaluation is 60 and total marks for internal evaluation is 15.

Components of Internal Evaluation Marks

Attendance	5
Assignment /Seminar/Viva	2
Test papers (2x4=8)	8
Total	15

For practical examinations total marks for external evaluation is 40 for internal evaluation is 10

Components Internal evaluation of Practical Marks

Attendance	2
Record*	4
Test paper (1 x 4)	4
Total	10

For projects

a) Marks of external evaluation: 80

b) Marks of internal evaluation: 20

Components of External Evaluation of Project Marks

Dissertation (External)	50
Viva-Voce (External)	30
Total	80

Components of internal Evaluation of Project

Punctuality	5
Experimentation/data collection	5
Knowledge	5
Report	5
Total	20

Assignments:-Assignments are to be done from 1st to 4th Semesters. At least one assignment should be done in each semester for all courses.

Seminar/Viva:- A student shall present a Seminar in the 5th semester for each paper and appear for Viva-voce in the 6th semester for each course.

Internal Assessment Test Papers: - Two test papers are to be conducted in each semester for each course. The evaluations of all components are to be published and are to be acknowledged by the candidates. The responsibility of evaluating the internal assessment is vested on the teacher(s), who teach the course. The results of the CE shall be displayed in SDE website. Complaints regarding the award of marks for CE if any have to be submitted to the Programme Co-ordinator within 15 working days from the display of marks.

A separate minimum of 30% marks each for internal and external (for both theory and practical) and aggregate minimum of 35% are required for a pass for a course. For a pass in a Programme, a separate minimum of **Grade D** is required for all the individual courses. If a candidate secures **F Grade** for any one of the courses offered in a Semester/Programme, **only F grade** will be awarded for that Semester/Programme until he/she improves this to **D Grade** or above within the permitted period. The CE and ESE ratio Students who complete the Programme with “D” grade in the Mahatma Gandhi University “Regulations for Under Graduate Programmes under Choice Based Credit and Semester System 2017” will have one betterment chance within 12 months, immediately after the publication of the result of the whole Programme. All papers (theory & practical), grades are given **on a 7-point scale** based on the total percentage of marks (**ISA+ESA**).

The minimum credits required for the award of the Programme

Credit Requirements	Credit
Accumulated minimum Credits required for successful completion of the Programme	120
Minimum Credits for Language Courses	22
Credits required for Core Courses including Project and Viva	73
Credits required for Complementary Courses	6
Minimum Credits required for Open Courses	3
Minimum Credits required for Elective/Option Courses	16

Internal assessment shall not be used as a tool for personal or other type of vengeance. A student has all rights to know, how the teacher arrived at the marks. In order to address the grievance of students, a three-level Grievance Redressal mechanism is envisaged. A student can approach the upper level only if grievance is not addressed at the lower level.

7. Requirements of the Laboratory Support and Library Resources

Computer Lab is not mandatory for B.Com (Finance and Co-operation streams but it is mandatory for B.Com (Computer Application). The students can use the state-of-the-art Computer Lab available at the Learning Support Centre. The students can also use the library resources available at the University Central Library and Learning Support Centers.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and Libraries of the 4 Study Centres. The University Library was established in 1989. The University Library which is situated on the main campus and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system.

The building of the University Library is 2000 sq.m in area and consists of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The Library provides service from 8 am to 8 pm in three shift timings for its staff. The Library functions on an average of 345 days in a year. Reading space is provided on all the three floors housing the various sections of the library. The library provides reading facility to visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016. The libraries of teaching departments are open during working hours of the Schools.

The University Library has a Library Advisory Committee. It is an 18 member committee with the Vice-Chancellor as Chairman and University Librarian as Convener.

The Library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, Bi-monthly Bibliography compilation and Literature Search Service are also available

The Library is a member of the INFLIBNET Centre, Ahmedabad as well as & DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its online thesis digital library. The various department libraries too have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B.	Name of School/Centre	Total No. of books
	School of Management and Business Studies	7549

8. Cost Estimate of the Programme and the Provisions

Sl.No	Expenditure	Cost estimate for B.Com Programme (1000 students/year)
01	Pay and Allowance	22,00,000
02	Contact classes and evaluation	12,50,000
03	Course materials	8,50,000
04	Advertisement charges	20,500
05	Postage and telephone	10,000
06	Books and Periodicals	75,000
07	Miscellaneous	12,500
	Total	44,18,000
	Provisions (10%)	4,41,800
	Total	Rs. 48,59,800
		Cost per student per year=Rs.4,860/-

9. Quality Assurance Mechanism and expected Programme outcomes

The SDE has devised the following mechanism for monitoring the effectiveness of the B.Com (CA) Programme to enhance its standards of curriculum, instructional design etc.

- (a) Established a monitoring Committee at the University level to develop and put in place a comprehensive and dynamic internal quality assurance system to enhance the quality of the Programmes offered through distance mode as per the norms and guidelines of the University Grants Commission (Open and Distance Learning) Regulations, 2017.
- (b) The SDE has an approved panel of experts for preparing SLM. The SLM prepared is being edited by the board of subject expert.
- (c) The SDE of the University has full time faculty members exclusively for coordinating the Programme and also has a panel of qualified guest teachers for counselling students and engaging in personal contact Programmes.

Towards the end of the Programme, students will be able to:

- Develop an ability to effectively communicate both orally and verbally
- Appreciate importance of working independently and in a team
- Have exposure of complex commerce problems and find their solution
- Process information by effective use of IT tools
- Understand required analytical and statistical tools for financial and accounting analysis
- Develop an understanding of various commerce functions such as finance, accounting, auditing, taxation, financial analysis, project evaluation, and cost accounting
- Develop self-confidence and awareness of general issues prevailing in the society

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**RESTRUCTURED CURRICULUM AND SYLLABI FOR THE
B.COM DEGREE PROGRAMME (MODEL I) UNDER THE
CHOICE BASED CREDIT AND SEMESTER SYSTEM**



**MAHATMA GANDHI UNIVERSITY
PRIYADARSHINI HILLS P O
KOTTAYAM, KERALA**

2017

(Effective from 2017-18 admissions)

ACKNOWLEDGEMENT

There are many pro-active, sapient people whose relentless support and guidance made this syllabus restructuring 2017 a success. I take this opportunity to express my sincere appreciation to all those who were part of this endeavour for restructuring the syllabus U G course in Commerce under Mahatma Gandhi University, Kottayam.

I express profound gratitude to the Honourable Vice-Chancellor, Pro-Vice Chancellor, Registrar, Members of the Syndicate and Academic Council for their sincere co-operation and guidance for completion of this work. My thanks and appreciation also goes to the members of Faculty of Commerce and Board of Studies for their untiring efforts. I also appreciate the efforts of members of University Academic Section and other staff. .

Furthermore, I would also like to acknowledge with much appreciation the crucial role of all teachers who participated in the workshops organised by the University for restructuring the syllabus. I also place on record my gratitude to all professionals, academicians and other stakeholders who gave valuable suggestions in this regard.

**Dean- Faculty of Commerce
Mahatma Gandhi University
Kottayam**

Courses and Duration of Examinations

Total credits: 120

Semesters- 6

Working Days per Semester: 90

Working Hours per Semester: 450

Examination- External Evaluation: 80% and Internal evaluation- 20%

MODEL-I

B.Com Degree Programme Model-I Course Structure

Common Courses

Sl No	Course Name	Credit	Hours per week
1	Language- English-I	4	5
2	Second Language-I	4	4
3	Language- English-II	4	5
4	Second Language-II	4	4
5	Language- English- III	3	3
6	Language- English -IV	3	3
	TOTAL	22	

Complementary Courses

Sl No	Course Name	Credit	Hours per week
1	Banking and Insurance	3	4
2	Principles of Business Decisions	3	4
	TOTAL	6	

Core Courses

Sl No	Course Name	Credit	Hours per week
1	Dimensions and Methodology of Business Studies	2	3
2	Financial Accounting I	4	5

3	Corporate Regulations and Administration	3	4
4	Financial Accounting II	4	5
5	Business Regulatory Framework	3	4
6	Business Management	3	3
7	Corporate Accounts I	4	5
8	Quantitative Techniques for Business- 1	4	5
9	Financial Markets and Operations	3	4
10	Marketing Management	3	3
11	Optional - 1	4	5
12	Corporate Accounts II	4	6
13	Quantitative Techniques for Business- II	4	6
14	Entrepreneurship Development and Project Management	4	5
15	Optional - 2 -	4	5
16	Cost Accounting - 1	4	6
17	Environment Management and Human Rights	4	5
18	Financial Management	4	5
19	Optional - 3	4	5
20	Cost Accounting - 2	4	6
21	Advertisement and Sales Management	3	4
22	Auditing and Assurance	4	5
23	Management Accounting	4	5
24	Optional - 4	4	5
25	Project and Viva	1	-
	TOTAL	89	

Details of Optional Courses

Sl No	Course Name	Credit	Hours per week
FINANCE AND TAXATION			
1	Goods and Services Tax	4	5
2	Financial Services	4	5
3	Income Tax- I	4	5
4	Income Tax - II	4	5
COMPUTER APPLICATIONS			
1	Information Technology for Business	4	5
2	Information Technology for Office	4	5
3	Computerized Accounting	4	5
4	Software for Business and Research	4	5

CO-OPERATION			
1	Basics of Co-operation	4	5
2	Management of Co-operative Enterprises	4	5
3	Co-operative Legal System	4	5
4	Accounting for Co-operative Societies	4	5
TRAVEL AND TOURISM			
1	Fundamentals of Tourism	4	5
2	Travel and Tourism Infrastructure	4	5
3	Hospitality Management	4	5
4	Tourism and Cultural Heritage of India	4	5
MARKETING			
1	Customer Relationship Management	4	5
2	Services Marketing	4	5
3	Marketing Research	4	5
4	International Marketing	4	5

OPEN COURSES OFFERED

Sl No	Course Name	Credit	Hours per week
1	CO5OP01- Fundamentals of Banking and Insurance	3	4
2	CO5OP02- Capital Market and Investment Management	3	4
3	CO5OP03- Fundamentals of Accounting	3	4
	TOTAL	3	

Semester-wise details

Semester- 1

Sl No	Course Code	Course Name	Credit	Hours per week
1		Language- English-I	4	5
2		Second Language-I	4	4
3	CO1CRT01	Dimensions and Methodology of Business Studies	2	3
4	CO1CRT02	Financial Accounting I	4	5
5	CO1CRT03	Corporate Regulations and Administration	3	4
6	CO1CMT01	Banking and Insurance	3	4
		TOTAL	20	25

Semester- 2

Sl No	Course Code	Course Name	Credit	Hours per week
1		Language- English-I	4	5
2		Second Language-I	4	4
3	CO2CRT04	Financial Accounting II	4	5
4	CO2CRT05	Business Regulatory Framework	3	4
5	CO2CRT06	Business Management	3	3
6	CO2CMT02	Principles of Business Decisions	3	4
		TOTAL	21	25

Semester 3

Sl No	Course Code	Course Name	Credit	Hours per week
1		Language- English-I	3	3
2	CO3CRT07	Corporate Accounts I	4	5
3	CO3CRT08	Quantitative Techniques for Business- 1	4	5
4	CO3CRT09	Financial Markets and Operations	3	4
5	CO3CRT10	Marketing Management	3	3
6		Optional - 1		
	CO3OCT01	Finance and Taxation-Goods and Services Tax	4	5
	CO3OCT02	Computer Application- Information Technology for Business (Theory)	3	3
	CO3OCP01	Computer Application- Information Technology for Business (Practical)	1	2
	CO3OCT03	Co-operation- Basics of Co-operation	4	5
	CO3OCT04	Travel and Tourism - Fundamentals of Tourism	4	5
	CO3OCT05	Marketing- Customer Relationship Management	4	5
		TOTAL	21	25

Semester- 4

Sl No	Course Code	Course Name	Credit	Hours per week
1	CO1CRT01	Language- English-I	3	3
2	CO4CRT11	Corporate Accounts II	4	6
3	CO4CRT12	Quantitative Techniques for Business- II	4	6
4	CO4CRT13	Entrepreneurship Development and Project Management	4	5
5	CO4	Optional - 2 -	4	5
	CO4OCT01	Finance and Taxation- Financial Services	4	5
	CO4OCT02	Computer Application- Information Technology for Office (Theory)	3	3
	CO4OCP01	Computer Application- Information Technology for Office (Practical)	1	2
	CO4OCT03	Co-operation- Management of Co-operative Enterprises	4	5
	CO4OCT04	Travel and Tourism- Travel and Tourism Infrastructure	4	5
	CO4OCT05	Marketing- Services Marketing	4	5
		TOTAL	19	25

Semester- 5

Sl No	Course Code	Course Name	Credit	Hours per week
1	CO5CRT14	Cost Accounting - 1	4	6
2	CO5CRT15	Environment and Human Rights	4	5
3	CO5CRT16	Financial Management	4	5
4		Optional - 3		
	CO5OCT01	Finance and Taxation- Income Tax- I	4	5
	CO5OCT02	Computer Application- Computerised Accounting(Theory)	3	3
	CO5OCP01	Computer Application- Computerised Accounting (Practical)	1	2
	CO5OCT03	Co-operation- Co-operative Legal System	4	5
	CO5OCT04	Travel and Tourism- Hospitality Management	4	5
	CO5OCT05	Marketing- Marketing Research	4	5

5		Open Course	3	4
		TOTAL	19	25

Semester- 6

Sl No	Course Code	Course Name	Credit	Hours per week
1	CO6CRT17	Cost Accounting - 2	4	6
2	CO6CRT18	Advertisement and Sales Management	3	4
3	CO6CRT19	Auditing and Assurance	4	5
4	CO6CRT20	Management Accounting	4	5
5	CO6OCT	Optional - 4	4	5
	CO6OCT01	Finance and Taxation- Income Tax- II	4	5
	CO6OCT02	Computer Application- Software for Business and Research (Theory)	3	3
	CO6OCP01	Computer Application- Software for Business and Research(Practical)	1	2
	CO6OCT03	Co-operation- Co-operative Legal System	4	5
	CO6OCT04	Travel and Tourism- Tourism and Cultural Heritage of India	4	5
	CO6OCT05	Marketing- International Marketing	4	5
6	CO6PR01	Project and Viva	1	-
		TOTAL	20	25

SEMESTER 1

Core Course -1: DIMENSIONS AND METHODOLOGY OF BUSINESS STUDIES

Instructional Hours: 54

Credit: 2

Objectives

- *To understand business and its role in society*
- *To have an understanding of Business ethics and CSR*
- *To comprehend the business environment and various dimensions*
- *To familiarise Technology integration in business*
- *To introduce the importance and fundamentals of business research*

Module 1

Business and Environment Business- Functions - Scope - Significance of business - Objectives of business - Business and development - Forms of business organisations- Stake holders of business-

Business Environment – Definition - Features- Importance - Components of business environment- Internal environment and external environment - Micro environment and macro environment- Global business environment
(10 Hours)

Module 2

Business in India- Stages and developments of business in the Indian economy since independence - Role of public, private, co-operative sectors - Liberalisation, Privatisation and Globalization – Disinvestment – Outsourcing –Recent economic initiatives - Niti Ayog - Make in India initiative
(10 Hours)

Module 3

Technology integration in business- E Commerce- Meaning- Functions - Operation of E-commerce - Types of E-Commerce -B2C-B2B-C2C- C2B- B2E- B2G- P2P- E-Commerce and E-Business – M-Commerce- Meaning- Advantages- Challenges – E-Payment systems (brief study) Debit/Credit card payment, Net banking, Digital wallet, e-cheque, e-cash – Payment gateway.
(14 Hours)

Module 4

Business Ethics – Importance - Principles of business ethics - Factors influencing Business Ethics - Arguments in favour and against business ethics - Social responsibility of business – objectives and principles - Arguments in favour and against social responsibility. Corporate Governance – Meaning and importance – Objectives – Principles
(10 Hours)

Module 5

Business Research – Research- Meaning and Definition- Importance of research- Quantitative and qualitative approach to research-Inductive and deductive reasoning- Major Types of Research (Pure-Applied - Exploratory- Descriptive- Empirical- Analytical) - Business Research- Elements of Business Research-Management Research- -Objectives- Research Methods vs Research Methodology -Research Process(brief outline only) –Research report
(10 Hours)

Suggested Readings

1. Keith Davis and William C.Frederick: *Business and Society Management, Public Policy, Ethics.*
2. Peter F. Drucker: *Management Tasks, Responsibilities, Practices.*
3. Peter F Drucker: *The Practice of Management.*
4. P.T.Joseph, S.J, *E-Commerce: An Indian Perspective , Prentice Hall of India*
5. Kamalesh K Bajaj and Debjani Nag: *E-Commerce, the Cutting Edge of Business:, Tata McGraw Hill.*
6. Schneider: *E-Commerce:, Thomson Publication*
7. CSV Murthy, *Business Ethics, Himalaya Publishing House, Mumbai*
8. C R Kothari *Research Methodology, New Age Publishers*
9. O R Krishnaswamy: *Research Methodology- Himalaya Publications*
- 10.N V Badi and R.V. Badi: *Business Ethics: Vrinda Publications*
11. Cherunilam, Fransis, Business environment, *Himalaya Publishing House, Mumbai.*
12. Fernando, A, C,. Business Environment, *Pearson, New Delhi*
- 13 Francis, Ronald & Mishra, Muktha, Business Ethics: An Indian Perspective, *Tata McGraw Hill Pvt Ltd, New Delhi*
- 14 Sharma, J.P., Corporate Governance, Business Ethics, and CSR, *Ane Books Pvt Ltd, New Delhi.*
15. Ghosh, B.N., Business Ethics and Corporate Governance, *Tata McGraw Hill Pvt Ltd, Delhi.*

Core Course -2: FINANCIAL ACCOUNTING– I

Instructional Hours: 90

Credit: 4

Objective: *To equip the students with the skill of preparing accounts and financial statements of various types of business units other than corporate undertakings*

Module – I

Preparation of Financial Statements –Conceptual framework- Accounting Principles - Accounting Concepts - Accounting Conventions- - Capital and Revenue Expenditure - Capital and Revenue Receipts - Capital and Revenue Losses - Deferred Revenue Expenditure–Accounting Standards- Objectives -Final Accounts of Sole Trader - Trading Account - Manufacturing Account - Profit and Loss Account - Balance Sheet - Adjusting entries - Closing Entries- Practical Problems with all Adjustments.

(26 Hours)

Module -II

Accounting of Incomplete Records - Single Entry System - Features - Advantages - Disadvantages - Distinction between Single Entry and Double Entry System- Ascertainment of Profit/loss - Statement of Affairs Method - Conversion Method - Steps for Conversion of Single Entry into Double Entry - Preparation of Trading and Profit and Loss Account and Balance Sheet.

(20 Hours)

Module - III

Royalty Accounts – Meaning – Minimum Rent – Short Working – Recovery– Journal Entries in the books of Lessor and Lessee – Preparation of Minimum Rent Account – Short Working Account – Royalty Account (Excluding Sublease)– Special Circumstances :Adjustment of Minimum Rent in the event of Strike and Lock - outs - Govt. Subsidy in case of Strikes/Lockouts

(18 Hours.)

Module - IV

Accounting for Consignment - Meaning – Important Terms – Journal Entries in the books of Consignor and Consignee – Preparation of Consignment Account – Consignee’s Account – Goods Sent at Cost or Invoice Price Delcredre commission- Valuation of Stock – Normal and Abnormal Loss

(18 Hours)

Module – V

Farm Accounts- Meaning- Characteristics- Objectives and advantages- Recording of farm transactions- Preparation of farm account, crop account, dairy account, livestock account etc- Preparation of final accounts of farming activities-

(8 Hours)

Suggested Readings

1. Jain, S.P., & Narang, K.L., *Advanced Accountancy, Kalyani Publishers, New Delhi*
2. Maheshwari, S.N., & Maheswari, S.K., *Advanced Accountancy, Vikas Publishing House, New Delhi.*
3. Shukla, M.C., & Grewal, T.S., *Advanced Accountancy, S Chand and Company (Pvt.) Ltd, New Delhi.*
4. Ashok, Sehgal, & Deepak Sehgal, *Financial Accounting Taxmann Allied Service (Pvt.) Ltd, New Delhi.*
5. MA Arulanandam and KS Raman, *Advanced Accountancy, Himalaya Publications, Mumbai.*
6. Paul, S. K., & Chandrani, Paul, *Advanced Accountancy, New Central Book Agency, New Delhi.*
7. Raman B S, *Financial Accounting- United Publishers*
8. The Chartered Accountant(Journal), Institute of Chartered Accountants of India, New Delhi.

Core Course -3:

CORPORATE REGULATIONS AND ADMINISTRATION

Instructional Hours: 72

Credit: 3

Objective: To familiarise the students with the management and administration of joint stock companies in India as per Companies Act, 2013

Module 1

Company - Definition – Characteristics – Classifications –History and framework of Company Law in India - Companies Act 2013 - one person company, small company, associate company, dormant company, producer company; association not for profit; illegal association **(Instructional Hours - 10)**

Module 2

Promotion and formation of a company- Body Corporate - promoter- legal position-duties-remuneration - Memorandum of Association – Articles of Association - Contents and alteration - Incorporation of Company - On-line registration of a company – CIN - Companies With Charitable Objects - Doctrines of Indoor Management, Constructive Notice, Ultra-vires - Lifting up of Corporate veil - Conversion of Companies **(Instructional Hours - 12)**

Module 3

Share Capital – Types - Public Offer - Private Placement - Prospectus - Contents of Prospectus – Types of prospectus – Deemed prospectus - Shelf Prospectus - Red Herring Prospectus - Abridged prospectus- Liability for Misstatements in Prospectus – Issue and Allotment of Securities – Types - Voting Rights – DVR- Application of Premiums - Sweat Equity Shares - Issue and Redemption of Preference Shares- Transfer and Transmission of Securities- Punishment for impersonation of Shareholder - Further Issue of Share Capital- Bonus Shares- Debenture Issue - **(Instructional Hours - 15)**

Module 4

Membership in company and meetings- modes of acquiring membership-rights and liabilities of members- cessation of membership- Register of Members - Company meetings – Annual General Meeting - Extraordinary General Meeting- Notice Of Meeting - Quorum - Chairman - Proxies - Voting - Show of Hands – E-Voting - Poll- Postal Ballot- Motions - Resolutions - Types - Minutes - Books of accounts - Annual Return- Directors - Types - legal position – Appointment - Duties - Disqualifications - DIN - Vacation of Office - Resignation - Removal - Meetings of Board - Resolutions and Proceedings - Powers of Board - Key Managerial Personnel- CEO- CFO - Audit and Audit Committee - related party- transactions - Corporate Social Responsibility.

(Instructional Hours - 20)

Module 5

Winding up - Contributory – Modes of winding up - Winding Up by Tribunal - Petition for Winding Up - Powers of Tribunal- Liquidators - Appointments- Submission of Report - Powers and Duties - Effect of Winding Up Order- Voluntary Winding Up - Circumstances - Declaration Of Solvency - Meeting of Creditors- Commencement of Voluntary Winding Up- Appointment of Company Liquidator- Final Meeting and Dissolution of Company Official Liquidators –Appointment -Powers - Functions - Winding up of unregistered companies. **(Instructional Hours - 15)**

Suggested Readings

1. Shukla, M.C., & Gulshan, Principles of Company Law, *S.Chand, New Delhi.*
2. Venkataramana, K., Corporate Administration, *Seven Hills Books Publications.*
3. Kapoor, N.D., Company Law and Secretarial Practice, Sultan Chand, *New Delhi.*
4. Bansal C.L., Business and Corporate Law, *Vikas Publishers, New Delhi.*
5. Bhandari, M.C., Guide to Company Law Procedures, Wadhwa Publication.
6. S.N. Maheswari and S.K. Maheswari, Elements of Corporate Law, Himalaya Publications,
7. Kuchal, S.C., Company Law and Secretarial Practice, *Vikas Publishers, New Delhi*
8. Chartered Secretary, *The Institute of Company Secretaries of India.*

Complementary Course 1: BANKING AND INSURANCE

Instructional Hours: 72

Credit: 3

Objective: *To familiarize the students with the basic concepts and practice of banking and the principles of Insurance*

Module I

Introduction to Banking- Origin and Evolution of Banks - Meaning and Definition-Classification of Banks – Functions of Commercial Banks- Primary and Secondary- Credit Creation-Reserve Bank of India-Functions of RBI-Banking Ombudsman Scheme. **(15 Hours)**

Module II

Innovations and Reforms in Banking – E-banking – ATM – CDM - telephone/ Mobile Banking –ECS – EFT – NEFT – RTGS – SWIFT - CORE Banking - Cheque Truncation System - Credit and Debit Cards – CIBIL – KYC - Banking Sector Reforms-Prudential Norms- Capital Adequacy Norms - NPA – NBA - Basel norms - Small Finance Banks - Payment Banks - Financial Inclusion - PMJDY. **(18 Hours)**

Module III

Banker and Customer- Meaning and Definition- Relationship- General and Special- Different Types of Accounts- Cheque- dishonour of cheque – payment in due course – Crossing - Endorsement. **(15 Hours)**

Module IV

Insurance - Introduction- Concept of Risk- Insurance - Need and Importance - Principles of Insurance contract Insurance Industry in India- IRDA - Insurance Sector Reforms – Bancassurance. **(9 Hours)**

Module V

Types of insurance - Life Insurance– Features - Classification of Policies - Policy Conditions - Application and Acceptance- Assignments - Nomination - Surrender-Foreclosure- Marine Insurance – Features- Policy Conditions - Clauses - Fire Insurance- Motor vehicle insurance - Health Insurance- Burglary insurance-personal accident insurance- Re-Insurance- Group insurance. **(15 Hours)**

Suggested Readings

1. Shekhar, K.C, Banking Theory and Practice, *Vikas Publishing House, New Delhi*
2. Maheswari, S.N., Banking Law and Practice, *Kalyani Publishers, New Delhi*

3. Sundharam, Varshney, Banking Theory Law & Practice, *Sulthan Chand & Sons, New Delhi.*
4. Agarwal, O.P., Banking and Insurance, *Himalya Publishing House, Mumbai*
5. Saxena, G.S., Legal Aspects of Banking Operations, *Sultan Chand and Sons, New Delhi*
6. Agarwal, O.P., Banking and Insurance, *Himalya Publishing House, Mumbai*
7. Tripathi, Nalini & Prabil Pal., Insurance: Theory and Practice, *PHI Pvt Ltd, New Delhi*
8. Gupta, P.K., Insurance and Risk Management, *Himalaya Publishing House, Mumbai*
9. Mishra, M.N., Principles and Practices of Insurance, *S. Chand and Sons, New Delhi*

SEMESTER 2

Core Course -4 FINANCIAL ACCOUNTING – II

Instructional Hours: 90

Credit: 4

Objective: *To acquaint the students with the preparation of books of accounts of various types of business activities and application of important accounting standards*

Module I

Accounting for Hire Purchase – Meaning and Features of Hire Purchase System – Hire purchase Agreement – Hire purchase and Sale - Hire Purchase and Installment – Interest Calculation – Recording Transactions in the Books of both the Parties – Default and Repossession- Complete repossession- Partial repossession- **(25 Hours)**

Module II

Branch Accounts – Objectives- Features – Types – Accounting for Branches keeping full system of accounting – Debtors System – Stock and Debtors System – Independent Branches and Incorporation of Branch Accounts in the Books of H.O – Cash in Transit and Goods in Transit – Consolidated Balance Sheet.(accounting for foreign branches excluded) **(20 Hours)**

Module III

Departmental Accounts – Meaning – Objectives – Advantages – Distinction between branch and department- Accounting Procedure – Allocation of Expenses and Income- Inter Departmental Transfers – Provision for Unrealized Profits. **(10 Hours)**

Module IV

Accounting for Dissolution of partnership firm- Dissolution of a firm- Settlement of Accounts on dissolution- - Insolvency of a partner-Application of decision of Garner Vs Murray Case - Settlement of accounts when all partners are insolvent- Piecemeal distribution- Highest Relative Capital Method- Maximum Possible Loss method **(25 Hours)**

Module V

Accounting Standards- Importance- Accounting Standards Board- Applicability of Accounting Standards – Brief learning of AS1, AS2, AS9, AS10 and AS 19(Theory only) **(10 Hours)**

Suggested Readings

1. Jain S.P & Narang K.L., Advanced Accountancy, *Kalyani Publishers, New Delhi*
2. Maheshwari, S.N., & Maheshwari, S.K., Advanced Accountancy, *Vikas Publishing House, New Delhi.*

3. Shukla, M.C., & Grewal, T.S., Advanced Accountancy, *S Chand and Company Pvt.Ltd, New Delhi.*
4. Ashok Sehgal & Deepak Sehgal, Financial Accounting *Taxmann Allied Service (Pvt) Ltd, New Delhi.*
5. Paul, S. K., & Chandrani Paul, Advanced Accountancy, *New Central Book Agency, New Delhi.*
6. MA Arulanandam and KS Raman, *Advanced Accountancy, Himalaya Publications, Mumbai.*
7. Raman B S, *Financial Accounting United Publishers*
8. The Chartered Accountant (Journal), Institute of Chartered Accountants of India, New Delhi.

Core Course -5 BUSINESS REGULATORY FRAMEWORK

Instructional Hours: 72

Credit: 3

***Objective:** The course is intended to familiarise the students with the legal framework influencing business decisions.*

Module I

Introduction to Mercantile Law -Law of Contract - Definition - Kinds of Contracts - Valid – Void - Voidable - Contingent and Quasi Contract - E-Contract - Essentials of a Valid Contract - Offer and Acceptance - Communication of Offer - Acceptance and its Revocation - Agreement - Consideration - Capacity to Contract - Free Consent - Legality of Object and Consideration - Performance of Contract - Discharge of Contract -Breach of Contract - Remedies for Breach of Contract.
(25 Hours)

Module II

Special Contract I-Bailor and Bailee - Finder of Lost Goods - Pledge - Essentials - Rights and Duties of Pawner and Pawnee
(15 Hours)

Module III

Special Contract II- Indemnity and Guarantee- Indemnity - Meaning and Definition - Contract of Guarantee - Kinds of Guarantee - Rights and Liabilities of Surety - Discharge of Surety.
(10 hours)

Module IV

Law of Agency - Essentials, kinds of agents, rights and duties of agent and principal, creation of agency, termination of agency-Sub agents and substituted agents- Relationship
(12 Hours)

Module V

Sale of Goods Act, 1930 -Essentials of Contract of Sale Goods - Classification of Goods - Condition and Warranties - Transfer of Property in Goods - Right of Unpaid Seller - Buyer's Right Against Seller - Auction Sale.
(10 Hours)

Suggested Readings

1. Aswathappa, K., Business Laws, *Himalaya Publishing House, Bengaluru.*
2. Kapoor,N.D., Business Laws, *Sultan Chand publications New Delhi.*
3. Sharma,S.C., Business Law, *International Publishers,Bengaluru*
4. Tulsian, Business Law, *McGraw-Hill Education Mumbai.*
5. Indian Contract Act No. IX, 1972
6. Indian Sale of Goods Act, 1930

Journals

1. The Indian Journal of Law and Technology, National Law School of India University, Bangalore.
2. E bulletin of Students Company Secretary

Core Course -6: BUSINESS MANAGEMENT

Instructional Hours: 54

Credit: 3

Objectives: To familiarise the students with concepts and principles of management.

Module 1

Introduction to Management - Meaning , Nature, Scope and Functional Areas of Management - Management as a Science, Art and Profession - Management & Administration - Principles of Management- Managerial roles: Mintzberg Model - Functions of Management - Contributions of F.W.Taylor and Henry Fayol.

(12 Hours)

Module II

Planning - Planning - Meaning - Nature - Importance - Types of Plans - Planning Process- Barriers to Effective Planning - M.B.O - Features – Steps - Coordination - Meaning and Importance - Techniques for Effective Coordination

(10 Hours)

Module III

Organizing - Meaning - Nature - Importance - Principles of Organisation - Types of Organisation - Organisation Chart - Organisation Manual - Centralization – Decentralization- Authority - Delegation of Authority -Responsibility and Accountability.

(10 Hours)

Module IV Direction and Control – Principles of direction- Leadership: Concept and Styles; Trait and Situational Theory of Leadership, Managerial Grid by Blake and Mouton , Likert's Four System Model - Motivation: Concept and Importance; Maslow's Need Hierarchy Theory; Herzberg's Two Factors Theory. Control: Concept and Process-Control Techniques.

(12 Hours)

Module V

Management Techniques – (Brief Study) Quality circle-Total Quality Management - Business Process Reengineering (BPR)- Six sigma-Kaizen

(10 Hours)

Suggested Readings

1. Koontz, O Donnell, Management, *McGraw-Hill*
2. Appaniah, Reddy, Essentials of Management, *Himalaya Publishing House*.
3. Prasad, L. M., Principles of management, *Sultan Chand and Sons*.
4. Srinivasan, Chunawalla, Management Principles and Practice, *Himalaya Publishing House*.
5. Tulsian, P.C., & Pandey, Vishal, Business Organization and Management, Pearson Education

Complementary Course -2 – PRINCIPLES OF BUSINESS DECISIONS

Instructional Hours: 72

Credit: 3

Objective: *The course is intended to familiarise the students with the economic concepts and principles underlying business decision making*

Module I

Introduction –Decision making- Definition of decision and decision making- Importance of decision making- Steps in decision making- Types of decisions- Decision making environment- Elements of a decision- Application of economic theories in decision making- Areas where economic theories can be applied for business decision making - Important Economic concepts and theories applied in decision making- – Incremental Reasoning – Time Perspective – Discounting Principle – Opportunity Cost – Equi- marginal Principle
(10 Hours)

Module II

Demand Theory –Demand–Meaning- Law of Demand – Reasons for Law of demand – Exceptions to the Law –Demand determinants- Movements Vs Shift in Demand- Demand distinctions- Elasticity of Demand – Price elasticity- Importance of price elasticity- Income elasticity-Advertisement elasticity – Cross elasticity – Measurement of elasticity - Demand Forecasting –Short Term and Long Term Forecasting – Methods of Forecasting(theory only) -Forecasting demand for new products- Characteristics of a good forecasting technique.
(20 Hours)

Module III

Production Analysis– Production- Production Function –Assumptions and uses of production function- Cobb Douglas Production Function – Laws of Production – Law of Diminishing Returns or variable proportions- –Law of Returns to Scale – Economies And Diseconomies of Scale – Isoquant Curve-Isocost Curve – Optimum Combination of Inputs
(12 Hours)

Module IV

Cost Analysis-Cost concepts- Determinants of cost- Cost output relationship in the short run and long run- Optimum firm
(8 Hours)

Module V

Pricing in Different Markets –Price theory and price mechanism- objectives of pricing- Various market forms and pricing- Perfect Competition –Features- Price determination- Equilibrium of a firm under perfect competition- Monopoly- Features and kinds of monopoly- Price and output determination- Price Discrimination- Types- conditions- degree of price discrimination- Monopolistic competition- features- Price-output determination- - Oligopoly—features- Kinked Demand Curve- Price Leadership – Pricing under Collusion
(22 Hours)

Suggested Readings

1. Dean, Joel Managerial economics- *Prentice Hall of India*
2. Varshney, R.L., & Maheshwari, K.L., Managerial Economics, *Sultan Chand & Sons Private Ltd., New Delhi*
3. Kasi Reddy M., & Saraswathi, S., Managerial Economics and Financial Accounting, *PHI Learning, New Delhi.*
4. Mehta, P. L., Managerial Economics, *Sultan & Chand, New Delhi*
5. *DM Mithani, Managerial economics, Himalaya Publishing House Mumbai.*

6. Trivedi, M.L., Managerial Economics Theory and Applications, *McGraw Hill Education Private Ltd, New Delhi.*
7. Dwivedi, D. N., Managerial Economics, *Vikas Publishing House Private Limited, New Delhi.*
8. Chopra P.N., Principles of Business Decisions, *Kalyani Publishers*

SEMESTER 3

Core Course -7 CORPORATE ACCOUNTS - I

Instructional Hours: 90

Credit: 4

Objective: To make the students familiarise with corporate accounting procedures and to understand the accounting for banking companies.

Module 1

Accounting for Shares– Redemption of Preference Shares– ESOP-Rights Issue – Bonus Issue – Buyback of Shares **(20 Hours)**

Module II

Underwriting of Shares and Debentures – Marked and Unmarked Applications – Firm Underwriting– Determining the Liability of Underwriters in respect of an Underwriting Contract – Complete Underwriting – Partial Underwriting – Firm Underwriting **(10 Hours)**

Module III

Final Accounts of Joint Stock Companies (Vertical form- As per provisions of Companies Act 2013) – Preparation of Company Final Accounts including Balance Sheet – Calculation of Managerial Remuneration- Profit (Loss) Prior to Incorporation **(30 Hours)**

Module IV

Investment Account – Cum-interest- Ex-interest- Cum-dividend- Ex-dividend- Accounting entries- Preparation of Investment Accounts- Treatment of Bonus Share and Right Shares – Preparation of Investment Accounts **(15 Hours)**

Module V

Insurance claims- Loss of stock- computation of claim for loss of stock- Application of average clause- elimination of abnormal/defective items – Loss of profit policy- Calculation of claim- **(15 Hours)**

Suggested Readings

1. Jain, S.P., & Narang, K.L. , Advanced Accountancy, *Kalyani Publishers, New Delhi*
2. Maheswari, S.N & Maheswari, S.K., Advanced Accounting, *Vikas Publishing House, New Delhi*
3. Shukla, M.C., & Grewal, T. S., Advanced Accountancy *S. Chand and Company Pvt. Ltd, New Delhi*
4. Shukla, S.M., & Gupta, S.P., Advanced Accounting, *Sahitya Bhavan Publications, Agra*
5. Raman B S *Corporate Accounting United Publishers*

6. MA Arulanandam and KS Raman, *Advanced Accountancy*, Himalaya Publications, Mumbai.
7. The Chartered Accountant (Journal), *Institute of Chartered Accountants of India*, New Delhi.

Core Course -8 QUANTITATIVE TECHNIQUES FOR BUSINESS - I

Instructional Hours: 90

Credit: 4

Objective: To make the students understand the role of statistics and quantitative techniques in business and familiarize them with basic tools applied

Module I

Introduction to Statistics- Origin and Growth- Meaning- definition- Statistics as data- Statistics as methods- Empirical and quantitative analysis- Descriptive statistics and Inferential statistics- Functions of statistics-, Planning and Business- Limitations of Statistics- Distrust of Statistics **(8 Hours)**

Module II

Statistical Survey- Planning and design of enquiry- Statistical units- Executing a survey- Business Data Sources- Primary and Secondary Data-Methods of collecting Primary data— Drafting a questionnaire- Collection of secondary data- Census method and Sampling – Sampling Methods Probability Sampling and Non- Probability Sampling- Theoretical base of sampling: Law of Statistical regularity and Law of Inertia of Large Numbers- Statistical errors- Editing and Coding of data- Classification- Types of classification- Tabulation of Data- Objectives of tabulation- Classification Vs Tabulation- Types of tabulation- Cross tabulation- Parts of a table- Statistical Series **(25 Hours)**

Module III

Uni-Variate Data Analysis I -Measures of Central Tendency – Concept –Functions of an average- Characteristics- Arithmetic Mean –Simple mean- Weighted mean- Combined mean- Properties of mean- Median –Quartiles and other partition values- Mode- Empirical relation between mean, median and mode- Graphical location of median and mode- Geometric Mean-Harmonic Mean-relation between Arithmetic mean, Geometric mean and Harmonic Mean Application of various measures- Merits and Demerits of various measures of central tendency - **(20 Hours)**

Module IV

Uni-Variate Data Analysis II- Measures of dispersion - Concept-Properties of a good measure of dispersion- Absolute and Relative Measure-Range-Inter Quartile Range- Quartile Deviation-Mean Deviation-Standard Deviation-Lorenz curve- Merits and Demerits of various measures-Relevance and Applications in Business-Mathematical properties of standard deviation - Variance and Co-efficient of Variation–Measures of Skewness –Definition of skewness- types- Test of skewness- Relatives measures of skewness- Moments- Central moments- Raw moments- Conversion of raw moments into central moments- Skewness based on moments- Kurtosis-meaning and types **(25 Hours)**

Module V

Interpolation and Extrapolation- Meaning of interpolation and extrapolation- Significance and utility- Assumptions- Methods of Interpolation- (a) Newton’s Method of Advancing differences (b) Binomial Expansion method (c) Lagrange’s method – Extrapolation- Forecasting using extrapolation **(12 Hours)**

Suggested Readings

1. Richard, Levin & Rubin, David, S., Statistics for Management, *Prentice Hall of India, New Delhi.*
2. Spiegel, M.R., Theory and Problems of Statistics, *Schaum's Outlines Series, McGraw Hill Publishing Co.*
3. Kothari, C.R., Research Methodology, *New Age Publications, New Delhi.*
4. Sharma, J. K., Business Statistics, *Pearson Education.*
5. Gupta, S.C., Fundamentals of Statistics, *Himalaya Publishing House.*
6. Gupta, S.P. & Gupta, Archana, Elementary Statistics, *Sultan Chand and Sons, New Delhi.*
7. Elhance D N, Elhance, Veena and Aggarwal B M *Fundamentals of Statistics , Kitab Mahal*
8. Gupta, C B and Gupta, Vijay., *An Introduction to Statistical Methods, Vikas Publishing House*
9. Pillai, R S N and Bagavathi, V ., *Statistics , S Chand & Co*

Core Course -9 FINANCIAL MARKETS AND OPERATIONS

Instructional Hours: 72

Credit: 3

Objective: *The course is intended to familiarise the students with financial market operations in India*

Module I

Indian Financial System- Savings and Investment – The Indian Financial System-Components - Role and Functions-Interactions among the Components- Recent Developments in the Indian Financial System- Financial Markets-Classification- Capital Market and Money Market Instruments- Indian Money Market- Role of RBI in Money Market- SEBI-Establishment-Objectives-Powers and functions.

(16 Hours)

Module II

Primary Market- Functions of New Issue Market - Methods of New Issue - IPO - FPO - ASBA- Green Shoe Option- Public Issue - Bonus Issue- Right Issue- Private Placement-Book Building - ESOP-Indian Depository Receipts - Intermediaries in the New Issue Market-Registrars to the Issue-Brokers to the Issue-Bankers to the Issue - Underwriters-Qualified Institutional Placement and Qualified Institutional Buyers- Innovative Financial Instruments.

(14 Hours)

Module III

Secondary Market- Role and Functions of Stock Exchanges - Listing of Securities - Stock Exchanges in India - Members of the Stock Exchanges- Methods of Trading in a Stock Exchange- Online Trading- Depositories – Role - Mark to Market System - Stock Market Indices - Methodology for Calculating Index.- Type of Speculators- Speculative Transactions in Stock Exchanges - Insider trading - SEBI regulations- Foreign Institutional Investors in Securities market- Foreign Portfolio Investment- Private Equity

(18 Hours)

Module IV

Mutual Funds -Meaning- Objectives- Advantages - Classification of Mutual Funds–Exchange Traded Fund- Constitution and Management of Mutual Funds in India- AMFI- Concept of Net Asset Value – Advantages and limitations of Mutual Funds-

(12 Hours)

Module V

Derivatives (Brief study only)- Features of Derivatives -Types of Derivatives– Forwards – Futures- Options-Swaps- Commodity Futures – Major Commodity Exchanges in India

(12 Hours)

Suggested Readings

1. Khan, M.Y., Indian Financial System, *Tata McGraw Hill, New Delhi.*
2. Singh, Preethi, Dynamics of Indian Financial System, *Ane Books, New Delhi*
3. Guruswami, S., Capital Markets, *Tata McGraw Hill, New Delhi*
4. Avadhani, V. A., Investment and Securities Market in India, *Himalaya Publishing House.*

Journals

SEBI and Corporate Laws - Taxmann, New Delhi
SEBI Monthly Bulletin

Core Course 10: MARKETING MANAGEMENT

Instructional Hours:54

Credit: 3

Objective: *The objective of this course is to provide a sound understanding of the basic principles of marketing management and their applications in the business and industry.*

Module I

Marketing Management–Market and Marketing- Meaning- Definition of marketing- Marketing Concepts – Marketing environment- Functions of marketing-Marketing Management- Marketing Mix- 4Ps and 4Cs- Importance of marketing mix- Factors affecting marketing mix- Market Segmentation – Concept – Need – Basis-benefits- Market Targeting- Market Positioning- differentiated and undifferentiated marketing (12 Hours)

Module II

Product Mix- Product – Meaning- Classification of products- -Product Line and Product Mix-New Product development- Steps- Reasons for failure of new products- - Product Life Cycle- – Branding- Types of brand- Brand Equity- Brand Loyalty- Trade Mark- Packaging-Role of packaging- Essentials of good packaging- Product Labelling- Marketing of services- Pricing of Products- Factors Influencing Pricing- Pricing Policies and Strategies -Types of Pricing (12 Hours)

Module III

Price Mix – Pricing-Factors affecting pricing decision- Role of pricing in marketing strategy- Steps in formulating pricing- Pricing methods and strategies- Pricing of a new product- Resale Price Maintenance (12 Hours)

Module IV

Physical Distribution Mix- - Logistic and Supply Chain Management – Elements- Channels of Distribution –Types- Factors Affecting the Choice of a Channel of Distribution-Functions of various Intermediaries – retailing- Types of retailing- Direct Marketing- Merits and demerits (12 Hours)

Module V

Recent Trends in Marketing (Overview Only)-Relationship Marketing - Social Marketing -Online Marketing- -Green Marketing-Tele Marketing -Viral Marketing- Relationship Marketing-De-marketing- Remarketing- Guerilla marketing – Ambush Marketing. (6 Hours)

Suggested Readings

1. Kotler, Philip & Keller, Kevin Lane, Koshy, Abraham, & Mithileshwar Jha, Marketing Management, A South Asian Perspective, *Pearson Education*.
2. Armstrong, Gary, and Kotler, Philip, The Essentials of Marketing, *Pearson Education, New Delhi*
3. Majaro, Simon, The Essence of Marketing, *Prentice Hall, New Delhi*.
4. Chhabra, T.N., Principles of Marketing, *Sun India Publication*.
5. Czinkota, Marketing Management, *Vikas Publishing House (P) Ltd*.
6. *Biplab S Bose, Marketing management, Himalaya Publishing House, Mumbai*
7. Rajan Nair and Varma M M – *Marketing Management- Sultan Chand and Sons*
8. Sontakki C N, *Marketing Management- Kalyani Publishers*
9. Ramaswamy V S and Namakumari *Marketing Management , McMillan India Ltd*

SEMESTER 4

Core Course 11: CORPORATE ACCOUNTS – II

Instructional Hours -108

Credit - 4

Objective: To equip the students with the preparation of financial statements of insurance companies and to understand the accounting procedure for reconstruction and liquidation of companies.

Module – I

Accounts of Insurance Companies – Insurance Companies – Special Terms – Final Accounts of Life Insurance – Revenue Account - Profit and Loss Account and Balance Sheet (As per IRDA Regulation Act, 2002) – Determination of Profit in Life Insurance Business – Valuation Balance Sheet – Accounts of General Insurance Companies (Fire and Marine only) – Revenue Account – Profit and Loss Account and Balance Sheet (as per IRDA Regulation Act) **(20 Hours)**

Module – II

Accounts of Banking Companies – Meaning – Important Provisions of Banking Companies Act, 1949 – Preparation of Final Accounts of Banking Companies – Profit and Loss Account, Balance Sheet – Transactions of Special Type – rebate on bills discounted- Asset Classification and Provisions – Non Performing Assets- Capital Adequacy. **(20 hours)**

Module – III

Internal Reconstruction -Alteration of Share Capital- Capital Reduction –Accounting procedure- Surrender of Shares- Accounting Treatment – Revised Balance Sheet. **(20 Hours)**

Module – IV

Amalgamation, Absorption and External Reconstruction – Meaning- Amalgamation in the nature of Merger, Purchase , External Reconstruction – Applicability of AS 14- Calculation of Purchase consideration (all methods) – Journal Entries in the books of Transferor and Transferee Companies, Revised Balance Sheet (excluding inter - company holdings) **(34 Hours)**

Module –V

Liquidation of Companies – Meaning-Types – Contributories-Preferential Creditors- Fraudulent Preference- Preparation of Liquidator’s Final Statement of Account (Statement of Affairs excluded) .
(14 Hours)

Suggested Readings

1. Jain, S.P & Narang, K.L., Advanced Accountancy, Kalyani Publishers, New Delhi
2. Maheswari, S.N & Maheswari, S.K., Advanced Accounting, Vikas Publishing House, New Delhi
3. Shukla, M.C., & Grewal, T.S., Advanced Accountancy, S Chand and Company Pvt. Ltd, New Delhi
4. Shukla, S.M., & Gupta, S.P, Advanced Accounting , Sahitya Bhavan Publications, Agra.
5. MA Arulanandam and KS Raman, Advanced Accountancy, Himalaya Publishing House, Mumbai.
6. Raman B S, Corporate Accounting United Publishers
7. The Chartered Accountant (Journal), Institute of Chartered Accountants of India, New Delhi.

Core Course 12: QUANTITATIVE TECHNIQUES FOR BUSINESS- II

Instructional Hours: 108

Credit : 4

Objective: The objective of this course is to familiarize the students with more advanced tools of data analysis and forecasting and also to have an understanding of the fundamentals of theory of probability

Module – I

Bi-Variate Data Analysis- I- Correlation - Concept- Correlation and Causation -Types of Correlation- Methods- Scatter diagram and Correlation graph- -Karl Pearson’s Co-efficient of Correlation-Spearman’s Rank Correlation Co-efficient- - Probable Error-Concurrent Deviation Method- Concept of lag and lead in correlation (Problems- Un grouped Data only) (22 Hours)

Module II

Bi-Variate Data Analysis- II -Regression Analysis– Concept-Utility- Comparison of correlation and regression- Lines of Regression- - Regression Equations and regression co-efficient- Algebraic Methods of studying regression- Standard Error of estimate - (Problems- Un grouped Data only) (20 Hours)

Module – III

Index Numbers-Meaning-Importance- Characteristics and uses of Index Numbers- Types of index numbers- Problems in construction of index numbers- Methods of constructing price index, quantity index and value index- : Unweighted Index numbers- Simple aggregative method and Simple average of price relatives method- Weighted Index numbers- Weighted average of price relative method- Weighted aggregative method applying Laspeyer’s, Paasche’s and Fishers methods- Test of Consistency of index numbers- Cost of Living Index Numbers and its Uses- Construction of cost of living index numbers- Aggregate expenditure method and family budget method- Concepts of Fixed base index numbers, chain based index numbers, base shifting, deflating and splicing(*theory only*)- Limitations of index numbers (22 Hours)

Module - IV

Time Series Analysis-Meaning-Definition- Components of Time Series-Time series analysis- Utility of Time Series Analysis- Mathematical models- Determination of Trend- Free hand curve method- Method of semi averages- Method of Moving Average-Method of Least Squares (first degree only)- Shifting the origin of trend- converting annual trend into monthly trend- **(20 Hours)**

Module – V

Probability-Meaning-Definition - Basic Terms-Concepts-Approaches to Assigning Probability - Permutation and Combination-Theorems of Probability- Addition Theorem- Multiplication Theorem- Conditional Probability- Baye's Theorem of Inverse probability **(24 Hours)**

Suggested Readings

1. Richard, Levin & Rubin, David, S., Statistics for Management, *Prentice Hall of India, New Delhi.*
2. Spiegel, M.R., Theory and Problems of Statistics, *Schaum's Outlines Series, McGraw Hill Publishing Co.*
3. Kothari, C.R., Research Methodology, *New Age Publications, New Delhi.*
4. Sharma, J. K., Business Statistics, *Pearson Education.*
5. Gupta, S.C., Fundamentals of Statistics, *Himalaya Publishing House.*
6. Gupta, S.P. & Gupta, Archana, Elementary Statistics, *Sultan Chand and Sons, New Delhi.*
7. Elhance D N, Elhance, Veena and Aggarwal B M *Fundamentals of Statistics , Kitab Mahal*
8. Gupta, C B and Gupta, Vijay., *An Introduction to Statistical Methods, Vikas Publishing House*
9. Pillai , R S N and Bagavathi, V ., *Statistics , S Chand & Co*

Core Course -13

ENTREPRENEURSHIP DEVELOPMENT AND PROJECT MANAGEMENT

Instructional Hours: 90

Credit: 4

Objectives:

- *To develop entrepreneurial spirit among students*
- *To empower students with sufficient knowledge to start up their venture with confidence*
- *To mould young minds to take up challenges and become employer than seeking employment and to make them aware of the opportunities and support for entrepreneurship in India*

Module I

Introduction to Entrepreneurship- Definition and Meaning- Distinction between entrepreneur and manager- Characteristics and traits of an entrepreneur- Skills - Motivation of Entrepreneur- -Functions of an Entrepreneur- Role and importance of Entrepreneurship in economic development- Factors affecting growth of entrepreneurship **(10 Hours)**

Module II

Classification of entrepreneurs- Dimensions of Entrepreneurship-Intrapreneurship-Technopreneurship- Cultural Entrepreneurship- International Entrepreneurship-Ecopreneurship- Social Entrepreneurship and Women Entrepreneurship- Problems faced by Women Entrepreneurs-Entrepreneurship in Agriculture

sector and service sectors- New avenues- Dealership, Networking and Franchising- Entrepreneurship in MSME- Micro Small Medium Enterprises-Definition- Role of MSME- Steps to establish an enterprise.

(25 Hours)

Module III

Project Identification-Project- Meaning- Types- Project Management- Project life Cycle- Project identification- Sources of Project idea- Constraints in a project- Sources of Business idea-Protecting the Idea-Legal Protection in India-Trademarks- Copyright- Patent- Geographical Indication- Designs-Plant and Farmer Rights-

(15 Hours)

Module IV

Project Formulation and Report- Formulation of a project- Stages in project formulation- - preparation of a project report- contents- project appraisal- various aspects of appraisal (Problems of appraisal techniques excluded)

(20 Hours)

Module V

Entrepreneurial Support in India- Entrepreneurial Education and training- Entrepreneurship Development Programmes- Objectives and Methodology- The Concept, Role and Functions of Business Incubators- Start-Ups- Govt. of India Funding and Support for Start-Ups- Cluster Development Schemes- Pradhan Mantri Mudra Yojana- Industrial Estates- Special Economic Zones- Other initiatives and assistance- Green Channel clearances- - Bridge Capital- Seed Capital Assistance- Special Institutions for Entrepreneurial Development and assistance in India-Functions of EDII, NIESBUD, NSIC, SIDBI and DIC

(20 Hours)

Suggested Readings

1. Anjan, R. *Managing New Ventures, Concepts and Cases in Entrepreneurship*, New Delhi, PHI Learning Private limited.
2. Bhide A, *The Origin and Evolution of New Businesses*, New York, Oxford University Press.
3. Brandt, S. C. (1997). *Entrepreneurship: The 10 Commandments for Building a Growth Company*. New Delhi: Mc Millan Business Books.
4. Manjunath, N. (2008). *Entrepreneurship & Management*. Bangalore: Sanguine Technical Publishers.
5. Khanka S S- *Entrepreneurial Development*- S Chand and Sons
6. Desai, Vasant- *Small Scale Business and Entrepreneurship*- Himalaya Publications
7. AP Padnekar, *Entrepreneurship, Himalaya Publishing House, Mumbai*.
8. Rao, V S P- *Business, Entrepreneurship and Management*- Vikas Publishing House
9. Pandya, Rameswary- . *Skill Development and Entrepreneurship in India*, New Century Publications

SEMESTER 5

Core Course : COST ACCOUNTING- I

Instructional Hours: 108

Credit: 4

Objectives: To familiarise the students with cost concepts and to make the students learn the Fundamentals of cost accounting as a separate system of accounting.

Module I

Introduction to Cost Accounting- Meaning- Definition- Cost Concepts-Costing- Cost Accounting- Cost Accountancy- Objectives and functions of Cost Accounting- Cost Unit- Cost Centre- Responsibility Centres- Profit Centre- Cost Control- Cost Reduction- Distinction between Cost Accounting and Financial Accounting-Essentials of a good costing system- Installation of costing system- Methods and Techniques of Cost Accounting- Advantages and Disadvantages of Cost Accounting- Cost concepts and classification- elements of cost **(18 Hours)**

Module II

Accounting and Control of Material Cost- Material Purchase Procedure- Inventory control- Material Stock Level-EOQ- ABC- VED and FSN Analysis-JIT- Stock turnover- Material Issue control- Stores records- Bincard and Stores ledger- Documents authorizing movement of materials-Inventory systems: Perpetual and Periodic Inventory System-Continuous Stock Taking - Material Losses-Wastage- Scrap-Spoilage-Defectives- Pricing of issue of materials- FIFO- LIFO- Simple Average- Weighted Average- **(25 Hours)**

Module III

Accounting and Control of Labour Cost- Time Keeping and Time Booking-Methods - Systems of Wage Payment-Time Rate System- Piece Rate System- Differential Piece Rate – Taylor’s differential piece rate system- Merrick’s differential piece rate system- Gantt Task and Bonus plan- Incentive Plans- Halsey Plan - Rowan Plan-Idle Time- Overtime and their Accounting Treatment- Labour Turnover- Causes and effects- Methods of Calculating Labour Turnover. **(20 Hours)**

Module IV

Accounting for Overhead-Classification of Overhead- Segregation of semi variable overhead- Production overhead- Allocation and apportionment- Primary and Secondary Distribution Summary- Absorption of Overhead- Methods of absorption of overheads- Overhead absorption rates- Actual and pre-determined rates- Blanket and Multiple rates- Over-absorption and Under-absorption- Reasons- Disposal- Introduction to Activity Based Costing (Problems of ABC excluded) **(25 Hours)**

Module V

Preparation of Cost Sheet- Cost sheet- Objectives- preparation- Tender and Quotation-Reconciliation Statement –Need- Reasons for disagreements in Profits-Preparation- Memorandum Reconciliation Account **(20 Hours)**

Suggested Readings

1. Jain, S.P., & Narang, K.L., Advanced Cost Accounting, Kalyani Publishers, New Delhi.
2. Iyengar, S. P., Cost Accounting, Sultan Chand & Sons, New Delhi.

3. Maheswari, S.N., Advanced Cost Accounting, *Sultan Chand & Sons, New Delhi.*
4. Arora, M. N., Cost Accounting, *Vikas Publishing House Pvt. Ltd, New Delhi.*
5. J Madegowda, Advanced Cost accounting, *Himalaya Publishing House, Mumbai*
6. Shukla, M.C., and Grewal, T.S., Cost Accounting, *Sultan Chand & Sons, New Delhi.*
7. Lall Nigam B M and Jain I C, Cost Accounting Principles and Practice, Prentice Hall of India

Core Course 15: ENVIRONMENT MANAGEMENT AND HUMAN RIGHTS

Instructional Hours: 90

Credit: 4

Module I (18 Hours)

Unit 1 : Multidisciplinary nature of environmental studies (2 Hours)

Definition, scope and importance -need for public awareness.

Unit 2 : Natural Resources :

Renewable and non-renewable resources : Natural resources and associated problems.

Forest resources : Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forest and tribal people. **-Water resources** : Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems. **Mineral resources** : Use and exploitation, environmental effects of extracting and using mineral resources, case studies. **Food resources** : World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies. **Energy resources**: Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources, Case studies. **Land resources**: Land as a resource, land degradation, man induced landslides, soil erosion and desertification - Role of individual in conservation of natural resources- Equitable use of resources for sustainable life styles.

(10 Hours)

Unit 3: Ecosystems

Concept of an ecosystem -Structure and function of an ecosystem -Producers, consumers and decomposers- Energy flow in the ecosystem -Ecological succession-Food chains, food webs and ecological pyramids-Introduction, types, characteristic features, structure and function of the given ecosystem:- Forest ecosystem **(6 Hours)**

Module II (26 hours)

Unit 1: Biodiversity and its conservation

- Introduction –Bio geographical classification of India -Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values-India as a mega-diversity nation-Hotspots of biodiversity-Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts-Endangered and endemic species of India

(8 Hours)

Unit 2: Environmental Pollution

Definition, Causes, effects and control measures of: - Air pollution, Water pollution, Soil pollution, Marine pollution, Noise pollution, Thermal pollution, Nuclear hazards, Solid waste Management: Causes, effects and control measures of urban and industrial wastes- Role of an individual in prevention of pollution, Pollution case studies, Disaster management: floods, earthquake, cyclone and landslides.

(8 Hours)

Unit 3: Social Issues and the Environment

Urban problems related to energy, Water conservation, rain water harvesting, watershed management, Resettlement and rehabilitation of people: its problems and concerns, Case studies, Environmental ethics: Issues and possible solutions, -Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust, Case studies- Consumerism and waste products- Environment Protection Act - Air (Prevention and Control of Pollution) Act, Water (Prevention and control of Pollution) Act, Wildlife Protection Act, Forest Conservation Act, Issues involved in enforcement of environmental legislation, Public awareness

(10 Hours)

Module – III (15 Hours)

Recent developments- Green Accounting- Meaning- History- Scope and Importance- Importance- Advantages and limitations- Green Banking- Meaning- benefits- coverage- steps in green banking- environmental risks for banks- Green banking initiatives- International initiatives- Initiatives in India- Green Marketing- Meaning- Need and benefits- Challenges- Green marketing in India- Green washing and consequences- Eco tourism- significance- eco tourism activities in India- Opportunities and challenges – carbon credit and carbon exchanges (over view only) - Environmental audit- concept- need and scope

(15 Hours)

Module – IV (13 Hours)

Right to Information Act 2005- Basic terms- Public authority- Competent authority- Appropriate Government- Third Part- Information – record- Right to information- Objectives of the Act- Features of the Act- Obligation of Public authority- Procedure for request of information- time limit- fee- ground of rejection- appeal- exemption from disclosure- Right to access information on specific issues- Banking transactions, insurance transactions, government dealing and related services

(13 Hours)

Module – V (18 Hours)

Unit 1- Human Rights– An Introduction to Human Rights, Meaning, concept and development, Three Generations of Human Rights (Civil and Political Rights; Economic, Social and Cultural Rights).

Unit-2 Human Rights and United Nations – contributions, main human rights related organs UNESCO, UNICEF, WHO, ILO, Declarations for women and children, Universal Declaration of Human Rights.

Human Rights in India – Fundamental rights and Indian Constitution, Rights for children and women, Scheduled Castes, Scheduled Tribes, Other Backward Castes and Minorities

Unit-3 Environment and Human Rights - Right to Clean Environment and Public Safety: Issues of Industrial Pollution, Prevention, Rehabilitation and Safety Aspect of New Technologies such as Chemical and Nuclear Technologies, Issues of Waste Disposal, Protection of Environment

Conservation of natural resources and human rights: Reports, Case studies and policy formulation. Conservation issues of Western Ghats- mention Gadgil committee report, Kasthurirangan report. Over exploitation of ground water resources, marine fisheries, sand mining etc. **(18 Hours)**

Assignment may include Field study involving

- Visit to a local area to document environmental grassland/ hill /mountain
- Visit a local polluted site – Urban/Rural/Industrial/Agricultural Study of common plants, insects, birds etc
- Study of simple ecosystem-pond, river, hill slopes, etc

Suggested Readings

1. Bharucha Erach, Text Book of Environmental Studies for undergraduate Courses. University Press, IInd Edition 2013 (TB)
2. Clark.R.S., Marine Pollution, Clarendon Press Oxford (Ref)
3. Cunningham, W.P.Cooper, T.H.Gorhani, E & Hepworth, M.T.2001 Environmental Encyclopedia, Jaico Publ. House. Mumbai. 1196p .(Ref)
4. Dc A.K.Environmental Chemistry, Wiley Eastern Ltd.(Ref)
5. Down to Earth, Centre for Science and Environment (Ref)
6. Heywood, V.H & Watson, R.T. 1995. Global Biodiversity Assessment, Cambridge University Press 1140pb (Ref)
7. Jadhav.H & Bhosale.V.M. 1995. Environmental Protection and Laws. Himalaya Pub. House, Delhi 284p (Ref)
8. Mekinney, M.L & Schock.R.M. 1996 Environmental Science Systems & Solutions. Web enhanced edition 639p (Ref)
9. Miller T.G. Jr., Environmental Science, Wadsworth Publishing Co. (TB)
10. Odum.E.P 1971. Fundamentals of Ecology. W.B. Saunders Co. USA 574p (Ref)
11. Rao.M.N & Datta.A.K. 1987 Waste Water treatment Oxford & IBII Publication Co.Pvt.Ltd.345p (Ref)
12. Rajagopalan. R, Environmental Studies from crisis and cure, Oxford University Press, Published: 2016 (TB)
13. Sharma B.K., 2001. Environmental Chemistry. Geol Publ. House, Meerut (Ref)
14. Townsend C., Harper J, and Michael Begon, Essentials of Ecology, Blackwell Science (Ref)
15. Trivedi R.K., Handbook of Environmental Laws, Rules Guidelines, Compliances and Standards, Vol I and II, Enviro Media (Ref)
16. Trivedi R. K. and P.K. Goel, Introduction to air pollution, Techno-Science Publication (Ref)

17. Wanger K.D., 1998 Environmental Management. W.B. Saunders Co. Philadelphia, USA 499p (Ref)
18. (M) Magazine (R) Reference (TB) Textbook
19. Amartya Sen, The Idea Justice, New Delhi: Penguin Books, 2009.
20. Chatrath, K. J.S., (ed.), Education for Human Rights and Democracy (Shimla: Indian Institute of Advanced Studies, 1998)
21. Law Relating to Human Rights, Asia Law House,2001.
22. Shireesh Pal Singh, Human Rights Education in 21st Century, Discovery Publishing House Pvt.Ltd, New Delhi,
23. S.K.Khanna, Children And The Human Rights, Common Wealth Publishers,1998. 2011.
24. Sudhir Kapoor, Human Rights in 21st Century,Mangal Deep Publications, Jaipur,2001.
25. United Nations Development Programme, Human Development Report 2004: Cultural Liberty in Today's Diverse World, New Delhi: Oxford University Press, 2004.
26. Monica Loss,,Green Marketing Strategies and Consumer Behaviour, Global Vision Publishing House
27. Robert Dahlstrom- Green Marketing:Theory, Practice and Strategies, Cengage Learning India Private Limited
28. A N Sarkar , Green Banking , Atlantic Publishers
29. Thomas Aronsson and Karl Gustaf Lofgren, Edgar Handbook of Environmental Accounting, Elgar Publishing
30. M Sarngadharan and G Raju , Tourism and Sustainable Economic Developments: Indian and Global Perspectives – New Century Publishers
31. ICAI Study Material of Auditing
32. Right to Information Act, 2005

Core Course 16: FINANCIAL MANAGEMENT

Instructional Hours: 90

Credit: 4

Objectives:

To familiarise the students with the functional areas and principles of financial management.

Module I

Introduction-Meaning of Finance – Financial Management-Importance - Scope – Objectives – Profit Maximization – Wealth Maximization – Finance Function -Role of Finance Manager-Financial Management and other Disciplines- Concept of Time value of money- Discounting and compounding
(15 Hours)

Module II

Financing Decision - Sources of Finance – Equity – Debt – Preference- Retained earnings- Cost of Capital-Concept- Importance- Measurement of Specific Costs– Cost of Debt – Cost of Preference Capital – Cost of Equity – Cost of Retained Earnings – Capitalisation - Capital Structure-Meaning of Capital Structure –Optimum Capital Structure- Factors Determining Capital Structure- Leverage-Meaning-Types-Operating Leverage- Meaning and Computation -Financial Leverage- Meaning and Computation-

Composite Leverage- Meaning and Computation- Financial Risk and Business Risk. (*Capital Structure theories excluded*) **(30 Hours)**

Module III

Investment Decision- Capital Budgeting – Meaning- Importance- Determination of Cash Flows – Evaluation Methods –Traditional Techniques- Pay Back Period – ARR –Discounted Cash flow techniques- NPV –IRR – Profitability Index – Discounted PBP- Interpretation of Results. **(20 Hours)**

Module IV

Management of Working Capital - Meaning–Definition – Importance-Types of working capital- Gross Working Capital- Net Working Capital- Factors Determining Working Capital–Estimation of Working Capital Requirements- Methods **(15 Hours)**

Module V

Dividend Decision- Meaning- Types of Dividend-Dividend Policy-Conservative Vs Liberal Policy-Pay-out Ratio- Retention Ratio- Factors Determining Dividend Policy- Bonus Shares- Stock Split and Reverse Split. (*Dividend theories excluded*) **(10 Hours)**

Suggested Readings

1. Pandey, I. M., Financial Management, Vikas publishing House Pvt. Ltd. New Delhi.
2. Khan, M.Y. & Jain, P.K., Financial Management, McGraw Hill (India) Private limited; New Delhi.
3. Rustagi, R. P., Financial Management, Theory, concepts and Problems, Galgotia Publishing Company, New Delhi.
4. Prasanna Chandra, Financial Management, Tata McGraw Hill publishing company limited, New Delhi.
5. OP Agarwal, Financial Management, Himalaya Publishing House, Mumbai
6. Raman B S, Financial Management- United Publishers
7. Srivastava, T. M., Financial Management, Principles and Problems, Pragatiprakashan, Meerut.

SEMESTER 6

Core Course 17: COST ACCOUNTING- II

Instructional Hours: 108

Credit: 4

Objectives: I To acquaint the students with different methods and techniques of costing, and to enable the students to identify the methods and techniques applicable for different types of industries.

Module I

Specific Order Costing- Job Costing – Meaning - Procedure- Batch Costing- Meaning- Procedure- Economic Batch Quantity- Contract Costing-Meaning- Objectives- Work-in-Progress Work Certified and

Uncertified- Retention money and progress payments- Determination of Profit on Incomplete Contract- Treatment-Balance Sheet- Escalation Clause- Cost-plus Contract.

(20 Hours)

Module II

Operating Costing- Definition- Transport costing- Canteen costing- Hospital costing

(15 Hours)

Module III

Process Costing- Process Accounts- Process Losses- Normal and Abnormal losses- Abnormal Gain - Treatment- Joint Products and By-products- Methods of Apportioning Joint costs- Accounting for By-products

(24 Hours)

Module IV

Marginal Costing and Break Even Analysis- Marginal Costing- Meaning-Definition- Difference between Marginal Costing and Absorption Costing - Differential Costing- Advantages and Disadvantages of Marginal Costing -Break Even Analysis- Cost Volume Profit Analysis- Break even chart- Simple Break Even Chart- Marginal Costing and Decision Making- Pricing Decisions- Key Factor- Make or Buy- Sales Mix- Acceptance of foreign Order.

(25 Hours)

Module V

Budget and Budgetary Control- Meaning and Definition- Objectives- Steps in budgetary control- - Budget Manual Budget Committee- Budget key factor- Types of budgets- Advantages and limitations of budgetary control- Preparation of Cash Budget and Flexible Budget- Zero base Budgeting- Performance Budgeting.

(24 Hours)

Suggested Readings

1. Jain, S.P., & Narang, K.L., Advanced Cost Accounting, *Kalyani Publishers, New Delhi.*
2. Iyengar, S. P., Cost Accounting, Sultan Chand & Sons, New Delhi.
3. Maheswary, S.N., Advanced Cost Accounting, Sultan Chand & Sons, New Delhi.
4. Arora, M. N., Cost Accounting, Vikas Publishing House Pvt. Ltd, New Delhi.
5. Shukla, M.C., & Grewal, T. S., Cost Accounting, Sultan Chand & Sons, New Delhi.
6. J Madegowda, Advanced cost accounting, *Himalaya Publishing House, Mumbai*
7. Lall Nigam B M and Jain I C- Cost Accounting Principles and Practice- Prentice Hall of India

Core Course 19: ADVERTISEMENT AND SALES MANAGEMENT

Instructional Hours: 72

Credit: 3

OBJECTIVE- *To make the students aware of the strategy, concept and methods of advertising and sales promotion.*

MODULE-1

Introduction : Advertising-Meaning-Origin and development - Objectives-Importance- Functions of advertising-Role of advertisement in marketing mix- Classification and Types of advertisement- Merits

and demerits- Advertisement process- Advertising planning- Key players in advertising industry- Advertisement agencies- Types and functions of advertising agencies- -Advertisement campaign - Social, economical and legal aspects of advertisement- Ethics in advertisement- meaning- perceived role of advertisement-Forms of ethical violation- misleading advertisements- advertising to children- product endorsements- stereotyping, cultural, religious and racial sensitivity in advertising- obscenity in advertising-misleading and deceptive advertising- false claims- Advertisement Standards Council of India – Regulation of advertising in India **(18 Hours)**

MODULE-2

Advertisement appeal and media- Advertisement appeal- Meaning- essentials of an advertisement appeal- types of appeal- advertisement copy- requisites of an effective advertisement copy-types of copy- Elements of copy-Lay out- Functions of lay out- Elements of layout- Principles of design and layout- copy writing- qualities of a good copy writer- -Copy testing and advantages- Advertising media-Media planning and strategy-Types of media- Media selection-Importance of media planning and selection- problems in media planning- Internet as an advertisement medium- Objects of internet advertisement- Advantages and disadvantages of internet advertising – Permission marketing- Steps in permission marketing- **(18 Hours)**

MODULE-3

Advertising research-Need for advertisement research- Measuring the effectiveness of advertising- Importance of measuring the effectiveness- Methods: Pre-testing, Concurrent testing and Post- testing- Constraints in measuring the effectiveness- DAGMAR model **(10 Hours)**

MODULE-4

Sales promotion-Promotion mix- Components- Sales promotion-Concept- Definition-Scope- Objectives- Importance of sales promotion- Methods and techniques of sales promotion -Sales promotion strategies- Differences between advertisement and sales promotion—Advantages and drawbacks of sales promotion- Sales promotion budget and its preparation-Sales promotion campaign- Evaluation of sales promotion strategies **(18 Hours)**

MODULE-5

Personal selling-Nature and importance-Essential elements of personal selling- Process-Principles of personal selling- Types of sales persons-Sales force management-Designing and managing the sales force- Evaluating sales force **(8 Hours)**

Suggested Readings

1. Wells, Moriarty & Burnett, *Advertising, Principles & Practice*, Pearson Education
2. Kenneth Clow. Donald Baack, *Integrated Advertisements, Promotion and Marketing communication*, Prentice Hall of India, New Delhi,
3. S. H. H. Kazmi and Satish K Batra, *Advertising & Sales Promotion*, Excel Books, New Delhi,
4. Manendra Mohan - *Advertising Management – Concepts and Cases*, Tata McGraw Hill
5. Sherlekar, Victor & Nirmala Prasad - *Advertising Management - Himalaya Publishing House*
6. S.A. Chunawalla - *Promotion Management Himalaya Publishing House*
7. C.L. Tyagi, Arun Kumar- *Advertising Management- Atlantic Publishers and Distributors*

Core Course 19: AUDITING AND ASSURANCE

Instructional Hours – 90

Credits: 4

objectives:

1. *To familiarize the students with the principles and procedure of auditing.*
2. *To enable the students to understand the duties and responsibilities of auditors and to undertake the work of auditing.*

Module I

Introduction-Meaning and Nature of Auditing- Definition of Audit- Basic Principles Governing an Audit, Scope of Audit, Objectives of Audit- Main Object and Subsidiary Objects -Advantages of an Audit, Inherent Limitations of Audit , Differences between Accountancy and Auditing. The Auditor: Qualities and Qualifications of an Auditor- Types and Conduct of Audit- Tax Audit- Performance Audit- Social Audit. Auditing standards : Overview, Role of Auditing and Assurance Standards Board in India

(17 Hours)

Module II

Audit Engagement, Documentation and Evidence – Audit Planning, Audit Programme Preparation before Audit. Audit files: Permanent and current audit files, Ownership and custody of working papers, Audit working papers. Audit evidence – Meaning, Types, Reliability of audit evidence, Methods of obtaining audit evidence- Physical verification, Documentation, Direct confirmation, Re-computation, Analytical review techniques, Representation by management.

(15 Hours)

Module III

Internal Control –Concept of internal control, Internal Control and the Auditor, Internal Control Questionnaire, Internal Control and Computerized Environment-General Control and Application Controls- Internal Check - Meaning and Definition , Objects of Internal Check, Auditors Duties as Regards Internal Check, Internal Audit- Internal Auditor and independent Auditor - Difference between Internal Check- Internal Control and Internal Audit- Internal Check as Regards Cash Transactions, purchases- sales- wages and stores. Vouching- meaning of Vouching- Definition -Vouchers- Points to be noted in Vouchers-Importance of vouching- Vouching of Cash Transactions - Vouching of Receipts and Payments, Vouching of Wages. Verification and Valuation of Assets and Liabilities - Concept, objects, Auditors Duty in Verification and Valuation.

(25 Hours)

Module IV

Audit of Limited Companies –(based on Companies Act 2013) Company Auditor- Qualifications- Disqualifications- Appointment Removal- Powers and Duties of an Auditor- Liabilities of an Auditor - Audit Report- Contents and Types.

(15 Hours)

Module V

Special Audits and Investigation – Government Audit, General Duties and powers of Comptroller and Audit General , Miscellaneous Audits (Procedure only)- Audit of Charitable organizations- Educational Institutions (College) – Hospital - Club- Audit in computerized environment- Audit around computer and audit through computer- Investigation- Meaning and Definition of Investigation- Scope of investigation- Distinction between Investigation and Auditing- Investigation on Acquisition of Running Business, Investigation when Fraud is suspected.

(18 Hours)

Suggested Readings

1. Tandon, B.N., Sudharsanam, S., & Sundharabahu, S., A Handbook of Practical Auditing, *S.Chand & Compaly Ltd, New Delhi.*
2. Arun Jha, *Auditing – University Edition, Taxman Publications*
3. Saxena, R. G., Principles and Practice of Auditing, *Himalaya Publishing House, Mumbai*
4. Sharma, T. R., Auditing *Sahitya Bhawan Publication Agra.*
5. Saxena, R. G., Principles and Practice of Auditing, *Himalaya Publishing House, New Delhi.*
6. ICAI Study material for IPCC and Final

Core Course 20 : MANAGEMENT ACCOUNTING

Instructional Hours: 90

Credit: 4

Objective: *To acquaint the students with management accounting techniques for the analysis and interpretation of financial statements and to study the basic framework of financial reporting.*

Module I

Introduction to Management Accounting – Meaning- evolution- Definition- Nature and characteristics- scope- Objectives- Functions- Distinction between financial accounting and management accounting- distinction between cost accounting and management accounting- Tools of management accounting- Limitations of Management accounting **(10 Hours)**

Module II

Financial Statement Analysis - Financial Statements –Nature and limitations of financial statements- Analysis and Interpretation of Financial Statements- Objectives – Importance – Types of Financial Analysis – Internal- External – Horizontal – Vertical – Techniques of Analysis – Comparative Statements – Common Size Statements – Trend Analysis. **(15 Hours)**

Module III

Ratio Analysis –Meaning – Objectives- Importance and Uses – Limitations – Types and classification of Ratios – Liquidity Ratios –Solvency Ratios- Activity Ratios - Profitability Ratios – Preparation of Trading and Profit and Loss Account and Balance Sheet by using Ratios. **(25 Hours)**

Module IV

Fund flow Analysis – Introduction – Meaning and Definition of Fund - Need for Fund Flow Statement – Managerial Uses- Limitations –Schedule of Changes in Working Capital- Funds from operations- Preparation of Fund Flow Statement. **(20 Hours)**

Module V

Cash Flow Statement – Introduction – Meaning – Uses- Comparison between Fund Flow Statement and Cash Flow Statement – Preparation of Cash Flow Statement as per Accounting Standard 3 – Direct Method and Indirect method **(20 Hours)**

Suggested Readings:

1. Manmohan & Goyal, S.N., Management Accounting, *Sahitya Bhawan Publication, New Delhi.*
2. Lal, Jawahar, Corporate Financial Reporting, Theory & Practice, *Taxmann Applied Services, New Delhi.*
3. J Madegowda, Advanced Management Accounting, *Himalaya Publishing House, Mumbai*
4. Arora, M. N., Cost Accounting and Management Accounting, *Vikas Publishing House Pvt. Ltd, New Delhi.*
5. S P Gupta, Management Accounting, Sahityabhavan, Agra
6. Raiyani, J. R., & Lodha, G., International Financial Reporting Standard (IFRS) and Indian Accounting Practices, *New Century Publications.*
7. Pillai R S N and Bagavathi- *Management Accounting- S Chand & Company*
8. Management Accountant (Journal), *Institute of Cost Accountants of India, Kolkata.*

**Optional Core Courses
Finance & Taxation
SEMESTER III**

Optional – 1- GOODS AND SERVICES TAX

Instructional hours 90

Credit 4

Course objective : *To give the students a general understanding of the GST law in the country with a practical perspective and employability to the students in the commercial tax practices.*

Module 1

Stages of Evolution of GST - Methodology of GST - CGST - SGST - IGST - Important concepts and Definitions. GSTN. **(30 hours)**

Module 2

Levy and Collection of Tax - Scope of Supply - Composite and Mixed Supplies- Levy and Collection - Time of Supply of Goods - Time of Supply of Services - Input Tax Credit - Recovery of Credit - Tax Invoice - Unauthorised Collection of Tax - Credit Notes - Debit Notes - Accounts and Records. **(20 hours)**

Module 3

Registration - Returns And Payment of Tax - Persons Liable for Registration - Compulsory Registration - Deemed Registration- Procedure For Registration - Amendment of Registration - Cancellation of

Registration - Returns - Furnishing Details of Supplies - Payment of Tax, Interest, Penalty - Tax Deduction at Source - Collection of Tax At Source - Refunds. **(15 Hours)**

Module 4

Assessment - Types - Audit Inspection - Search - Seizure - Inspection of Goods in Movement - Power of Authorities - Demands And Recovery - Fraud and Suppression of Facts - Liabilities - Provisional Attachment. **(15 Hours)**

Module 5

Appeals - Appellate Authorities - Powers - Procedure - Appeal to High Court -Supreme Court - Offences and Penalties. **(10 Hours)**

(All the provisions in the Central GST, State GST and Integrated GST Acts and Rules as amended up to date will be applicable)

Suggested Readings:

- 1) *Indirect Taxes - Vinod K Singania, Taxmann's Publications, New Delhi*
- 2) *Indirect Taxes - H.C Mehrotra, Sahitya Bhavan Publications, New Delhi*
- 3) *Bare Act CGST*
- 4) *Bare Act SGST*
- 5) *Bare Act IGST*

SEMESTER IV

Optional Core – 2: FINANCIAL SERVICES

Instructional Hours: 90

Credit: 4

Objectives: 1. *To provide the students with an overall idea of financial services available in the country and to create an understanding about recent trends in financial services sector.*

MODULE I

Introduction to Financial Services – Meaning – Types- Fund Based Financial Services- Fee Based Financial Services- Introduction to Merchant Banking Services in India- Role and Functions of Merchant Bankers **(15 Hours)**

MODULE II

Venture Capital and Securitisation - Features and Types of Venture Capital- various Stages of Venture Capital Financing- Factors affecting investment decision- Investment nurturing- Venture capital Exit strategies- Venture Capital Firms in India- Securitisation of Debt- Parties involved- Steps of securitisation - Types of securitisation- Advantages- Limitations – SARFAESI Act 2002- Background- Purpose of the Act- Main provisions **(20 Hours)**

MODULE III

Leasing and Factoring– Leasing- Essentials –Types- Operating and Financial Lease- Sale and Lease back- Other classifications- Advantages and Limitations of Leasing—Leasing Vs Hire purchase- Factoring-Parties involved- Process of Factoring- Functions of a Factor- Different Forms of Factoring Services- Factoring Vs. Bill Discounting – Forfaiting- Mechanism of Forfaiting- Factoring Vs. Forfaiting **(20 Hours)**

MODULE IV

Credit Rating –Meaning, types of Credit Rating- Need for credit rating-Factors affecting credit rating- Advantages and Limitations of Credit rating- Rating process and methodology Credit Rating Agencies in India. **(15 Hours)**

MODULE V

Mergers and Acquisition- Expansion of business firms- Internal and external expansion- forms of combinations- merger, acquisition and take over- Reasons for merger- Types of merger- Legal aspects involved- Valuation methods- Forms of financing mergers-Merger Vs Take over- Types of take over- Defense strategies against hostile takeovers- Mergers in India- Recent trends in financial services- Shadow Banking -Angel Funds- Hedge funds **(20 Hours)**

Suggested Readings

1. Bhole, L.M., Financial Institutions and Markets: Structure, Growth and Innovations *Tata McGraw Hill. New Delhi:*
2. Gupta, N. K., Financial Markets, Institutions and Services, *Ane Books Pvt. Ltd. New Delhi*
3. Khan, M.Y., Financial Services - *Tata McGraw Hill New Delhi.*
4. Siddaiah, T., Financial Services Pearson Education New Delhi.
5. VA Avadhani, Financial Services in India, *Himalaya Publishing House, Mumbai*
6. Yogesh, M., Investment Management, *PHI Learning Pvt. Ltd. New Delhi:*
7. Shashi K Gupta and Nisha Agarwal- *Financial Services- Kalyani Publishers*

SEMESTER V

Optional Core-III: INCOME TAX- I

Instructional Hours-90

Credit-4

Objective : *To familiarise the students with Income Tax Act 1961 and to enable the students to compute Income taxable under the first three heads of Income.*

Module I

Introduction - Brief History of Income Tax in India - Basic Concepts- Finance Act- Definition of Income- Gross Total Income- Total Income-Assessee- Assessment Year Average Rate of Tax - Maximum Marginal Rate- Previous Year - Accelerated Assessment -Person - Finance Act- Rates of Income Tax-Capital and Revenue **(15 Hours)**

Module II

Residential Status- Incidence of Tax- Income Exempt from Tax- Heads of Income. **(15 Hours)**

Module III

Income from Salary- Chargeability- Definition – Perquisites- Profit in lieu of Salary -Deductions from Salary- Provident Funds and Treatment - Computation of Income from Salary **(25 Hours)**

Module IV

Income from House Property - Basis of Charge - Deemed Ownership- Income from House Property Exempt from Tax- Annual Value and its Determination in Various Cases- Deductions Permissible- Unrealised Rent and Recovery of Unrealized Rent and Arrears of Rent- Computation of Income from House Property **(15 Hours)**

Module V

Profit and Gains of Business or Profession - Chargeability - Deductions Expressly Allowed - General Deductions - Depreciation - Expenses/Payments Not Deductible - Expenses Allowed on Actual Payment Basis Only- Deemed Profits U/S 41 - Computation of Profits and Gains of Business or Profession

(20 Hours)

Suggested Readings

1. Singhania, Vinod, K., & Singhania Monica, Students Guide to Income Tax, *Taxman Publication, New Delhi.*
2. Mehrotra, H.C., Goyal, S. P., Direct Taxes Law and Practice- *Sahitya Bhawan Publications, Agra.*
3. Gaur, V.P, & Narang, D.B., Direct Taxes- *Kalyani Publishers, New Delhi.*
4. Income Tax Act

SEMESTER VI

Optional Core-IV: INCOME TAX -II

Instructional Hours-90

Credit-4

Objective- *To have an understanding of determination of Total Income and tax payable and to get an overview regarding returns to be filed by an individual and also assessment procedure*

Module-I

Capital gains - Basis of charge - Capital assets - Kinds- Computation of Short term and Long term Capital Gains- Computation of Capital Gain in following Special Cases - Conversion of Capital Asset into Stock in Trade - Transfer of Capital Asset by a Partner to a Firm, AOP, BOI - Compensation on Compulsory Acquisition of Assets and also Enhanced Compensation - Right Share and Bonus Shares - Converted Shares/Debentures - Capital Gains Exempt from Tax - Capital Gains Account Scheme - Computation of Income from Capital Gain. **(20 Hours)**

Module-II

Income from Other Source- General and Specific Chargeability- Kinds of Securities and Grossing up of Interest- Bond Washing Transaction- Deductions Allowed - Deduction Not permitted- Computation of Income under the head Income from Other Source. **(10 Hours)**

Module-III

Clubbing of Income - Aggregation of Incomes- Set off and Carry forward of Losses - Order of Set off - Computation of Gross Total Income - Deductions under Chapter VI A -Payment or Contribution deductions applicable to individuals from Sec 80C to 80GGC and deduction under Sec 80U- Total income **(25 Hours)**

Module-IV

Assessment of individuals - Agricultural Income - Partly Agricultural Income - Clubbing of Agricultural Income - Computation of Tax **(20 Hours)**

Module-V

Income Tax authorities - Powers and Functions - Assessment- Assessment procedure- Types of Return – E- filing of Return - Return through TRP- PAN - Types of Assessment - Tax Deducted at Source- TCS- TAN - A brief study on areas (a) Advance payment of tax (b) Refund (c) Recovery of tax (d) Tax Clearance Certificate – Tax planning -Tax evasion – Tax avoidance – Tax management (theory only)
(15 Hours)

Suggested Readings

1. Singhania, Vinod, K, & Singhania Monica, Students Guide to Income Tax, *Taxmann Publication, New Delhi.*
2. Mehrotra, H.C., & Goyal, S. P., Direct Taxes-Law and Practice, *Sahitya Bhawan Publications, Agra.*
3. Gaur, V.P., & Narang, D.B., Direct Taxes, *Kalyani Publishers, New Delhi.*
4. Income Tax Act

Optional Courses- Computer Applications

SEMESTER III

Optional Core I-INFORMATION TECHNOLOGY FOR BUSINESS

Instructional Hours: 90 (54 theory and 36 practical)

Credit: 4

Objectives: 1. *To make the students aware of the role of information technology in business and make them capable of developing web pages for business*

Module I

Introduction to Information Technology -Informatics - Information Technology -E-World -Information Systems–Hardware and Software: Input, Processing, Storage, Output and Communication Hardware–Software: System Software and Application Software – Operating System: WINDOWS, UNIX and LINUX – Versions. Free Software Movement – Futuristic IT – Artificial Intelligence – Virtual Reality.
(16 Hours)

Module II

Social Informatics - IT and Society –IT Applications in Commerce, Business and Industry – IT Applications in Education, Teaching and Learning – Computer and Health Issues – Proper Usage of Computers and Internet – Cyber Ethics - Cyber Addiction –Cyber Crime -E-waste and Green Computing.
(12 Hours)

Module III

Network and Communications - Computer Networks – Types of Networks: WAN, MAN, LAN, PAN, CAN- Benefits of Networks, Network Topology –Work Group Computing & Groupware - Telecommuting & Virtual Offices - Network Security –Firewalls. Communication Medium: Wired and Wireless – Generations in Communication.
(15 Hours)

Module IV

HTML and Webpage - Introduction to HTML – Essentials- Static & Dynamic Web Pages - Structure of a Web Page - Designing Web Pages- HTML Tags -Text Formats- Working with Text- Presenting and Arranging Text-Paragraphs- Animated Effects: Marquee – using White Space - Tables in HTML-

Working with Links, E-mail Links, Lists, Images, Thumbnails, Rollover Images, Audio & Video-Forms & Frames - Website Management. **(34 Hours)**

Module V

Internet -Working Concepts -Devices, History, Benefits and Drawbacks - Internet Structure, Internet Protocols: TCP/IP, FTP, HTTP, etc., IP Address, Domain Name System (DNS), URL, Web Browsers, WWW Consortium, Search Engines – Types, Academic Search Techniques - Business Applications of Internet, Internet Access Methods - Intranet and Extranet.

(13 Hours)

Practical Training:

1. Designing a web page for your Department
2. Designing a web page for a Retail Marketing Firm.
3. Design a web page for a Hotel

Suggested Readings

1. Alexis Leon & Mathews Leon, Fundamentals of Information Technology, *Vikas Publishing House, New Delhi.*
2. Williams & Sawyer, Using Information Technology (6th Edition), *Tata McGraw Hill Company.*
3. Avi Silberschatz Peter Galvin & Greg Gagne, Operating System Concepts (Windows XP update) .*Willey India.*
4. *Uyless Black*, Computer Networks, Protocols, Standards and Interface, *Prentice Hall India Pvt. Ltd.*
5. Nagpal, D.P., Web Design Technology Theory and Techniques on the Cutting Edge, *S.Chand & Company Ltd*

SEMESTER IV

Optional Core II: INFORMATION TECHNOLOGY FOR OFFICE

Instructional Hours: 90 (54 theory and 36 practical)

Credit: 4

Objectives- *The objective of this course is to make the students capable of managing the office activities with the help of information technology.*

Module-I

Word Processing Package: MS-Word 2013- Introduction-Features- Word User Interface Elements- Creating New Documents- Basic Editing- Saving a Document- Printing a Document- Print Preview-Page Orientation- Viewing Documents- Setting Tabs-Page Margins- Indents- Ruler- Formatting Techniques- Font Formatting- Paragraph Formatting- Page Setup- Headers &Footers-Bullets and Numbered List- Borders and Shading- Find and Replace-Page Break Page Numbers-Mail Merging-Spelling and Grammar

Checking- Thesaurus- Macros- Tables- Side-By-Side and Nested Tables- Formatting Tables- Drawing- Word art- Paint Brush Document Templates – Email Editor. **(18 Hours)**

Module-II

Desktop Publishing- PageMaker 7.0 - Introduction to Desktop Publishing as a Process- PageMaker Tools and Palettes- Working With Objects -Type Styling Options - Working With Text - Formatting Options- Leading, Margins and Indents - Scaling Text-Paragraph Formatting Options -Working With Grids - Creating Frames - Layers. **(18 Hours)**

Module-III

Spreadsheet Package: MS -Excel 2013-Introduction-Excel User Interface- Working With Cell and Cell Addresses- Selecting a Range, Moving, Cutting, Copying With Paste-Inserting and Deleting Cells- Freezing Cells- Adding, Deleting and Copying Worksheet Within a Workbook- Renaming a Worksheet- Cell Formatting Options- Formatting Fonts- Aligning-Wrapping and Rotating Text- Using Borders- Boxes and Colors- Centering a Heading, Changing Row/Column Height / Width-Formatting a Worksheet Automatically- Insert Comments- Clear Contents in a Cell- Using Print Preview- Preparing Worksheet for the Printer- Selecting Print Area-Margin and Orientation- Centering a Worksheet- Using Header and Footer- Inserting Page Breaks- Sorting Data. **(22 Hours)**

Module-IV

Advanced Features of Excel: All Functions in Excel- Using Logical Functions-Statistical Functions- Mathematical Functions - Linking Data between Worksheet- Elements of Excel Charts-Categories- Create a Chart- Choosing Chart Type- Edit Chart Axis - Titles, Labels, Data Series and Legend- Adding a Text Box- Rotate Text in a Chart- Converting a Chart on a Web Page- Saving a Chart- Designing of Templates in Excel. **(20 Hours)**

Module-V

Presentation Package: Ms-Power Point 2013-Advantages of Presentation- Screen Layout- Creating Presentation- Inserting Slides-Adding Sounds and Videos-Formatting Slides -Slide Layout Views in Presentation - Colour Scheme- Background Action Buttons- Slide Transition- Custom Animation- Creating Master Slides- Managing Slide Shows - Using Pen Setting Slide Intervals. **(12 Hours)**

Practical Training:

1. Create a small poster using PageMaker
2. Create a Brochure using PageMaker
3. Prepare Pay rolls in Excel
4. Conditional Cell Formatting
5. Analysis and presentation of data using charts in Excel
6. Usage of Functions in Excel
7. Mail merging feature of Word.

Suggested Readings

1. Gini, Courter & Annette Marquis, Ms-Office 2013, *BPB Publications*
2. Patrick Blattner, Louie Utrich. Ken Cook & Timothy Dyck, *Special Edition Ms Excel 2013, Prentice Hall India Pvt. Ltd.*
3. Atman Rebecca & Atman Rich, *Mastering PageMaker, BPB Publications*
4. *Building a Foundation with Microsoft Office 2013*
5. *Welcome to Microsoft Office*

SEMESTER V

Optional Core III: COMPUTERIZED ACCOUNTING

Instructional Hours: 90 (54 theory and 36 practical)

Credit :4

Objectives:

1. To equip the students to meet the demands of the industry by mastering them with industry sought after computerized accounting packages.
2. To expose the students to computer applications in the field of accounting.
3. To develop practical skills in the application of Tally Accounting Package.

Module I

Introduction to Computerized Accounting- Computerized Accounting Vs. Manual Accounting- Merits of Computerized Accounting –Tally ERP9-Features of Tally ERP 9– Screen Components–Creation of Company-Selecting a Company – Altering/ Modifying Company Creation Details – Deleting a Company – F 11 Features – F 12 Configuration. **(6 Hours)**

Module II

Accounts and Vouchers– Account Groups – Pre-Defined Groups – Creating Single& Multiple Groups – Creation of Primary Account Groups – Creating Ledger Accounts in Single & Multiple – Displaying- Altering and Deleting Account Groups and Ledgers –Accounting Vouchers- Entering Transactions in Accounting Vouchers – Bill Wise Details -Altering and Deleting a Voucher Entry – Creating New Voucher Types – Modifying an Existing Voucher – Duplicating a Voucher – Optional Vouchers – Post-Dated Vouchers – Reverse Journal – Bank Reconciliation Statement - Creating Budget - Generating Reports - Configuring Reports Balance Sheet – Profit and Loss Account – Trial Balance – Day Books – Account Books –Statement of Accounts – Ratio Analysis - Cash Flow - Fund Flow – List of Accounts – Exception Reports. **(20 Hours)**

Module III

Accounts With Inventory– Enabling F 11 and F 12 - Stock Category – Stock Group Single/Multiple Creation of Stock Category and Stock Group – Creation of Units of Measurement – Creating Single/Multiple Stock Items – Creating Godowns - Displaying, Altering and Deleting Stock Groups, Units, Items and Godowns – Cost Categories- Cost Centres – Creating Cost Categories and Cost Centres - Displaying, Altering and Deleting Cost Categories and Cost Centres – Purchase / Sales Orders - Inventory Vouchers - Using Inventory Vouchers – Using Accounting Vouchers With Inventory Details (Invoice Mode) - Tally Security - Tally Vault –Tally Audit – Advanced Security Control – Back-Up and Restore – Inventory Reports – Stock Summary - Inventory Books – Statement Of Inventory. **(22 Hours)**

Module IV

Accounting With Tax– F 11 &F 12 Settings For Taxation – TDS – Ledgers Related to TDS – Creating TDS Voucher Types - TDS Reports – TCS – Service Tax - VAT –VAT Terminologies – Computing VAT – Ledgers and Vouchers Pertaining to VAT – VAT Reports – VAT Forms – Interstate Trade and CST. **(20 Hours)**

Module V

Payroll: Enabling Payroll – Creating Pay Heads – Single/Multiple Creation of Employee Groups - Single/Multiple Creation of Employee Head – Salary Details – Configuration of Salary Details - Creating Units of Work – Managing and Creating Attendance / Production Types – F 12 Payroll Configuration – Payroll Vouchers – Creating Payroll Voucher Types -Displaying, Altering and Deleting Payroll

Documents – Payroll Reports (Full) – Configuring All Payroll Reports – Statutory Deductions – PF – Employers Contribution to PF – PF Ledger Heads– PF Related Heads in Pay Structure –Gratuity Calculation, Creation and Accounting - Generating a Sample Pay Slip – Employee Loan & Salary Advance Management. **(22 Hours)**

Practical Training

- Prepare final accounts of a Company in Tally ERP 9 with Inventory
- Prepare final accounts of a company in Tally ERP 9 incorporating VAT and TDS
- Preparation of payroll

Suggested Readings

1. Roopa, Tally for Every one - *ATC Publishing Chennai*.
2. Nadhani, A.K. Implementing Tally ERP 9
3. A Comprehensive Guide to Tally ERP 9, Tally Manual

SEMESTER VI

Optional Core IV: SOFTWARE FOR BUSINESS AND RESEARCH

Instructional Hours 90 (54 theory and 36 practical)

Credit 4

Objectives:

- To impart knowledge to use IT in business research analysis.
- To develop practical skills in the applications of business software.

Module I

Data Analysis: Data – Meaning and Definition – Sources of Data – Data Life Cycle – Processing – Methods and Types- EDP – Information – Value of Information in Decision Making - Information and Analysis of Business Research – Data Processing Software. **(6 Hours)**

Module II

Introduction to SPSS: Menus, tool bar – SPSS layout- Variable View – Data View – Output View – Terminology - Basic Steps for Performing any Statistical Procedure – Creating a Data file- Defining Variables- Variable Characteristics- Default Values - Entering the Data – Inserting Variable and Cases – Selecting Cases - Listing Cases – Identifying Duplicate Cases and Unusual Cases- Sorting Cases. **(24 Hours)**

Module – III

Data Transformation: Computing New Variables – Recoding Variables – Automatic Recode – Visual Binning – Rank cases – Types of Measurement Scales – Summary Measures - Frequency, Explore and Cross Tabs – Describing Data Graphically - Descriptive Data Analysis- Number of cases, Minimum, Maximum, Sum, Mean, Standard Deviation, Variance, Kurtosis, Skewness - Bivariate Correlation. **(20 Hours)**

Module – IV

Libre Office Writer: Free Software – Libre Office - Writer – User Interface – Creating new Document – Page setup - Saving Documents – Basic Editing – Find and Replace - Formatting Text – Copying and Moving Text – Indenting and Spacing – Headers and Footers – Bulleted and Numbered lists – Tables - Previewing and Printing. **(20 Hours)**

Module – V

Libre Office Calc: Spread Sheet – Features – User Interface – Cells – Selecting – Moving and Copying – Text Alignment – Formatting Text – Inserting and Deleting Columns and Rows – Adding and Renaming Worksheets – Borders, Boxes and Colors – Formatting Worksheet – Entering Formulae – Functions – Charts – Previewing and Printing. **(20 Hours)**

Practical Training

- List out frequency table, cross tab and graphs related with the marks and details of students in a class.
- Prepare a report on descriptive analysis of any relevant Socio demographic details related with social issue.
- Prepare a letter using Writer
- Prepare a mark sheet using Calc

Suggested Readings

1. Tutorial of IBM SPSS Statistics.
2. Kiran Panya, Smruti Bulsari & Sanjay Sinha., *SPSS in Simple Steps*, First edition, Durga Enterprises, Delhi.
3. Field A., *Discovering Statistics Using SPSS*, Fourth Edition, SAGE Publishers, 2013
4. Libre Office Handbook
5. Keith Gordon, Principles of Data Management, BCS Publications, UK

Optional Courses- CO-OPERATION

SEMESTER III

Optional Core I: BASICS OF CO-OPERATION

Instructional Hours-90

Credit-4

Objectives:

- To inculcate the principles of co-operation among the students and to acquaint the students with the management and working of co-operatives.

MODULE-I

Origin and Development of Co-operation- Meaning-Definition- Features Importance- Objectives- Benefits of Co-operation- Different aspects of Co-operation- Economic, Social and Morale.

(10 Hours)

MODULE-II

Co-operation and other Economic Systems- Capitalism- Socialism and Communism -Co-operatives and other Forms of Business Organizations- Distinctive Features of a Co-operative Organization vis-à-vis Partnership and Joint Stock Companies- A Co-operative as an Institution and as an Enterprise - Co-operative Common Wealth.

(15 Hours)

MODULE-III

Co-operative Principles-Different Stages-Rochdale Pioneers- Karve Committee on Co-operative Principles- Principles of ICA in 1995 (IVth Stage) - Distinction between Co-operative Values and Co-operative Principles

(15 Hours)

MODULE-IV

Types of Co-operatives in India and in Kerala (i) Short term and Medium term Co-operative Credit Structure- Primary Agricultural Credit Societies- Urban Cooperative Banks- Employees Credit societies- District Co- operative Banks and State Co-operative Banks (ii) Long term Credit Structure- PCARDBs and SCARDBs (iii) General Purpose and Special Purpose Agricultural Marketing Societies- Primary Marketing Societies and their Federations including NAFED- Rubber Marketing Societies and their Federations- Dairy Co-operative Societies and their Federations- Fishery Co-operatives and their Federations (iv) Processing Co-operatives- Need and Importance (v) Housing Cooperatives and their Federations (vi) Consumer Co-operatives and their Federations (vii) Industrial Co-operatives and their Federations- Handlooms and Power looms – Coir - Handicrafts (viii) Workers Co-operatives- Significance of Workers Co-operatives in Kerala.

(35 Hours)

MODULE-V

Co-operative Movement in Foreign Countries - Great Britain (Consumer)- Germany (Agricultural Credit)- Sweden (KF) - Denmark (Dairy)- China (Induscos)- Japan (Multi -purpose)- USA (Marketing) (Brief Study).

(15 Hours)

Suggested Readings

1. Hejela, T.N., Principles, Problems and Practice of Co-operation, Konark Publishers, New Delhi.
2. Krishnaswami, O.R., Fundamentals of Co-operation, S. Chand & Company, New Delhi.
3. Krishnaswami, O.R., Kulandaisamy, V., Theory of Co-operation- An in-depth Analysis, Shanma Publication, Coimbatore.
4. Mathur, B.S., Co-operation in India, Sahitya Bhavan Publishers, Agra.
5. Bedi, R.D., Theory, History and Practice of Co-operation. R. Lal Book Depot, Meerut.

SEMESTER IV

Optional Core II: MANAGEMENT OF CO-OPERATIVE ENTERPRISES

Instructional Hours-90

Credit-4

Objectives:

1. To familiarize the students with the principles and practice of co-operative management and administration.
2. To enable the students to identify the issues in the process of management and administration of co-operatives.

Module-I

Co-operative Management - Nature and Importance- Managing Members- Dual Role of Members as Users and Owners of Co-operative Enterprise- Democracy in Co-operatives- Managing the Relationship between the Board of Directors and Members- Corporate Governance- Relation between Member Societies and their Federations. **(20 Hours)**

Module-II

Issues in Co-operative Management- Managing the Social Process in a Cooperative- Competition, Conflict and Co-operation- Associative Character of a Co-operative and Managing a Co-operative Association- Issues in Organizing a Co-operative Size of the Organization- Small Area vs. Large Area, Single Purpose vs. Multipurpose Co-operatives –Multipurpose vs. Multi-functional Co-operatives- Unitary vs. Federal Co-operatives Designer vs. Green House Co-operatives - Issues in Financing a Co-operative- Evaluating a Co-operative Organization - Member Dimension, Enterprise Dimension and Ethical Dimension.

(20 Hours)

Module-III

Administrative Set up of Co-operative Department in Kerala - State Level - District level and Taluk level - Powers and Responsibilities of Co-operative Department - Conferment of Powers of Registrar - Functional Registrars in Kerala - Need for Separating Administration from Audit – Employment Opportunities in Co-operative Sector – Selection Procedure. **(15 Hours)**

Module- IV

Co-operative Education and Training- Need and importance- Arrangements for Co-operative Education and Training in India and in Kerala - NCUI, NCCT, VAMNICOM- Institute of Cooperative Management-Institute Kerala State Co-operative Union, Circle Co-operative Unions, Specialized Sectoral Training Institutes in Kerala **(15 Hours)**

Module- V

Management and Working of Major Co-operative Organizations and Institutions in - Aid of Co-operatives - NAFED, IFFCO, KRIBCO, NABARD, NDDDB, NCDC, and National Housing Bank and other National Organizations Providing Assistance to Housing Co-operatives.

(20 Hours)

Suggested Readings

1. Krishnaswami, O.R., Kulandaiswamy V., Co-operation Concept and Theory *Arundhra Academy, Coimbatore.*
2. Bedi, R.D., Theory, History and Practice of Co-operation, *R. Lal Book Depot, Meerut.*
3. Kulandaiswamy, V., Principles of Co-operative Management, *Rainbow Publication, Coimbatore.*
3. Nakkiran, S., a Treatise on Co-operative Management, *Rainbow Publications Coimbatore.*
4. Sinha S.K., Sahaya R., Management of Co-operative Enterprises *NCCT, New Delhi.*

5. ILO, Co-operative Management and Administration, *Oxford IBH, Publishing Co. Pvt. Ltd., 1988.*

SEMESTER V

Optional Core III: CO-OPERATIVE LEGAL SYSTEMS

Instructional Hours: 90

Credit: 4

Objectives:

1. *To give an insight into the prevailing co-operative legal system*
2. *To enable the students to understand the legal framework of co-operation in India and in Kerala.*

Module I

Co-operative Legislation in India and in Kerala- Evolution of Co-operative Legislation in India- 1904 Act - Act of 1912- Co-operation as a State Subject in 1919- Madras Co-operative Societies Act, 1932- Multi State Co-operative Societies Act 1984- and its Replacement in 2002- Evolution of Cooperative legislation in Kerala- Cochin Co-operative Societies Act-Travancore Co-operative Societies Act- Kerala Co-operative Societies Act 1969.

(15 Hours)

Module II

Kerala Co-operative Societies Act (Act 21 of 1969) Preamble and its Significance- Important Definitions- Registration of Co-operative Societies- Procedure for Registration, Byelaws- Contents -Amendment of Byelaws- Change of Name and Liability- Amalgamation and Division of Co-operative Societies- Membership- Qualification for Membership- Rights and Liabilities of Members- Removal and Expulsion of Members- Withdrawal and Transfer of Shares by Members- Restriction on Holding Shares- Nomination by Members

(20 Hours)

Module III

Management of Co-operatives- Annual General Meeting- Special General Meeting- Powers of General Body- Constitution of Committee- Term- Reservation for Weaker Sections- Disqualification of Committee Members- Election- State Co-operative Election Commission and its Powers - Election Procedure- Appointment of Delegates- Supersession of the Committee- Appointment of Administrator / Administrative Committee Seizure of Books and Records- Privileges of Co-operatives Charge and Set-off- Register of Members as Prima facie Evidence - Exemption from Stamp Duty- Taxes and Fees- Deduction of Dues of Co-operatives Exemption from Compulsory Registration of Certain Documents- Enquiry, Inspection and Supervision procedures - Surcharge procedures.

(25 Hours)

Module IV

Settlement of Disputes, Arbitration and Awards - Provisions and procedures - Execution and Enforcement of Awards - Provisions and Procedures- Appeals, review and revision - Meaning and Distinction - Authority of Appeals - Co-operative Tribunal- Constitution and Powers- Offences and Penalties, Provisions and Procedures.

(20 Hours)

Module V

Winding up and Dissolution of Co-operative Societies- Appointment and Powers of Liquidators- Procedures - Settlement of Claims.

(10 Hours)

Suggested Readings

1. Kerala Co-operative Societies Act,1959 (Bare Act)
2. Goyal, D.B , Co-operative Legislation :Trends and Dimensions
3. Mohanan, P.N , Co-operative Societies Laws in Kerala, *Kerala State Publications*
4. Trivedi, B.B , Law and Management of Co-operatives
5. Pillai F.R (ed) , Kerala Co-operative Societies Act and Rules

SEMETER VI

Optional Core IV: ACCOUNTING FOR CO-OPERATIVE SOCIETIES

Instructional Hours-90

Credit-4

Objectives:

1. *To familiarize the students with the special features of accounting and auditing of co-operatives.*
2. *To enable the students to understand the procedures of co-operative audit.*

Module-1

Co-operative Accounting- Meaning-Importance-Special Features of Cooperative Accounting- Books and Registers Kept by Co-operatives as per Kerala Co-operative Societies Act and Rules **(12 Hours)**

Module -II

Sources of Funds- State Aid to Co-operatives - Share Capital Contribution - Principal State Partnership Fund - Subsidiary State Partnership Fund - Grants - Subsidies - Owned Funds Borrowed Funds. **(20 Hours)**

Module -III

Trial Balance - Preparation of Trial Balance - District Co-operative Bank-State Co-operative Bank-Agricultural and Rural Development Banks- Preparation of Receipts and Disbursement Statement of Primary Societies- Consumer –Marketing-Housing – Dairy –Fishery –Industrial – Processing Societies - Practical Problems. **(20 Hours)**

Module -IV

Final Accounts- Statutory Forms - Preparation of Trading-Profit and Loss Account and Balance Sheet of Consumer –Marketing-Housing – Dairy- Primary Agricultural Credit Societies and Primary Agricultural and Rural Development Banks - Disposal of Net Profit - Statutory and Non- Statutory Requirements. **(18 Hours)**

Module -V

Co-operative Audit - Definition - Objectives - Scope - Advantage - Difference between Audit of Co-Operative Societies and Joint Stock Companies - Special Features of Co-operative Audit Administrative Set Up for Co-operative Audit - Types of Audit - Preparations for Audit and Framing of Audit Programme - Stages of Practical Audit - Mechanical Audit- Administrative Audit- Preparation of Final Statements - Reconciliation of Bank Accounts – Co-operative Auditor - Duties - Powers and Liabilities - Audit Report - Audit Certificate - Audit Classification - Assessment and Levy of Audit Fees. **(20 Hours)**

Suggested Readings

1. Khandelwal, M. C., Co-operative Audit x-rayed, A Study Based on the Cooperative Banking Institutions of Rajasthan, *Pitaliya Pustak Bhandar, Jaipur*.
2. Krishnaswami, O.R., Co-operative Account Keeping *Oxford and IBH Publishing Company Pvt Ltd, New Delhi*.
3. Krishnaswami, O.R., Co-operative Audit *Oxford and IBH Publishing Company Pvt Ltd New Delhi*.
4. Samiuddin, M. R. Cooperative Accounting and Auditing, *Himalaya Publishing House, New Delhi*.
5. Department of Co-operation, Government of Kerala Co-operative Audit Manual.

Optional Courses- TRAVEL & TOURISM

SEMESTER III

Optional Core I: FUNDAMENTALS OF TOURISM

Instructional Hours-90

Credit-4

Objectives- To provide the basic knowledge of tourism as a growing industrial branch of the Indian Economy

MODULE-I

Introduction to Tourism Industry- Meaning and Definition of Tourism- Nature and Scope- Historical Perspective of Tourism Industry in India- Growth of Indian Tourism- Ministry of Tourism (GOI)-Aims and Functions. **(15 Hours)**

MODULE-II

Types of Tourism- Pilgrimage- Cultural-Folklore-Farm-Eco-Business- Adventure Rural- Cuisine-Monsoon- Community-Based Tourism- Sports Tourism- Health Tourism- Responsible Tourism -Main Characteristics and Activities Involved. **(15 Hours)**

MODULE-III

Tourism Products- Meaning And Concept- Components- Art and Architecture -Archaeological Sites-Monuments- Forts and Palaces Museums-Traditions and Festivals- Nature-Based Tourism- Wild-Life Sanctuaries-National Parks- Hill-Resorts- Desert Safari- Indian Beaches And Backwaters- Indian Folk-Culture-Customs- and Costumes. **(20 Hours)**

MODULE-IV

Tourism Planning and Development-General concepts of Planning- Major Types of Planning-Need for Tourism Planning-Different Types of Tourism Planning-Ten Main Steps or Phases in the Planning Process- Sustainability and Sustainable Tourism Development **(20 Hours)**

MODULE-V

Impact of Tourism: - Meaning, Positive and Negative Impacts of Tourism: - Social, Cultural, Economic and Environmental. Tourism Economic Multiplier- Employment Multiplier- The WTO Conference- The Manila Declaration **(20 Hours)**

Suggested Readings

1. Bhatya, A.K., Tourism Development Principles and Practices, *Kalyani publishers West Bengal*.
2. Kamra, K.K., & Mohinder Chand Basics of Tourism, *Sterling Publication, New Delhi*.
3. Ratandeep Singh, Dynamics of Modern Tourism –*Kanishka Publication New Delhi*
4. Tewari, S.P., Tourism Dimensions, *Atma Ram and Sons Publication New Delhi*.
5. Sinha, P.C., Tourism Impact Assessment, *Anmol Publications Pvt. Ltd. New Delhi*.

SEMESTER - IV

Optional Core II: TRAVEL AND TOURISM INFRASTRUCTURE

Instructional Hours: 90

Credit-4

Objective- *To introduce the role of travel and infrastructure in the development of tourism industry.*

MODULE-I

Tourism Infrastructure - Meaning and Scope of Tourism Infrastructure- Transport- Roads and Canals- Building for Residential Accommodation- Recreation Centres- Amusement Parks- Relationship between Tourism Infrastructure and the Arrival of the International Tourists - Role of Government in Improving and Preserving Tourism Infrastructure- National Policy of the Government for Promoting Infrastructural Facilities. **(20 Hours)**

MODULE-II

Historical Growth and Development of Travel Agency and Tour Operation Business - Travel Agency- Meaning- Definition- Importance- Types of Travel Agency- Functions of Travel Agency -Tour Operators-Features of Tour- Operators-Types of Tour Operators - Functions of Tour Operators - Role of Tour Operators and Travel Agencies in the Growth of Tourism Industry. **(15 Hours)**

MODULE-III

Setting up of Travel Agency and Tour Operation Business - Travel Agency and Tour Operation Business- Approval Formalities-Setting Procedure and Process- Ministry of Tourism, Govt. of India and IATA Guidelines - Revenue Sources of Travel Agency and Tour Operation - Financial Incentives Available for Travel Agency and Tour Operator in India **(20 Hours)**

MODULE-IV

Tourism Demand - Concept of Demand and Supply in Tourism - Unique Features of Tourist Demand - Determinants of Demand for Tourism- Measuring Demand for Tourism - Importance of Measurement of Demand- Tourist Statistics-Volume Statistics- Value (Expenditure) Statistics-Visitor Profile (Characteristics) Statistics. **(15 Hours)**

MODULE-V

Travel Formalities and Regulations-Concept- Meaning and Scope- Issues of Passports- Visa- Foreign Exchange- Customs and Immigrations- Air Cargo Documentation- Domestic and International Rate-

Departure and Arrival Formalities- Nature of Cargo- Security of Cargo and its Clearance- Information Technology and Travel Formalities. **(20 Hours)**

Suggested Readings:

1. Jagmohan Negi, Travel Agency and Tourism Operations and Concepts and Principles, *Kanishka Publishers*.
2. Sinha, P.C., Encyclopedia of Tourism Management, *Anmol Publications*.
3. Sunetra Roday, Archana Biwal & Vandana Joshi, Tourism Operations and Management *Oxford University Press*.
4. Manjula Chaudhary, Tourism Marketing, *Oxford University Press*.
5. Jha, S.M, Services Marketing, *Himalaya Publishing House*

SEMESTER V

Optional Core III: HOSPITALITY MANAGEMENT

Instructional Hours: 90

Credit: 4

Objective- To Understand the Essentials of Hospitality Management for Taking up Hospitality Business.

Module I

Introduction to Hospitality Management- Concept of Hospitality-Meaning-Definition and Nature of Hospitality- Hospitality in the Cultural Settings of India- Inducting Management in Hospitality Industry- Historical Perspective of Hospitality Management- Objectives of Hospitality Management- Prerequisites of Hospitality Management- Hospitality Management in the Indian Scenario.

(10 Hours)

Module II

Organization and Function of Hotel Industry- Hotel Industry - Concept- Meaning and Scope- Functional Departments of Hotel Industry- Functions of Front Office- Management of Front Office- House-Keeping functions- Nature and Dimensions- Food and Beverages- Managements of Food Services- Restaurant Infrastructure and Management- Food Production Infrastructure- Supporting Services- Purchase- Storage and Sales

(15 Hours)

Module III

Accommodation Marketing- Role of Accommodation in Tourism- Types of Accommodation- Grouping and Categorization of Hotels- Registration Forms of Hotel Ownership- Pricing Strategies of Hotels- Price-offs as Sweep Takers in the Competitive Economy- Promotion of Hotel Accommodation- Domestic and Overseas Promotion- Emerging Trends in Promotion of Hotel Accommodation - Public Relation and Hotel Industry.

(25 Hours)

Module IV

Managerial Issues in Hospitality Management.- Concept of Managerial Issues Ethical, Cultural and Social Issues- Threats and Challenges of Managing Hotel- Human Resources Management of Hotels Interface between Travel Agencies and Hotelier's- Catering - Types - Railways - Airways - Role of Private and Public Agencies in Catering for Tours.

(20 Hours)

Module V

Emerging Trends in Hospitality Management- Changing Scenario of the Hospitality Industry-Eco-friendly Accommodation-Heritage Accommodation - Seasonality and Promoting Domestic Market for Hotel Industry- Multi-Purpose Accommodation- Seminar- Conference- Business Meet- Independent Guest Houses- Private Agencies in Guest House Accommodation- Government and Hotel Industry- Fiscal and Non-Fiscal Incentives- Challenges of Hospitality Industry in India **(20 Hours)**

Suggested Readings:

1. John, R., Warker, Introduction of Hospitality, *PHI, New Delhi.*
2. Zeithaml, V.A., Service Marketing, *McGraw Hill, London*
3. Gray & Ligouri, Hotel and Motel Management and Operations, *PHI, New Delhi*
4. Andrews, Hotel Front Office Training Manual, *Tata McGraw Hill, Mumbai*
5. Negi, Hotels for Tourism Development, *S.Chand, New Delhi.*

SEMESTER VI

Optional Core IV: TOURISM AND CULTURAL HERITAGE OF INDIA

Instructional Hours-90

Credit-4

Objective- *To provide the students an insight of the relevance of Indian culture and heritage for the development of tourism industry.*

Module I

Introduction to the Indian Culture - Definition of Culture- Heritage and Civilization- Culture and its Determinants- Culture Society and History- Political Structure and their Impact on Culture- Outside Influences and Culture- Cultural Awareness and History- Indian Culture-Perspectives for Tourism.

(15 Hours)

Module II

Historical Evolution- Harappan Period- Vedic Civilization- Early Vedic Period- Later Vedic Period-Post Vedic Period – Social and Structural Change- Family-Lineage and Caste- Buddhist Epoch- Gupta Period- Post Gupta Period – Medieval Period – Changes in Hindu and Muslim Caste-Colonial Period-Post Colonial Period- Contemporary Period.

(15 Hours)

Module III

Conservation of Culture-Culture of Tourism Versus Tourism of Culture- Conservation and Significance- Conservation of Natural Heritage-Conservation of Historical Heritage- Archaeological Sites and Monuments- World Heritage List- Main Problems of Conservations of Monuments- Organization of Enterprise- Conservation and Preservation of the Artistic and Cultural Heritage- Tourism and Culture the Views in Indian Context.

(20 Hours)

Module IV

Features of Indian Culture-Assimilation-Unity in Diversity-Patriarchy and Women- Syncretic Tradition- Religious Tolerance-Cultural Tolerance of Elite and Masses- Contribution of Mughals to the Indian Culture – Art and Architecture Under Mughals- The British – Birth of Indian Nationalism– Factors favouring Growth of Nationalism– Independent India. **(20 Hours)**

Module-V

Emergence of Political Struggle for Responsible Govt. (Kerala) - Anti Colonial Movement- Modern Kerala's Political and Cultural Changes - Educational Progress and Trends in Kerala Tourism **(20 Hours)**

Suggested Readings

1. Jha, D.N., Ancient India – An introductory out line ,*Rupa & Co. New Delhi*
2. Pandey, A.B., *The Medieval India (Mughal period), Vol.II*
3. Kosambi, D.D., Culture and Civilization of Ancient India in Historical Outline
4. Sharma, R.S., Aspects of Ancient Indian Political Ideas and Institutions- *1959, Delhi.*
5. Sharma,R.S., Indian Society, Historical Probing,

Optional Courses- MARKETING

SEMESTER III

Optional Core I: CUSTOMER RELATIONSHIP MANAGEMENT

Instructional Hours – 90 Hours

Credit -3

Objectives: The purpose of this course is to familiarize the students with the concepts and strategies involved in Customer Relationship Management

MODULE I

Customer Relationship Management – Introduction – Definition-Need for CRM - Concepts - Customer Loyalty and Optimizing Customer Relationships - Strategic Framework for CRM - Origin and Role of CRM - Components of CRM-CRM Processes. **(20 Hours)**

MODULE II

Customer Satisfaction- Product Marketing- Direct Marketing- Customer Learning Relationship- Key Stages of CRM-Forces Driving CRM- Benefits of CRM-Growth of CRM Market in India- Key Principles of CRM. **(20 Hours)**

MODULE III

CRM Strategy- CRM Strategy Development Process-CRM Value Creation Process- Customer Profitability- Customer Acquisition and Retention - Customer Strategy **(15 Hours)**

MODULE IV

CRM Process Framework- Governance Process- Performance Evaluation Process- Monitoring System- Key Performance Indicators- CRM Budget and CRM Return on Investment **(15 Hours)**

MODULE V

Use of Technology in CRM- Call Centre Process- CRM Technology Tools -Implementation- Selection of CRM Package- Reasons for Failure of CRM **(20 Hours)**

Suggested Readings

1. Peelen, E.D., Customer Relationship Management, *Pearson Education, Mumbai.*
2. Francis, Buttle & Stan Maklan, Customer Relationship Management Concepts and Technologies, *Taylor and Francis, UK.*
3. Bhat, G.K., Customer Relationship Management, *Himalaya Publishing House, Mumbai.*
4. Peeru, H., Mohamed & Sagadevan, A., Customer Relationship Management, *Vikas Publishing House, Noida.*
5. Sontakki, C.N., Marketing management, 10th revised edition (2013), *Kalyani Publishers, New Delhi.*

SEMESTER – IV

Optional Core II: SERVICE MARKETING

Instructional Hours: 90

Credit -4

Objective: *To develop insights into emerging trends in the service sector and tackle issues involved in the management of services.*

MODULE-I

Concept of Service – Meaning – Definition - Components and Tangibility-Growth of Service Sector-Challenges and Strategies-Classification of Services- Marketing Triangle-Marketing of Services.

(16 Hours)

MODULE -II

Marketing Mix in Service Marketing-7 Ps- Product Decision- Pricing Strategies-Promotion of Services-Placing or Distribution of Services -Additional Dimensions – People-Physical Evidences-Process.

(20 Hours)

MODULE -III

Consumer Behaviour in Services- Behavioural Profile of Consumers-Customer Satisfaction and Expectation Gap Analysis-Quality Perceptions in Service- Measurement of Service Quality-SERVQUAL Dimensions-Service Recovery and Problem Solving-Employees Role in Service Marketing-Role of Technology.

(20 Hours)

MODULE -IV

Service Market Segmentation - Bases – Positioning-Differentiation and Retention Strategies Applicable to Service Marketing- Relationship Marketing.

(16 Hours)

MODULE –V

Marketing of Services with Reference to Tourism - Financial Services and Health-Trends in Service Marketing.

(18 Hours)

Suggested Readings:

1. Christopher Lovelock, Service Marketing, *Pearson, Mumbai.*
2. Helen Woodruffe, Service Marketing, *Macmillan India.*
3. Rao, Service marketing, *Pearson, Mumbai.*
4. Roland Rust and Anthony Timothy, Service Marketing, *Haper Collins College Publishers.*
5. *Indian Journal of Marketing (ISSN 0973-8703), New Delhi-110016*

SEMESTER V

Optional Core III: MARKETING RESEARCH

Instructional Hours: 90

Credit: 4

Objective: *To acquaint the students with the method and techniques of marketing research.*

Module-I

Research-Types-Marketing Research-Definition-Significance-Areas Covered by Marketing Research- Market and Marketing Research-Outside Agencies and Research-Reliable Information Sources in India-Limitations of Marketing Research. **(14 Hours)**

Module-II

Research Design-Exploratory-Descriptive-Diagnostic-Experimental-Before only - Before and After-After Only with Control-Before and After With Control Independent and Extraneous Variable-Treatment **(16 Hours)**

Module-III

Collection of Data-Primary and Secondary-Sampling and Sampling Design-Probability and Non Probability Sampling-Collection of Data-Methods for Collection of Both Primary and Secondary Data-Scale of Measurement and its Basics **(18 Hours)**

Module-IV

Data Processing-Coding-Editing-Tabulation-Testing of Hypotheses- Steps -Parametric and Non Parametric Tests(Theory only) -ANOVA -MANOVA-ANCOVA-Chi-square Test -Use of SPSS **(30 Hours)**

Module-V

Reporting- Report of Research Findings-Types of Report-Report Format-Contents **(12 Hours)**

Suggested Readings

1. Kotler, Philip, Armstrong, Gary, Prafulla Y Agnihotri & Khsanul Haque, Principles of Marketing, *Pearson Education Inc, South Asia.*
2. Kotler, Philip, Kerin Lave, Koshy, Abraham, & Jha, Mithelwar, Marketing Management, *Pearson Education Inc., South Asia.*
3. Stanton, J.W., Fundamentals of Marketing, *McGraw Hill, New York.*
4. Pillai, R.S.N., & Bagavathy, V., Modern Marketing, Principles and Practices, *S Chand Company Private Ltd, New Delhi.*
5. Nair, Rajan, Marketing Management, *S Chand Company Private Ltd, New Delhi.*

SEMESTER VI

Optional Core IV: INTERNATIONAL MARKETING

Instructional Hours-90

Credit-4

Objective-To equip the students with environmental, procedural, institutional and decisional aspects of international marketing.

Module I

International Marketing-Definition-Nature-Benefits-Special Problems-Features of International Marketing vis-a vis Domestic Marketing-Internationalisation Stages-International Marketing Orientation-Planning for International Marketing **(20 Hours)**

Module II

International marketing Research-Objectives of Marketing Research-Features, Advantages and Limitations of Marketing Research-Steps In Marketing Research Process-Importance of International Marketing Research-Research Agencies-Market Entry and Operating Strategies **(15 Hours)**

Module III

International Marketing Environment- Economic, Political, Legal, Demographic and Cultural Environment, International Institutions-Free Trade Zone- Globalisation –Positive and Negative Effects of Globalization- Globalisation and Its Impact on International Marketing-Marketing Barriers-Tariff and Non-Tariff Barriers **(20 Hours)**

Module IV

Foreign Trade Strategy of India-Foreign Trade Policy-India and World Trade-Export and Import Policy-Major Problems of India's Export Sector-Procedure and Documentation on Exporting-Export Promotion Council-Export Finance **(20 Hours)**

Module V

International Marketing Mix-Product Strategies-International Marketing and PLC-Pricing Strategies-Promotion Strategies-Distribution Strategies **(15 Hours)**

Suggested Readings

1. Keegen, Global Marketing Management, *Pearson, Mumbai*
2. Cateora Philip, John Graham & Mary Gilly, International Marketing, *McGraw Hill/Irwin*.
3. Sak Onkvisit & John J Shaw, International marketing analysis and strategies, *Routledge Taylor and Francis group, UK*
4. Cherunilam, Francis, International Marketing Text and cases, *Himalaya Publishing House, Mumbai*
6. Indian Journal of Marketing (ISSN 0973-8703), *New Delhi-110016*

OPEN COURSES

FUNDAMENTALS OF BANKING AND INSURANCE

Instructional Hours: 72

Credit: 4

Objective: To familiarize the students with the basic concepts and practice of banking and the principles of Insurance

Module I

Introduction to Banking - Origin and Evolution of Banks – structure of banking system -Types of Banks – Functions of Commercial Banks- Primary and Secondary- Credit Creation -Reserve Bank of India- Functions of RBI
(16 Hours)

Module II

Banking Practice – Banker – Customer – relationship between banker and customer – general and special relationship – Cheque – essentials of a valid cheque – crossing – dishonour of cheque – liabilities of wrongful dishonour – opening and operation of accounts by special types of customers – minor, married woman, firm, company.
(16 Hours)

Module III

Innovations in Banking – Social Banking- E-Banking – CORE – ECS – EFT – RTGS – NEFT – SWIFT – Mobile banking – Precautions in mobile banking – internet banking - Credit and Debit Cards- Banking Ombudsman Scheme
(18 Hours)

Module IV

Insurance- Evolution of insurance – Role and Importance - Insurance Contract- Principles of Insurance - Insurance and Assurance
(10 Hours)

Module V

Types of Insurance (Overview only) - Life insurance – Distribution system of life insurance – life insurance plans - General insurance - Marine insurance - Fire insurance - Health Insurance - Motor Insurance - Burglary insurance - Personal Accident Insurance.
(12 Hours)

Suggested Readings

1. Shekhar, K.C, Banking Theory and Practice, *Vikas Publishing House, New Delhi*
2. Maheswary, S.N., Banking Law and Practice, *Kalyani Publishers, New Delhi*
3. Sundharam, Varshney, Banking Theory Law & Practice, *Sulthan Chand & Sons, New Delhi.*
4. Agarwal, O.P., Banking and Insurance, *Himalya Publishing House, Mumbai*
5. Saxena, G.S., Legal Aspects of Banking Operations, *Sultan Chand and Sons, New Delhi*
6. Tripathi, Nalini & Prabil Pal., Insurance: Theory and Practice, *PHI Pvt Ltd, New Delhi*
7. Gupta, P.K., Insurance and Risk Management, *Himalaya Publishing House, Mumbai*
8. Mishra, M.N., Principles and Practices of Insurance, *S. Chand and Sons, New Delhi*

CAPITAL MARKET AND INVESTMENT MANAGEMENT

Instructional Hours-72

Credit-3

MODULE-1

Financial Systems – Indian financial System - Components - Role and Functions - money market and capital market - characteristics of capital market in India- Instruments in capital market: equity shares, preference shares, debentures, bonds, Govt. securities, and new instruments – SEBI- Objectives and functions- Recent developments in the Indian Capital market. **(15 Hours)**

MODULE-2

Primary and secondary markets: Primary market: Definition and functions - Methods of New issues, Right issue - Operators in the new issue market: Managers to the issue, underwriters, brokers to the issue - Merchant bankers - Minimum subscription - Types of issue - Allotment - Listing. Secondary Market: Stock exchanges in India - role and functions- membership - Trading and settlement – Speculators- Bulls, bears, stags and lame duck - Dematerialized securities - On-line trading - Depositories - Stock Market indices – **(20 Hours)**

MODULE-3

Derivatives- Features of Derivatives -Types of Derivatives– Forwards – Futures- Options-Swaps – (Brief study only) **(12 Hours)**

MODULE-4

Investment Management – Process- Investment, Speculations and Investment, Gambling and Investment, Investment Objectives- Investment process- Meaning of portfolio **(15 Hours)**

MODULE-5

Investment Avenues: Corporate Securities - Government bonds - Post office saving certificate and deposits - Public Provident Fund scheme, Mutual Fund schemes, Bank deposits - Insurance - Real Estate- Other Investment Avenues. **(10 hours)**

Suggested Readings

1. Khan, M.Y., Indian Financial System, Tata McGraw Hill, New Delhi.
2. Singh, Preethi, Dynamics of Indian Financial System, Ane Books, New Delhi
3. Guruswami, S., Capital Markets, Tata McGraw Hill, New Delhi
4. Avadhani, V. A., Investment and Securities Market in India, *Himalaya Publishing House*.

Journals

SEBI and Corporate Laws - Taxmann, New Delhi
SEBI Monthly Bulletins

FUNDAMENTALS OF ACCOUNTING

Instructional Hours-72

Credit-3

OBJECTIVE- *To familiarise the students with the basic accounting principles and practices in business.*

MODULE-1 Accounting – Introduction- meaning- Book keeping and Accounting –Objectives of Accounting - Accounting Principles- Concepts and Conventions- Double Entry System- Books of Accounts- Accounting Equation- Golden Rule of Accounting **(15 Hours)**

MODULE-2 Journal- Meaning – Journalising- Journal Entry- Simple and Compound Entries- opening Entry . **(15 Hours)**

MODULE-3 Ledger - Form of an Account -Posting - Balancing of Accounts-Subdivision of Journals- Purchase book- Sales Book - Cash book (simple, triple column)-Petty Cash book. **(22 Hours)**

MODULE-4 Trial Balance - Meaning - Objects-Preparation- **(8 Hours)**

MODULE-5 Final Accounts-Trading and Profit and Loss Account- Balance Sheet (without adjustments) **(12 Hours)**

Suggested Readings

1. *R L Gupta and M Radhaswamy - Advanced Accountancy-.Sultan Chand Publishers*
2. *P C Tulsian. Advanced Accountancy- S Chand Publications-*
3. *S Kr. Paul- Fundamentals of Accounting - New Central Agency*
4. *M.C.Shukla and T.S.Grewal- Advanced Accounting, S Chand Publication*
5. *Jain and Narang- Fundamentals of Accounting, Kalyani Publishers*
6. *B S Raman – Financial Accounting- United Publishers*

Guidelines for Practical Examinations , Project and Viva and Industrial Visit/Study Tour

Practical Examination

Practical examinations will be conducted only at the end of even semesters.

Project Report

All students are to do a **project in the area of core course.**

This project can be done individually or in groups (not more than five students) which may be carried out in or outside the campus.

The report of the project in duplicate is to be submitted in English with not less than 30 pages (Printed in A4 size paper) to the Department at the sixth semester and are to be produced before the examiners appointed by the University.

External Project Evaluation and Viva / Presentation are compulsory and will be conducted at the end of the Programme.

Structure of the Report

- Title Page
- Declaration by the student
- Certificate from the guide
- Acknowledgements
- Contents
- Chapter I: Introduction (Research problem, Objectives of the study, methodology etc)
- Chapter II: Review of Literature/Conceptual Framework
- Chapter III: Data Analysis
- Chapter IV: Summary /findings/ Recommendations
- Appendix (Questionnaire, Specimen copies of forms, other exhibits etc).
- Bibliography

Evaluation of the Project Report.

The project report shall be subject to **Internal and External Evaluation** followed by a **Viva-voce**.

- Internal Evaluation is to be done by the supervising teacher and external evaluation by an examiner appointed by the University and the Head of the Department or his nominee.
- A viva voce related to the project work will also be conducted by the external evaluation board consisting of an examiner appointed by the University as chairman and the Head of the Department or his nominee as member. The students have to attend the viva voce individually. Grades are to be awarded to the students combining the internal evaluation, external evaluation and viva voce.

Components of External Evaluation

of Project /	Marks
Dissertation (External)	50
Relevance of Topic	10
Statement of Objectives	5
Methodology	10
Presentation of Facts and Figures	5
Quality of Analysis and Findings	15
Bibliography	5
Viva-Voce (External)	30
Total	80

Components for Internal Evaluation of Project (20 marks)

Punctuality	5
Experimentation/Data Collection	5
Knowledge(Based on individual assessment)	5
Report	5
Total	20

Industrial Visit /Study Tour

An industrial visit cum tour for three to five days form part of the course of study for regular students during the programme and a report of the same shall be prepared and submitted to the department.

Note

Only Commerce Teachers whose appointments are approved by the University and Commerce Teachers of Government Colleges should be entrusted with the setting of Question Papers, Valuation of Answer Scripts of Common, Core, Complementary, Open and Choice Based Core elective Courses and the conduct of Practical Examinations

Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

BACHELOR OF COMPUTER APPLICATION (BCA)

Course Co-ordinator: Dr. Sajimon Abraham

Academic support by

School of Management and Business Studies (SMBS)
Mahatma Gandhi University
Kottayam, Kerala

BACHELOR OF COMPUTER APPLICATION (BCA)

PROGRAMME PROJECT REPORT (PPR)

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Conventional Graduate and Post Graduate Programmes in addition to Diploma and Certificate Programmes which are very relevant to contemporary society. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University.

1. Programme's Mission & Vision

- To conduct and support undergraduate, postgraduate and research-level/Programmes of quality in different disciplines.
- To foster teaching, research and extension activities for the creation of new knowledge for the development of society. To help in the creation and development of manpower that would provide intellectual leadership to the community.
- To provide skilled manpower to the professional, industrial and service sectors to meet global demands.
- To help and promote the cultural heritage of the nation and preserve the /environmental sustainability and quality of life.
- To cater the holistic development of the region through academic /leadership.

Aims and Objectives of the Programme

The BCA Programme is designed with the following specific objectives.

- a) To attract young minds to the potentially rich & employable field of computer applications.
- b) To be a foundation graduate Programme which will act as a feeder course for higher studies in the area of Computer Science/Applications.
- c) To develop skills in software development so as to enable the BCA graduates to take up self-employment in Indian & Global software market.
- d) To train and equip the students to meet the requirement of the Industrial standards.

2. Relevance of the Programme to the Institution's Mission and Goals

In this age of Computers and everything being digitalized, knowledge about machines is very important. It helps the person have a distinct advantage over the others who do not have a degree in Computer Applications. The domain is growing at a rapid pace. In the 1990's with the advent of globalization computers grew in prominence and slowly started to replace the paper and files in offices. It brought down the cost to quite an extent.

A three year degree in Computer Applications will get skills and information not only about Computer and Information Technology but also in communication, organization and management. One also get to learn programming languages such as Java, C++, HML, SQL, etc. Information about various computer applications and latest developments in IT and communication systems is also provided. The Bachelor of Computer Application Programme of Mahatma Gandhi University has been designed to supply trained manpower it ever growing IT and IT Enabled industry.

3. Nature of Prospective Target Group of Learners:

Candidate who passed 10+2 with Mathematics/Statistics/Informatics studied as one of the subject recognized by Mahatma Gandhi University.

4. Appropriateness of Programme to be conducted in Open and Distance Learning Mode to acquire specific skills and competence

a) Technology is defined as the applications of Basic Science. The past two revolutions, industrial and electronic, have transformed the society from agricultural to industrial and then to electronic. The electronically based technologies focused in information gathering, processing and distribution. The use of this technology in all sectors gave the birth to Computer Industry and its unprecedented growth launched another revolution in Communication.

b) Information, the basic raw material for the Decision Support System, can be derived from processing of huge database related with different sectors. Systematic storage and management with adequate security are essential for data retrieval and processing to generate information. The information technology plays an important role in all areas. But the main drawback is the technophobia of the people to adapt with the new technologies. This may be due to lack of awareness of the merits and advantages of new technologies. So our youths have to be equipped with all kinds of knowledge tools to work with computers comfortably which are basic requirements to provide human resource to the industry.

c) The radical changes in technologies both in hardware as well as software and their ever increasing adaptation to newer areas of application demand frequent updating of the academic curriculum so that the students can rise to the expectation of the Industry. The syllabus revision committee has considered all these factors thoroughly before venturing into the revision exercise.

Those who are working in the industry can also acquire this knowledge when the Programme is offered in Distance Education platform.

5. Instructional design

The candidates will be supplied with study materials from time to time and will be required to attend the contact classes regularly.

5.1 Duration of Programme(s)

The duration of the BCA Programme of study is three academic years with six semesters. The duration of odd semesters shall be from June to October and that of even semesters from November to March.

5.2 Programme Detail

Sem	Title with Course Code	Course Category	Contact Hours	Credit	Marks		
					Intl	Extl	Total
I	DEN1CC01- English-I	Common	12	4	20	80	100
	DM1CMT01- Mathematics	Complementary	12	4	20	80	100
	DS1CMT02 - Basic Statistics	Complementary	12	4	20	80	100
	DCA1CRT01 -Computer Fundamentals and Digital Principles	Core	12	4	20	80	100
	DCA1CRT02-Methodology of Programming and C Language	Core	9	3	20	80	100
	DCA1CRP01-Software Lab I (Core)	Core	60	2	20	80	100
Total			117	21	120	480	600
II	DEN2CC02- English-II	Common	3	4	20	80	100
	DM2CMT03-Discrete Mathematics	Complementary	3	4	20	80	100
	DCA2CRT03 -Data Base Management	Core	9	3	20	80	100
	DCA2CRT04-Computer Organization and Architecture	Core	12	4	20	80	100
	DCA2CRT05-Object oriented programming using C++	Core	12	4	20	80	100
	DCA2CRP02-Software Lab- II	Core	60	2	20	80	100
Total			99	21	120	480	600
III	DS3CMT04 - Advanced Statistical Methods	Complementary	12	4	20	80	100
	DCA3CRT06-Computer Graphics	Core	12	4	20	80	100
	DCA3CRT07-Microprocessor and PC	Core	12	4	20	80	100
	DCA3CRT08-Operating Systems	Core	12	4	20	80	100
	DCA3CRT09-Data Structure using C++	Core	9	3	20	80	100
	DCA3CRP03-Software Lab III	Core	60	2	20	80	100
Total			117	21	120	480	600

IV	DR4CM05-Operational Research	Complementary	12	4	20	80	100
	DCA4CRT10-Design and Analysis of Algorithms	Core	12	4	20	80	100
	DCA4CRT11- System Analysis &Software Engineering	Core	12	4	20	80	100
	DCA4CRT12-Linux Administration	Core	12	4	20	80	100
	DCA4CRT13-Web Programming using	Core	9	3	20	80	100
	DCA4CRP04-Software Lab IV	Core	60	2	20	80	100
Total			117	21	120	480	600
V	DCA5CRT14-Computer Networks	Core	12	4	20	80	100
	DCA5CRT15-IT and Environment	Core	12	4	20	80	100
	DCA5CRT16-Java Programming using	Core	9	3	20	80	100
	DCA5OPT01-- Open Course	Core	9	3	20	80	100
	DCA5CRP05 -Software Lab V	Core	60	2	20	80	100
	DCA5CRP06-Software Development Lab I(Mini Project)	Core	6	2	20	80	100
Total			108	18	120	480	600
VI	DCA6CRT17 -Cloud Computing	Core	12	4	20	80	100
	DCA6CRT18 -Mobile Application development-Android	Core	12	4	20	80	100
	DCA6PET-- -Elective	Core	12	4	20	80	100
	DCA6CRP07 –Software Lab VI &Seminar	Core	60	2	100	-	100
	DCA6CRP08 -Software Development Lab II (Main Project)	Core	9	3	20	80	100
	DCA6VVT01-Viva Voce	Core		1	-	100	100
	Total			105	18	180	420
Grand Total			663	120	780	2820	3600

Faculty and support staff requirements

Course Co-ordinator

Dr. Sajimon Abraham
Faculty Member in Computer & IT, School of Management & Business Studies,
Mahatma Gandhi University

Qualifications : M.C.A,M.Sc(Maths), M.B.A, Ph.D(Computer Science)

Teaching faculty

The two Common Courses in English have to be taught by teachers with a Master's degree in English along with other qualifications prescribed by the University. The core courses have to be taught by teachers with MCA / MSc. Computer Science / Msc. IT along with other qualifications prescribed by the University. The service of the large number of teachers who teach BCA in regular courses can be utilized for the delivery of the Programme.

Instructional Delivery Mechanism

In addition to provide SLMs prepared in line with the UGC guidelines on preparation of SLMs, the students are offered contact classes at the head quarters of the School of Distance Education and at the Learner's Support Centers during the weekend.

Student Support Service Systems at SDE

The SDE establishes Learner Support Centres for the students at different locations within the jurisdiction of the University to facilitate contact classes and practical sessions.

6. Procedure for admissions, Curriculum Transaction and Evaluation

Qualification : The eligibility for admission to BCA Degree Programme under the Mahatma Gandhi University is a pass in Pre-degree, Plus Two or equivalent examinations in science stream with Mathematics/Computer Science as a compulsory subject.

Verification of Documents:

1. Qualifying certificates ie SSLC, Plus Two
2. Applicants possessing qualifications from Universities / Institutions other than Universities in Kerala should apply for recognition. Applications for Matriculation/ Recognition are also provided with the Application Form.
3. Candidates possessing qualifications from other Universities should also produce migration certificates / NOC from the Universities or other board of examinations.
4. TC from the educational institution where the candidate last studied

Fees : Rs. 16000/- for Full Programme

Evaluation

Examinations- One Internal Exam and one External Exam of 3 hours duration

Assignments- Two assignment in each course

Internals – Internal Exam (10)+Assignments(10)=20

Test Papers – As per instructors choice

Projects : Mini Project in the fifth Semester and Major project in the Sixth Semester. Students shall be required to undergo two software development project by choosing a real-life problem from the Industry. The report will have an internal evaluation at the end of the semester.

7. Details of laboratory support required for the Programme(s)

Mahatma Gandhi University Library and Information System consists of University Library, Libraries of the Schools and Libraries of the 4 Study Centres. The University Library was established in 1989. The University Library which is situated on the main campus and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area and consists of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library provides service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. Reading space is provided on all the three floors housing the various sections of the library.

The library provides reading facility to visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016. The libraries of teaching departments are open during working hours of the Schools.

The University Library has a Library Advisory Committee. It is an 18 member committee with the Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, Bi-monthly Bibliography compilation and Literature Search Service are also available. The library is a member of the INFLIBNET Centre, Ahmedabad as well as & DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its online thesis digital library. The various department libraries too have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	School of Computer Sciences	4130

8. Cost Estimate of the Programme and the Provisions

S1. No	Expenditure	Cost estimate for BCA Programme (1000 students)
01	Pay and Allowance	20,00,000
02	Contact classes and evaluation	15,00,000
03	Course materials	10,00,000
04	Advertisement charges	30,000
05	Postage and telephone	15,000
06	Books and Periodicals	50,000
07	Miscellaneous	30,000
	Total	46,25,000
	Provisions (10%)	4,62,500
	Total	Rs. 50,87,500/- Cost per student per year = Rs.5088/-

9. Quality assurance mechanism and expected Programme outcomes

The material will be adequate to the syllabus prepared. Since the scheme, syllabus and examination, evaluation norms all are same for the regular Programme there is no problem with the equivalence of the programme. The quality of the Programme will be ensured through strict monitoring by an executive committee that includes the Co-ordinator of the Programme, subject experts and Director, School of Distance Education. The Co-ordinator of the Programme shall ensure regular student feedback of courses, teachers and the Programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the Programme's efficacy will be held, in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the Programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.



Mahatma Gandhi University, Priyadarshini Hills
Kottayam

Bachelor's Degree Programme in Computer Applications and Science

Prepared By

Board of Studies in Computer Applications

And

Faculty of Science and Technology

May 2017

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Acknowledgement

There are many profound personalities whose relentless support and guidance made this syllabus restructuring 2017 a success. I take this opportunity to express my sincere appreciation to all those who were part of this endeavor for restructuring of the syllabus and curriculum of Under Graduate Programme in Computer Applications and Science under Mahatma Gandhi University, Kottayam.

I express profound gratitude to the Honorable Vice-Chancellor, Pro-Vice chancellor, Registrar, Members of the syndicate and Academic Council for their leadership and guidance for completion of this work. I place on record my whole hearted gratitude to the members of Faculty of Science and Technology and Board of Studies (UG) in computer Applications for their untiring efforts. I also appreciate the efforts of members of University Academic section and other staff.

I am also grateful to all faculty members of various colleges who participated in the workshops organized by the University for restructuring the syllabus and curriculum. I also place on record my gratitude to all professionals, academicians and other stakeholders who gave valuable suggestions in this regard.

Dean, Faculty of Science and Technology,
Mahatma Gandhi University,
Kottayam.

1. Introduction

Mahatma Gandhi University introduced choice based credit and semester and grading system in colleges affiliated to University from the academic year 2009-2010 under direct grading system. Regulations for undergraduate programmes under choice based course-credit-semester system and grading was introduced in the university from the academic year 2013-2014 onwards under indirect grading system. The university Grants Commission, in order to facilitate student mobility across institutions within and across countries and also to enable potential employers to assess the performance of students, insisted to introduce uniform grading system in universities. The academic council of M G University resolved to introduce the UGC guidelines for choice based credit semester system from the academic year 2016-17 onwards . Meanwhile the Hon'ble Supreme Court of India has issued orders to include core courses on Environmental Studies and Human Rights in the Syllabi and curricula of all U G programmes of all Universities all over India. In continuation to this the U.G.C has issued circular regarding the implementation of the above said changes by accepting the direction of the Honorable Supreme Court as a national policy. Hence, the syndicate of M G University has decided to modify the syllabi and curricula of all UG programmes in accordance with the directions of the Honourable Supreme Court and U.G.C. Further, the syndicate has decided to implement the new regulations and syllabi with effect from the academic year 2017-18. In view of this, the Board of Studies of Computer Applications and the Faculty of Science and Technology has prepared the following syllabus for U G programmes in Computer applications and Science.

2. Scope

The revised syllabus for Computer Application and Science provides a strong foundation to pursue post graduation programme in computer science / applications. The knowledge acquired by the students may also equip them to meet the industrial need, and get placed.

3. Programme Objective

The Programme in Computer Application and Science is designed with the following specific objectives.

- (a) To attract young minds to the potentially rich & employable field of computer applications.

(b) To be a foundation graduate programme which will act as a feeder course for higher studies in the area of Computer Science/Applications.

(c) To develop skills in software development so as to enable the graduates to take up self-employment in Indian & global software market.

(d) To Train & Equip the students to meet the requirement of the Industrial standards.

4. Course Design

The UG programme in Computer Applications and Science includes Common courses, Core courses, Complementary courses, Open courses, Seminar, Project and viva voce. No course shall carry more than four credits. The student shall select any one open course in semester V offered by various departments of the College.

5. Duration of Course

The programme shall normally extend over a period of three academic years consisting of six semesters.

Consolidated Scheme – I to VI Semesters of BCA

Sem	Title with Course Code	Course Category	Hours per week	Credit	Marks		
					Intl	Extl	Total
I	English-I	Common	5	4	20	80	100
	Mathematics	Complementary	4	4	20	80	100
	Basic Statistics	Complementary	4	4	20	80	100
	CA1CRT01 -Computer Fundamentals and Digital Principles	Core	4	4	20	80	100
	CA1CRT02-Methodology of Programming and C Language	Core	4	3	20	80	100
	CA1CRP01-Software Lab I (Core)	Core	4	2	20	80	100
II	English-II	Common	5	4	20	80	100
	Discrete Mathematics	Complementary	4	4	20	80	100
	CA2CRT03 -Data Base Management Systems	Core	4	3	20	80	100
	CA2CRT04-Computer Organization and Architecture	Core	4	4	20	80	100
	CA2CRT05-Object oriented programming using C++	Core	3	4	20	80	100
	CA2CRP02-Software Lab- II	Core	5	2	20	80	100
III	Advanced Statistical Methods	Complementary	4	4	20	80	100
	CA3CRT06-Computer Graphics	Core	4	4	20	80	100
	CA3CRT07-Microprocessor and PC Hardware	Core	3	4	20	80	100
	CA3CRT08-Operating Systems	Core	4	4	20	80	100
	CA3CRT09-Data Structure using C++	Core	4	3	20	80	100
	CA3CRP03-Software Lab III	Core	6	2	20	80	100
IV	Operational Research	Complementary	4	4	20	80	100
	CA4CRT10-Design and Analysis of Algorithms	Core	4	4	20	80	100
	CA4CRT11- System Analysis & Software Engineering	Core	4	4	20	80	100
	CA4CRT12-Linux Administration	Core	4	4	20	80	100
	CA4CRT13-Web Programming using PHP	Core	3	3	20	80	100
	CA4CRP04-Software Lab IV	Core	6	2	20	80	100

V	CA5CRT14-Computer Networks	Core	3	4	20	80	100
	CA5CRT15-IT and Environment	Core	4	4	20	80	100
	CA5CRT16-Java Programming using Linux	Core	3	3	20	80	100
	CA5OPT-- Open Course	Core	4	3	20	80	100
	CA5CRP05 -Software Lab V	Core	5	2	20	80	100
	CA5CRP06-Software Development Lab I (Mini Project)	Core	6	2	20	80	100
VI	CA6CRT17 -Cloud Computing	Core	4	4	20	80	100
	CA6CRT18 -Mobile Application development- Android	Core	4	4	20	80	100
	CA6PET-- -Elective	Core	4	4	20	80	100
	CA6CRP07 –Software Lab VI & Seminar	Core	6	2	100	-	100
	CA6CRP08 -Software Development Lab II (Main Project)	Core	7	3	20	80	100
	CA6VVT01-Viva Voce	Core		1	-	100	100

Open Course(OP): CA5OPT01 : Informatics and Cyber Ethics, CA5OPT02 : Computer Fundamentals, Internet & MS Office.

Electives (PE): CA6PET01: Data Mining, CA6PET02: Digital Image Processing, CA6PET03: Soft Computing Techniques.

Consolidated Scheme for I to VI Semesters – B.Sc. Computer Science

Sem	Course Code & Title	Course Category	Hours per Week		Credits	Marks		
			Theory	Lab		Internal	External	Total
I	English-I	Common	5		4	20	80	100
	Mathematics-I	Complementary	4		4	20	80	100
	CS1CRT01 Computer Fundamentals and Basics of PC Hardware	Core	4		4	20	80	100
	CS1CRT02 Methodology of Programming and C Language	Core	4		3	20	80	100
	CS1CMT01 Fundamentals of Digital Systems	Complementary	4		4	20	80	100
	CS1CRP01 Software Lab-I	Core		4	2	20	80	100
II	English-II	Common	5		4	20	80	100
	Mathematics-II	Complementary	4		4	20	80	100
	CS2CRT03 Data Communication	Core	4		3	20	80	100
	CS2CRT04 Computer Organization and Architecture	Core	4		4	20	80	100
	CS2CRT05 Object Oriented Programming using C++	Core	4		3	20	80	100
	CS2CCP02 Software Lab-II	Core		4	2	20	80	100
III	Probability and Statistics	Complementary	4		4	20	80	100
	CS3CRT06 Database Management Systems	Core	4		4	20	80	100
	CS3CRT07 System Analysis and Design	Core	4		4	20	80	100
	CS3CRT08 Networking Fundamentals	Core	4		4	20	80	100
	CS3CRT09 Data Structure using C++	Core	4		3	20	80	100
	CS3CRP03 Software Lab-III	Core		5	2	20	80	100
IV	CS4CRT10 LINUX Administration	Core	4		4	20	80	100
	CS4CRT11 Microprocessor and Assembly Language Programming	Core	4		4	20	80	100
	CS4CRT12 Computer Aided Optimization Techniques	Core	4		4	20	80	100
	CS4CRT13 Web Programming Techniques	Core	4		4	20	80	100

	CS4CRP04 Assembly Language Programming Lab	Core		5	2	20	80	100
	CS4CRP05 Software Lab IV	Core		4	2	20	80	100
V	CS5CRT14 System Software and Operating System	Core	4		4	20	80	100
	CS5CRT15 IT and Environment	Core	4		4	20	80	100
	CS5CRT16 Java Programming using Linux	Core	4		3	20	80	100
	CS5CRT17 Computer Security	Core	4		3	20	80	100
	CS5OPT Open Course	Core	4		4	20	80	100
	CS5PRP06 Software Development Lab I (Mini Project)	Core		5	2	20	80	100
VI	CS6CRT18 Computer Graphics	Core	5		4	20	80	100
	CS6CRT19 Big Data :Analytics	Core	5		4	20	80	100
	CS6PET Programme Elective	Core	5		4	20	80	100
	CS6SMP07 Seminar	Core		3	2	100	0	100
	CS6PRP08 Software Development Lab II (Main Project)	Core		7	3	20	80	100
	CS6VVP Viva Voce	Core		0	1	0	100	100
Grand Total			113	37	120	780	2820	3600

Open Course(OP): CA5OPT01 : Informatics and Cyber Ethics, CA5OPT02 : Computer Fundamentals, Internet & MS Office.

Consolidated Scheme for I to VI Semesters – B.Sc. Computer Application (Triple Main)

Sem	Course	Course Category	No. of hrs/ week		Duration of exam in hrs.	Maximum Mark			Credits
			Lect.	Lab		Intl	Extl	Tot	
I	English-I	Common	5		3	20	80	100	4
	Statistics	Core	4		3	20	80	100	3
	Mathematics	Core	4		3	20	80	100	3
	CA1CRT01-Computer Fundamentals and Digital principles	Core	4		3	20	80	100	3
	CA1CRT02-Methodology of programming and C language.	Core	4		3	20	80	100	3
	CA1CRP01 - Software Lab – I	Core		4	3	20	80	100	2
	English	Common	5		3	20	80	100	4
II	Statistics	Core	4		3	20	80	100	3
	Mathematics	Core	4		3	20	80	100	3
	CA2CRT03-Database Management System	Core	4		3	20	80	100	3
	CA2CRT04-Object Oriented Programming using C++	Core	4		3	20	80	100	3
	CA2CRP02- Software Lab II	Core		4	3	20	80	100	2
	Statistics	Core	5		3	20	80	100	4
III	Mathematics	Core	5		3	20	80	100	4
	CA3CRT05-Data Structure Using C++	Core	4		3	20	80	100	3
	CA3CRT06-Computer Network	Core	3		3	20	80	100	4
	CA3CRT07-System	Core	4		3	20	80	100	3

	Analysis and Software Engineering								
	CA3CRP03-Software lab-III	Core		4	3	20	80	100	2
IV	Statistics	Core	5		3	20	80	100	4
	Statistics	Core	5		3	20	80	100	4
	Mathematics	Core	5		3	20	80	100	4
	CA4CRT08-Linux Administration	Core	3		3	20	80	100	3
	CA4CRT09-Web Programming Using PHP	Core	3		3	20	80	100	3
	CA4CRP04- Software Lab IV	Core		4	3	20	80	100	3
V	Environmental Studies Human rights and Design of experiments	Core	5		3	20	80	100	4
	Mathematics	Core	5		3	20	80	100	4
	Mathematics	Core	5		3	20	80	100	4
	CA5CRT10-Java Programming	Core	4		3	20	80	100	4
	CA5OPT-Open Course	Core	4		3	20	80	100	4
	CA5CRP05-Software Lab V	Core		2	3	20	80	100	3
VI	Mathematics	Core	5		3	20	80	100	4
	Mathematics	Core	5		3	20	80	100	4
	CA6CRT11-Operating Systems	Core	5		3	20	80	100	4
	CA6PET-Elective	Core	5		3	20	80	100	4
	CA6CRP06-Software Development Lab (Main Project)	Core		5		20	80	100	3
	CA6VVT01 Course Viva	Core					100	100	1

Consolidated Scheme for I to VI Semesters – B.Sc. IT

Sem	Course	Course Category	No. of hrs/ week		Duration of exam in hrs.	Maximum Mark			Credits
			Lect.	Lab		Intl	Extl	Tot	
I	English-I	Common	5		3	20	80	100	4
	Mathematics	Complementary	4		3	20	80	100	4
	IT1CRT01- Computer Fundamentals and Basics of PC Hardware	Core	4		3	20	80	100	4
	IT1CRT02- Digital Electronics	Core	4		3	20	80	100	3
	IT1CRT03- Methodology of programming and C language.	Core	4		3	20	80	100	3
	IT1CRP01 - Software Lab – I	Core		4	3	20	80	100	2
	II	English-II	Common	5		3	20	80	100
Probability & Statistics		Complementary	4		3	20	80	100	4
IT2CRT04- Operating Systems		Core	4		3	20	80	100	4
IT2CRT05- Computer Organization and Architecture		Core	4		3	20	80	100	4
IT2CRT06- Object Oriented Programming using C++		Core	4		3	20	80	100	3
IT2CRP02- Software Lab II		Core		4	3	20	80	100	2
	IT3CRT07- Software	Core	4		3	20	80	100	4

III	Engineering								
	Operation Research	Complementary	4		3	20	80	100	4
	ITCRT08-Data Structure Using C++	Core	4		3	20	80	100	4
	IT3CRT09-Database Management Systems	Core	4		3	20	80	100	3
	IT3CRT10-Computer Graphics	Core	4		3	20	80	100	3
	CA3CRP03-Software lab-III	Core		5	3	20	80	100	2
IV	IT4CRT11-Design & Analysis of Algorithms	Core	4		3	20	80	100	4
	Discrete Mathematics	Complementary	4		3	20	80	100	4
	IT4CRT12-Linux Administration	Core	4		3	20	80	100	4
	ITCRT13-Parallel processing	Core	4		3	20	80	100	4
	IT4CRT14-Web Programming Using PHP	Core	4		3	20	80	100	3
	IT4CRP04-Software Lab IV	Core	-	5	3	20	80	100	2
	ITCR5T15-Computer Networks	Core	4		3	20	80	100	4
	IT5CRT16- Java Programming using Linux	Core	3		3	20	80	100	3
	IT5CRT17-IT and Environment		4		3	20	80	100	4

V	IT5OPT- Open Course	Core	4		3	20	80	100	4
	IT5CRP05- Software Lab V	Core		4	3	20	80	100	3
	IT5CRP06- Software Development Lab I	Core		6	3	20	80	100	3
VI	IT6CRT18- Mobile Application Development- Android	Core	4	4	3	20	80	100	4
	IT6CRT19- System Software	Core	4		3	20	80	100	4
	IT6PET- Elective	Core	4		3	20	80	100	4
	IT6CRP08- Software Lab VI & Seminar	Core		6					2
	IT6CRP09- Software Development Lab II	Core		7		20	80	100	3

Consolidated Scheme for I to IV Semesters – B.Sc Mathematics Vocational Model-II

Semester	Course	No. of hours per week		Durn. of Exam in hours	Maximum Mark			Credit
		Lecture	Lab.		Interna 1	External	Total	
I	CA1VOT01 : Computer Fundamentals	4	-	3	20	80	100	4
	CA1VOP01 Software Lab –I- Introduction to WEB Technologies		4	3	20	80	100	3
II	CA2VOT02 : Object Oriented Programming with C++	4	-	3	20	80	100	4
	CA2VOP02 : Software Lab-II using C++	-	4	3	20	80	100	3
III	CA3VOT03 :Database Management Systems	6	-	3	20	80	100	4
	CA3VOP03 :Software Lab -II using SQL	-	6	3	20	80	100	3
IV	CA4VOT04:Operating System	6	-	3	20	80	100	4
	CA4VOP04 : Software Lab – IV Project	-	6	3	20	80	100	3

Consolidated Scheme for I to IV Semesters – B.Sc Physics Vocational Model-II

Semester	Title of the Course	Hours/week	Credits	e s e r		marks	
						IA	EA
1	English I	5	4	90	3	20	80
	Second Language I	5	4	90	3	20	80
	PH1CRT01 – Methodology and Perspectives of Physics	2	2	36	3	10	60
	Complementary I – Mathematics I	5	3	90	3	20	80
	CA1VOT01 - Computer Fundamentals	2	2	36	3	20	80
	CA1VOT02 Computer Networks & Internet Technologies	2	2	36	3	10	60
	Core Practical I: PH2CRP01 Mechanics and Properties of Matter	2	-	36	-	-	-
	Vocational Practical I: CA2VOP01 Introduction to Computers & ANSIC Programming	2	-	36	-	-	-
	English II	5	4	90	3	20	80
	Second Language II	5	4	90	3	20	80

2	PH2CRT02 – Mechanics and Properties of Matter	2	2	36	3	10	60
	Complementary I – Mathematics II	5	3	90	3	20	80
	CA2VOT03 Word and Data processing Packages	2	2	36	3	20	80
	CA2VOT04 - Programming in ANSI C	2	2	36	3	10	60
	Core Practical I: PH2CRP01 Mechanics and Properties of Matter	2	2	36	3	20	40
	Vocational Practical 2: CA2 VOP01 Introduction to Computers & ANSI C Programming	2	2	36	3	20	40
	English III	5	4	90	3	20	80
	PH3CRT03 – Optics, Laser and Fiber Optics	3	3	54	3	10	60
	Complementary I – Mathematics III	5	4	90	3	20	80

3	CA3VOT05 Concepts of Object Oriented Programming	3	4	54	3	10	60
	CA3VOT06 – Operating System	3	3	54	3	10	60
	Core Practical II: PH4CRP02	2	-	36	-	-	-

Optics and Semiconductor Physics						
Vocational Practical II: CA4VOP02 Data Processing Packages, Operating System and Visual Basic Programming	2	-	36	-	-	-
Vocational Practical III: CA4VOP03 C++ Programming and Web Development	2	-	36	-	-	-

	English IV	5	4	90	3	20	80
	PH4CRT04 - Semiconductor Physics	3	3	54	3	10	60
	Complementary I – Mathematics IV	5	4	90	3	20	80
	CA4VOT07 - Visual Basic Programming	3	4	54	3	10	60
4	CA4VOT08 Web Development and PHP Programming	3	3	54	3	10	60
	Core Practical II: PH4CRP02 Optics and Semiconductor Physics	2	2	36	3	20	40
	Vocational Practical II: CA4VOP02 Data Processing Packages, Operating System and Visual Basic Programming	2	2	36	3	20	40
	Vocational Practical III: CA4VOP03 C++ Programming and Web Development	2	2	36	3	20	40

**Consolidated Scheme for III to VI Semesters – B.Com Computer Application
Vocational Model-II**

Semester	Course	No. of hours per week		Durn. of Exam in hours	Maximum Mark			Credit
		Lecture	Lab		Intern al	External	Total	
III	CO3OCT02- Information Technology for Business	3		3	10	60	100	3
	CO3OCP01-Information Technology for Business		2	3				1
IV	CO4OCT02 – Information Technology for Office	3	-	3	10	60	70	3
	CO4OCP02 – Information Technology for Office(P01&P02)	-	2	3				1
	Software Lab I				10+10	40	60	
V	CO5CMT04- Programming in C	3	-	3	10	60	70	3
	CO5CMP01- Programming in C	-	2	3				1
	CO5OCT02 – Computerized accounting	3		3	10	60	70	3
	CO5OCP01 – Computerized accounting		2					1
VI	CO6CMT04- Database Management System	3	-	3	10	60	70	3
	CO6CMP01- Database Management System		2	3				1
	CO6OCT02- Software for Business and Research	3		3	10	60	70	3
	CO6OCP01- Software for Business and Research		2					1

	Software Lab II				10+10	40	60	
	Software Lab III				10+10	40	60	

**Consolidated scheme for I to IV Semesters-BA Economics Programme (Vocational)
Model II Computer Application**

Semester	Course	No. of hours per week		Durn. of Exam in hours	Maximum Mark			Credit
		Lecture	Lab.		Internal	External	Total	
I	CA1CMT01 : Computer Fundamentals	3	-	3	10	60	70	3
	Practical – I Office Automation		2					
II	CA2CMT02 : Computerized Techniques for Office	3	-	3	10	60	70	3
	Practical – II Computerized Techniques for Office	-	2					
	CA2CMP01 : Practical – I & II external				10+10	40	60	2
III	CA3CMT03 : Database Management System	2	-	3	10	60	70	3
	Practical – III DBMS and MS Access	-	2					
IV	CA4CMT04 : Visual Programming Techniques	2	-	3	10	60	70	3
	Practical – IV based on VB.NET	-						
	CA4CMP02 : Practical – III & IV external			3	10+10	40	60	2

Consolidated scheme for I to IV semesters-B.Sc Petrochemicals Complementary Papers

Semester	Course	No. of hours per week		Durn. of Exam in hours	Maximum Mark			Credit
		Lecture	Lab.		Interna 1	External	Total	
I	CA1CMT01 : Computer Fundamentals	3	-	3	10	60	70	2
	Practical – I Office Automation		2					
II	CA2CMT02 : Programming in C language	3	-	3	10	60	70	3
	Practical – II using C	-	2					
	CA2CMP01 : Software lab I – Lab I & Lab II			3	10+10	40	60	2
III	CA3CMT03 : Web Technology and Programming	4	-	3	10	60	70	2
	Practical – III Web Technology based	-	2					
IV	CA4CMT04 : Visual Programming Techniques	3	-	3	10	60	70	3
	Practical – IV based on VB.NET	-	2					
	CA4CMP02 : Software lab II – Lab III & Lab IV			3	10+10	40	60	2

**Consolidated scheme for I to IV semesters -Model- I Complementary Paper For B.Sc.
Statistics, B.Sc. Mathematics**

Semester	Course	No. of hours per week		Durn. of Exam in hours	Maximum Mark			Credit
		Lecture	Lab.		Intern al	External	Total	
I	CA1CMT01 : Computer Fundamentals	2	-	3	10	60	70	2
	Practical – I Office Automation		2					
II	CA2CMT02 : Programming in C Language	2	-	3	10	60	70	3
	Practical – II using C	-	2					
	CA2CMP01 : Software lab I – Lab I & Lab II			3	10+10	40	60	2
III	CA3CMT03 : Web Technology and Programming	3	-	3	10	60	70	2
	Practical – III Web Technology based	-	2					
IV	CA4CMT04 : Visual Programming Techniques	3	-	3	10	60	70	3
	Practical – IV based on VB.NET	-	2					
	CA4CMP02 : Software lab II – Lab III & Lab IV			3	10+10	40	60	2

SYLLABUS- BCA- SEMESTER I

CA1CRT01 : Computer Fundamentals and Digital Principles (Core)

Theory:4 hrs. per week

Credits:4

Unit-1: (12 hrs.)

Introduction: Functional units of a computer system, Different types of computers, Computer Software and Hardware, Types of software-System software and Application programme. Characteristic of computers. Input Devices – Keyboard, Mouse, Optical input devices, Output devices – Monitors and Printers.

Unit-2: (10 hrs.)

Introduction to Operating Systems and Networking: Definition of an Operating System - Different types of PC Operating Systems. Computer Networks- categories of networks - LAN, WAN,MAN. The Internet - Working of Internet - Major Features of Internet.

Unit 3: (12 hrs.)

Number Systems: Base or radix ,Positional number system, Popular number systems(Decimal, Binary, Octal and Hexadecimal), Conversion-From one number system to another, Concept of binary addition and subtraction, Complements in binary number systems, 1^s Complement, 2^s Complement and their applications, Signed magnitude form, BCD numbers- concept and addition.

Unit 4: (20 hrs.)

Boolean Algebra and Gate Networks: Logic gates- AND, OR, NOT, NAND and NOR Truth tables and graphical representation, Basic laws of Boolean Algebra, Simplification of Expressions, De Morgans theorems, Dual expressions, Canonical expressions, Min terms and Max terms, SOP and POS expressions, Simplification of expression using K-MAP (up to 4 variables), Representation of simplified expressions using NAND/NOR Gates, Don't care conditions, XOR and its applications, parity generator and checker.

Unit5: (18 hrs.)

Sequential and Combinational Logic. Flip flops- Latch, Clocked, RS, JK, T, D and Master slave , Adders-Half adder, Full adder(need and circuit diagram), Encoders, Decodes, Multiplexers and Demultiplexers(working of each with diagram), Analog to digital and digital to analog converters (Diagram and working principle), : Concept of Registers, Shift Registers

Books of study :

1. Peter Nortons- Introduction to Computers, Sixth Edition, Published by Tata McGraw Hill
2. P K Sinha & Priti Sinha - Computer Fundamentals , Fourth Edition, BPB Publications.
3. M Morris Mano-Digital Logic and Computer design, Fourth Edition, Prentice Hall.

References Text:

1. Thomas C Bartee- Digital computer Fundamentals, Sixth Edition, TATA McGraw Hill Edition
2. Thomas L Floyd- Digital Fundamentals, Ninth edition, PEARSON Prentice Hall.
3. Malvino & Leach- Digital Principles and Applications, Sixth Edition, Tata McGraw Hill, 2006

CA1CRT02 -Methodology Of Programming And C Language (Core)

Theory:4 hrs. per week

Credits:3

UNIT 1 (12 hrs.)

Introduction to programming, Classification of computer languages, Language translators (Assembler, Compiler, Interpreter), Linker, Characteristics of a good programming language, Factors for selecting a language, Subprogram, Purpose of program planning, Algorithm, Flowchart, Pseudocode, Control structures (sequence, selection, Iteration), Testing and debugging

UNIT 2(12 hrs.)

C Character Set, Delimiters, Types of Tokens, C Keywords, Identifiers, Constants, Variables, Rules for defining variables, Data types, C data types, Declaring and initialization of variables, Type modifiers, Type conversion, Operators and Expressions- Properties of operators, Priority of operators, Comma and conditional operator, Arithmetic operators, Relational operators, Assignment operators and expressions, Logical Operators, Bitwise operators.

UNIT 3 (15 hrs.)

Input and Output in C – Formatted functions, unformatted functions, commonly used library functions, Decision Statements If, if-else, nested if-else, if-else-if ladder, break, continue, goto, switch, nested switch, switch case and nested if. Loop control- for loops, nested for loops, while loops, do while loop.

UNIT 4(15 hrs.)

Array, initialization, array terminology, characteristics of an array, one dimensional array and operations, two dimensional arrays and operations. Strings and standard functions, Pointers, Features of Pointer, Pointer and address, Pointer declaration, void wild constant pointers, Arithmetic operations with pointers, pointer and arrays, pointers and two dimensional arrays.

UNIT 5(18 hrs.)

Basics of a function, function definition, return statement, Types of functions, call by value and reference. Recursion -Types of recursion, Rules for recursive function, direct and indirect recursion, recursion vs iterations, Advantages and disadvantages of recursion. Storage class, Structure and union, Features of structures, Declaration and initialization of structures, array of structures, Pointer to structure, structure and functions, typedef , bitfields , enumerated data types, Union, Dynamic memory allocation, memory models, memory allocation functions.

Book Of Study:

1. Ashok Kamthane - Programming in C, Third Edition, Pearson Education
2. P K Sinha & Priti Sinha - Computer Fundamentals , Fourth Edition, BPB Publications.

Reference Text

1. E. Balaguruswamy -Programming in ANSI C ,Seventh Edition , McGraw Hill Education
2. Byron Gotfried - Programming with C, Second Edition, Schaums Outline series. McGraw Hill

CA1CRP01-Software Lab I (Core)

Software Lab: 4 hrs. per week

Credits:2

Syllabus

1. Programs to familiarize printf() and scanf() functions.
2. Programs Based on Decision statements , break, goto, continue, switch and Loop controls statements.
3. Programs Based on One dimensional and two dimensional arrays.
4. Programs on Strings and string handling functions.
5. Programs based on Pointers, operations on pointers, Arrays & Pointers,
6. Programs based on functions, Call by value, Call by reference, Recursion,
7. Programs based on structure and union, array of structures, Pointer to structure, structure and functions
8. Simple programs using pointers and malloc().

Scheme of Evaluation for software lab I external is as follows:

Division of Marks (Practical - 3 hours External)

First program from part 1& 2	- 25 marks
1.Flowchart	- 5 marks
2.Logic	- 10 marks
3.Successful compilation	- 5 marks
4.Result	- 5 marks
Second program should be based on advanced concepts ,part 3 to part 8	- 35 marks
1.Logic	- 20 marks
2.Successful compilation	- 10 marks
3. Result	- 5 marks)
Viva Voce	- 10 marks
Lab Record (minimum of 25 Programs)	- 10 marks
Total Marks	- 80 marks

BCA- SEMESTER II

CA2CRT03- Database Management Systems (Core)

Theory:4 hrs. per week

Credits:3

Unit 1: Introduction (12 hrs.)

Characteristics of the Database Approach – Database users :DBA , Database Designers ,End users – Advantages of using the DBMS Approach – Data models, Schemas , and Instances – Three-Schema Architecture and Data Independence.

DBMS Languages: DDL, DML – The Database System Environment: DBMS Component Modules.

Unit 2: Relational Model (16 hrs.)

Entity Relationship Modeling: Introduction –Entity Types , Entity Sets , Attributes and Keys – Relationship Types ,Relationship Sets, Roles , and Structural Constraints – Weak Entity Types – Notation for ER diagrams – Sample ER diagrams.

Relational Model concepts: Domains ,Attributes , Tuples , and Relations – Characteristics of Relations – Relational Model Constraints and Relational Database Schemas : Domain Constraints, Key Constraints , Relational Database Schemas , Entity Integrity , Referential Integrity, and Foreign Keys .

Unit 3: SQL(14 hrs.)

Data Types – Data Definition commands : CREATE , ALTER ,DROP - Adding constraints in SQL –

Basic SQL Queries : INSERT ,SELECT ,DELETE ,UPDATE - Substring comparison using LIKE operator ,BETWEEN operator – Ordering of rows – SQL set operations UNION , EXCEPT , INTERSECT – Complex Queries : Comparison involving NULL and Three-valued logic ,Nested queries , EXISTS and UNIQUE functions, Renaming of attributes and Joining of tables, Aggregate functions ,Grouping – Managing Views.

Unit 4: Normalization and Indexing Structures for Files(15 hrs.)

Normalization: Informal Design Guidelines for Relational Schemas –Functional Dependencies – Normal forms : First Normal Form , Second Normal Form , Third Normal Form – General Definitions of Second and Third Normal Forms –BCNF.

Indexing Structures for files: -Types of Single-Level Ordered Indexes: Primary Indexes, Clustering Indexes, and Secondary Indexes.

Unit 5: Transaction Processing and Database Security (15 hrs.)

Transaction Processing: Introduction to Transaction Processing - Transaction and System Concepts – Desirable properties of Transactions.

Database Security and Authorization: Types of Security – Control measures – Database Security and DBA – Access Control , User Accounts, and Database Audits –Access Control based on Granting and Revoking Privileges.

Books of study:

1.Ramez Elmasri and Shamkant B.Bavathe - DATABASE SYSTEMS , Sixth Edition, Pearson Education.

References:

1. C.J Date- An Introduction to Database Systems, Eighth edition, Pearson Education,2003
2. Reghu Ramakrishnan and Johannes Gehrke- Database Management Systems , Third edition, Mc Graw Hill International Edition.
3. Dipin Desai , An Introduction to Database Systems , First Edition, Galgoria Publications .

CA2CRT04 : Computer Organization and Architecture (Core)

Theory:4 hrs. per week

Credits:3

Unit 1: (12 hrs.)

Basic computer organization and design

Operational concepts, Instruction codes, Computer Registers, Computer Instructions, Memory locations and addresses, Instruction cycle, Timing and control, Bus organization.

Unit 2: (15 hrs.)

Central Processing Unit:

General Register Organization, Stack Organization, Addressing modes, Instruction Classification, Program control.

Unit 3: (16 hrs.)

Memory Organization

Memory Hierarchy, Main Memory, Organization of RAM, SRAM, DRAM, Read Only Memory-ROM-PROM,EROM,EEPROM, Auxiliary memory, Cache memory, Virtual Memory, Memory mapping Techniques.

Unit 4: (15 hrs.)

Parallel Computer Structures:

Introduction to parallel processing, Pipeline computers, Multi processing systems, Architectural classification scheme-SISD, SIMD, MISD, MIMD.

Unit 5: (14 hrs.)

Pipelining and Vector processing: Introduction to pipelining, Instruction and Arithmetic pipelines (design) Vector processing, Array Processors.

Book of study :

1. M.Morris Mano-Computer Systems Architecture, Third Edition, Pearson Education
2. Kai Hwang and F A Briggs-Computer Architecture and parallel processing, McGraw Hills,1990

Reference

1. Carl Hamacher -Computer Organization, Fifth Edition, Tata McGraw Hill.
2. John P Hayes -Computer Architecture & Organization–Mc Graw Hill
3. William Stallings-Computer Organization and Architecture , Seventh Edition, Pearson Education

CA2CRT05- Object Oriented Programming using C++ (Core)

Theory:3 hrs. per week

Credits:4

Unit 1: (10 hrs.)

Principles of Object Oriented Programming, Beginning with C++

Procedure Oriented Programming-Object Oriented Programming-Basic concepts of object-oriented programming- Benefits of OOP- Applications of OOP-A simple C++program-Structure of C++ program-C++ data types- Symbolic constants- Reference by variables-Operators in C++- Operator precedence-Control structures- Function in C++ - The main function, Function prototyping- Call by reference- Return by reference- Inline function- Default arguments- Function overloading.

Unit 2: (10 hrs.)

Classes and Objects :Specifying a class- Defining member functions- Nesting of member functions - Private member functions - Arrays within a class - Memory allocation for objects-Static data members - Static member functions -Arrays of objects - objects as function arguments -Friendly functions- Returning Objects.

Unit 3: (12 hrs.)

Constructors and Destructors, Overloading

Constructors- Default constructor-Parameterized constructor-Copy constructor- Multiple constructors- Constructors with default arguments- Dynamic constructor-Destructors- Operator overloading- Unary and Binary operator overloading- Overloading using friends- Rules for overloading- Type conversion.

Unit 4: (10 hrs.)

Inheritance: Inheritance - Defining derived classes-Visibility modes-Single, Multilevel, Multiple, Hierarchical and Hybrid inheritance- Virtual base classes- Abstract classes- Constructors in derived classes- Nesting of classes.

Unit 5: (12 hrs.)

Pointers, Virtual Functions and Polymorphism, Working with Files :Pointers- Pointers to objects- this pointer-Pointers to derived classes- Virtual functions- Pure virtual functions- File Stream classes, Opening and closing a file- File opening modes- File pointers and their manipulations- Sequential input and output operations.

Book of Study:

1. E. Balagurusamy - Object Oriented Programming with C++, Fifth edition, Tata McGraw Education Hill , 2011.

Reference:

1. Ashok N. Kamthane, Object oriented Programming with ANSI & Turbo C++, First Edition, Pearson India
2. Robert Lafore, Object Oriented Programming in Turbo C++, First Edition, Galgotia Publications.
3. D Ravichandran, Programming with C++, Second edition, Tata McGraw- Hill.

CA2CRP02-Software Lab II (Core)

Software Lab: 5 hrs. per week

Credits:2

I. SQL Commands (2 hrs. per week)

1. Data definition commands - CREATE, ALTER, DROP, Adding Constraints Primary key, foreign key, unique key, check, not null.
2. Basic SQL queries INSERT, SELECT, DELETE, UPDATE, Using multiple tables, ordering of rows using ORDER BY option, Set operations using UNION, EXCEPT, INTERSECT, Substring Comparison using LIKE operator, BETWEEN operator.
3. Complex Queries Nested Queries, EXISTS and UNIQUE/DISTINCT functions, NULL values, Renaming of attributes and Joining of tables, Aggregate functions and grouping.
4. Managing views, Simple stored procedures.
5. Data Control commands - Access Control and Privilege commands.

II. Object Oriented Programming using C++ (3 hrs. per week)

1. Programs based on default arguments, function overloading.
2. Programs based on array of objects, friend functions, passing objects as arguments to function.

3. Programs based on operator overloading (binary, unary) using member functions and friend functions.
4. Programs based on constructors, different types of constructors.
5. Programs based on inheritance, different types of inheritance.

Scheme of Evaluation for software lab II external is as follows:

(There will be two questions; the first from DBMS and second from C++)

Division of Marks (Practical - 3 hours External)

First program - questions from DBMS **- 25 marks**

- | | |
|---------------------------|------------|
| 1. Logic | – 10 marks |
| 2. Successful compilation | – 8 marks |
| 3. Result | – 7 marks |

Second program – questions from Object Oriented Programming using C++ **- 35 marks**

- | | |
|---------------------------|------------|
| 1. Logic | – 20 marks |
| 2. Successful compilation | – 10 marks |
| 3. Result | – 5 marks |

Viva Voce **- 10 marks**

Lab Record **- 10 marks**

(DBMS -Minimum of 10 Programs

C++ -Minimum: of 15 Programs)

Total Marks **- 80 marks**

BCA- SEMESTER III

CA3CRT06 - Computer Graphics (Core)

Theory:4 hrs. per week

Credits:4

Unit 1 : (12 hrs.)

Introduction: A survey of Computer Graphics, overview of graphics systems-Video display devices-Refresh CRT, Raster-Scan and Random-Scan Displays ,Color CRT Monitors, DVST, Flat-Panel Displays , Raster Scan systems, Random scan systems, Input devices, Hard copy devices, Graphics software.

Unit 2: (14 hrs.)

Output primitives: Line drawing algorithms: DDA algorithm, Bresenham's line algorithm, Circle generating algorithm- Midpoint circle algorithm, Character generation.

Unit 3: (18 hrs.)

2D geometric Transformations: Basic transformations: Translation, Rotation, Scaling; Other transformations-Reflection and shear, Matrix representation and homogenous coordinates, Composite transformation, Interactive picture construction Techniques.

Two-dimensional viewing: viewing pipeline, window and viewport, window to viewport transformation. Clipping operations- Point clipping, Line clipping:- Cohen Sutherland line clipping, Polygon clipping:- Sutherland- Hodgeman polygon clipping, Text Clipping.

Unit 4: (14 hrs.)

Three-dimensional concepts: Three dimensional display methods, Three dimensional object representations- Polygon surfaces, Sweep representations, Constructive solid geometry methods, octrees and quadtrees.

Unit 5 (14 Hrs)

Computer Animation: Design of animation sequences, raster animations, computer animation languages, key-frame systems, morphing, motion specifications.

Book of study :

1. Donald D.Hearn & M. Pauline Baker, Computer Graphics C Version, Second Edition,, PHI Pvt. Ltd.

References:

1. Newman W M & R F Sproul, Principles of Interactive Computer Graphics, Second Edition Mc-Graw Hill Publishers.
2. Plastock R & Xiang Z, Theory and problems of computer Graphics, Second Edition Schaum Series, McGraw Hill Publishers.

CA3CRT07 -Microprocessors and PC Hardware (Core)

Theory:3 hrs. per week

Credits:3

Unit1: (10 hrs.)

Introduction : Evolution of microprocessors. **Introduction to the concept of 8085 microprocessor:** Intel 8085 introduction, Architecture ,Pin diagram, Instruction cycle, Timing diagrams, Interrupts of Intel 8085.

Unit 2 : (10 hrs.)

Instruction Set of Intel 8085 : Introduction, Instruction and data format, Addressing modes, Status flags, Intel 8085 instruction set.

Unit3: (12 hrs.)

Motherboard : Components of motherboard — expansion slots, Processor socket, coprocessor, memory modules, BIOS and CMOS, chipset. Super I/O chip, ROM BIOS, System buses- Processor Buses, Memory buses, I/O Bus(ISA,PCI Local Bus, AGP, USB), Motherboard selection criteria.

Unit4: (10 hrs.)

Hard disk: Hard Disk drive, Definitions, Hard Disk operations, Disk formatting, Basic hard disk drive components, Hard disk features, Hard disk drive installation procedure, FAT Disk, VFAT, FAT 32, NTFS.

Unit5: (12 hrs.)

Types of memory: Physical Memory, Memory modules:- SIMMs, DIMMs, RIMMs, Brief study of conventional base memory, Upper memory area, High memory area, Extended memory, Expanded memory.

Book of study :

1. B Ram -Fundamentals of microprocessors and microcontrollers, Seventh revised edition, Dhanpat Rai Publications.
2. Manahar Lotia and Pradeep Nair- All about motherboard, First edition, 2005, BPB Publications..
3. Manahar Lotia and Pradeep Nair- Modern all about Hard Disk Drive , First edition, BPB publications.

References:

1. Scott Mueller - Upgrading and repairing PCs , 18th Edition, Pearson.
2. R S. Gaonkar- Micro processor Architecture, Programming and applications with 8085, Sixth Edition, PENRAM International Publishing.

CA3CRT08 - Operating Systems (Core)

Theory:4 hrs. per week

Credits:4

Unit 1: (10 hrs.)

Introduction: OS Definition, Functions, Evolution of OS, OS Structure Operating System Operations, Operating System Services, User Operating System Interface, System Calls, Types of System Calls.

Unit 2: (14 hrs.)

Process: Basic Concepts, Process Scheduling, Operations on Processes, Inter process communication, Process Scheduling - Scheduling Criteria, Scheduling Algorithms, Multiple Processor Scheduling.

Unit 3: (18 hrs.)

Process Coordination: Synchronization - The Critical Section problem, Semaphores, Classic Problems of Synchronization, Monitors. Deadlocks: System Model, Deadlock Characterization, Methods of handling Deadlocks, Deadlock Prevention, Deadlock Avoidance, Deadlock Detection, Recovery from Deadlock.

Unit 4: (16 hrs.)

Memory Management: Memory Management Strategies - Swapping, Contiguous memory allocation, Paging, Segmentation. Virtual Memory Management- Demand paging, Page Replacement.

Unit 5: (14 hrs.)

Storage Management: File System: - File Concept, Access Methods, Directory structure. Implementing File Systems:-File System Structure, Allocation Methods, Free Space Management, Disk Scheduling.

Book of study:

1. Abraham Silberschatz, Peter Galvin and Greg Gagne - Operating System Principles, Seventh Edition, John Wiley
2. William Stallings - Operating Systems, Sixth Edition, Prentice Hall of India, Pearson

Reference:

1. Milan Kovic - Operating Systems, 2nd Edition, (TMH)

CA3CRT09 - Data Structures using C++

Theory:4 hrs. per week

Credits:3

Unit 1 (12 hrs.)

Concept of Structured data - Data structure definition, Different types and classification of data structures, Arrays – Memory allocation and implementation of arrays in memory, array operations, Applications - sparse matrix representation and operations, polynomials representation and addition, Concept of search and sort – linear search, binary search, selection sort, insertion sort, quick sort.

Unit 2 (12 hrs.)

Stacks – Concepts, organization and operations on stacks using arrays (static), examples, Applications - Conversion of infix to postfix and infix to prefix, postfix evaluation, subprogram calls and execution, Multiple stacks representation.

Queues - Concepts, organization and operations on queues, examples.

Circular queue – limitations of linear queue, organization and operations on circular queue. Double ended queue, Priority queue.

Unit 3 (18 hrs.)

Linked list: Concept of dynamic data structures, linked list, types of linked list, linked list using pointers, insertion and deletion examples, circular linked list, doubly linked lists

Applications- linked stacks and queues, memory management basic concepts, garbage collection.

Unit 4 (15)

Trees - Concept of recursion, trees, tree terminology, binary trees, representation of binary trees, strictly binary trees, complete binary tree, extended binary trees, creation and operations on binary tree, binary search trees, Creation of binary search tree, tree traversing methods – examples, binary tree representation of expressions.

Unit 5 (15)

File - Definition, Operations on file (sequential), File organizations - sequential, Indexed sequential, random files, linked organization, inverted files, cellular partitioning, hashing – hash tables, hashing functions, collisions, collision resolving methods.

Books of study :

1. G.S Baluja - Data Structures Through C++ (A Practical Approach), Second Edition-2004, Danapat Rai & Co.
2. Ellis Horowitz and Sartaj Sahni - Fundamentals of Data Structures in C++ , Second Edition, Galgotia Publications.

References:

1. Seymour Lipschutz, Theory and Problems of Data Structures, Schaums Outline Series,2006, McGraw Hill
2. Yedidyah Lannsam, Moshe Augustein, Aaron M Tenenbaum- Data structures using C and C++ , Second Edition, Prentice Hall

CA3CRP03-Software Lab III (Core)

Software Lab: 6 hrs. per week

Credits:2

Syllabus

Module I

Array – Insertion , Deletion, Polynomial addition using arrays

Sort – Selection, Insertion, Quick

Search – Linear search, Binary search

Sparse matrix – Sparse form representation, transpose and addition using the sparse form

Module II

Stack - Implementation using arrays (linear stack), Infix to postfix conversion, Postfix evaluation

Queue – Implementation using arrays (linear queue), Implementation of circular queue

Module III

Singly linked list – Implementation using dynamic memory allocation techniques, arrange the list based on the ascending or descending order of the information field, concatenate two linked lists, interchange any two nodes in a list, Implementation of circular list, Implementation of linked stacks and queues.

Doubly linked list – Implementation of doubly linked list, Implementation of circular doubly linked list.

Module IV

Creation of binary search trees, Insertion and deletion of nodes, Tree traversals.

Scheme of Evaluation for software lab III external is as follows:

(There will be two questions)

Division of Marks (Practical - 3 hours External)

First program - questions from module 1 & II **- 25 marks**

1. Logic – 10 marks
2. Successful compilation – 8 marks
3. Result – 7 marks

Second program – questions from module III & IV **- 35 marks**

1. Logic – 20 marks
2. Successful compilation – 10 marks
3. Result – 5 marks

Viva Voce **- 10 marks**

Lab Record **- 10 marks**

(Minimum of 25 Programs)

Total Marks - 80 marks

BCA - SEMESTER IV

CA4CRT10 - Design and Analysis of Algorithms (Core)

Theory:4 hrs. per week

Credits:4

Unit 1: (12 hrs.)

Introduction, Definition of Algorithm, Algorithm design techniques, Algorithm Analysis, performance analysis - space complexity, time complexity, Best, Worst, And average case complexity.

Unit 2 (14 hrs.)

Divide and Conquer General method, Binary search, finding the maximum and minimum, merge sort, quick sort, performance measurement of quick sort, Selection, Strassen's matrix multiplication.

Unit 3 (18 hrs.)

Greedy Algorithm General Characteristics of greedy algorithms, Problem solving using Greedy Algorithm - Knapsack problem, Minimum Spanning trees (Kruskal's algorithm, Prim's algorithm).

Unit 4: (16 hrs.)

Dynamic programming The general method, multistage graphs, all-pairs shortest path, Single source shortest path, 0/1 Knapsack problem, Traveling Sales person problem.

Unit 5: (12 hrs)

Basic traversal and search techniques - BFS and traversal, DFS and traversal, Bi-connected components and DFS, Backtracking General method, 8-queens problem, Sum of subsets problem, Graph coloring, Hamiltonian cycles.

Book of study:

1. Ellis Horowitz, Sartaj Sahni, Sanguthevar Rajasekharan, Computer algorithms/C++,Second Edition, Universities Press.

References:

1. Anany Levitin- Introduction to design and analysis of algorithms, Third Edition, Addison Wesley Low price edition.
2. Richard Neapolitan & Kumarss Naimipour, Foundation of Algorithms using C++ Pseudocode, Third edition, Jones And Bartlett Publishers.

CA4CRT11 - System Analysis & Software Engineering (Core)

Theory:4 hrs. per week

Credits:4

Unit 1: (12 hrs.)

Information systems concepts, Business information systems; Describing the business organization – organization chart , organization function list ; information system levels - operational, lower, middle, top management; SDLC Life cycle activities- life cycle flow chart, task, management review, baseline specifications, role of system analyst.

Unit 2: (14 hrs.)

Introduction to Software Engineering - Definition, Program Vs Software, and Software process, Software Characteristics, Brief introduction about product and process, Software process and product matrices. Software life cycle models , Definition, Waterfall model, Increment process models- Iterative , RAD , Evolutionary process models-Prototyping ,Spiral. Selection of a life cycle model.

Unit 3: (18 hrs.)

Software Requirement Analysis and Specification Requirements Engineering type of requirements, Feasibility Studies, Requirement Elicitation – Use Case, DFD, Data Dictionaries , Various steps for requirement analysis, Requirement documentation, Requirement validation, an example to illustrate the various stages in Requirement analysis. Project planning-Size estimation, cost estimation, the constructive cost model (COCOMO).

Unit 4: (14 hrs.)

Software Design - Definition, Various types, Objectives and importance of Design phase, Modularity, Strategy of design, Function oriented design, IEEE recommended practice for software design descriptions. Steps to Analyze and Design Objected Oriented System. Software Reliability Definition, McCall software quality model, Capability Maturity Model.

Unit 5: (14 hrs.)

Software Testing : What is testing?, Test, Test case and Test Suit, Verification and Validation, Alpha, beta and acceptance testing, functional testing, techniques to design test cases, boundary value analysis, Equivalence class testing, decision table based testing, cause effect graphing technique, Structural testing path testing, Graph matrices, Data flow testing; Levels of testing Unit testing, integration testing, system testing, validation testing,

Book of Study:

1. Marvin Gore & John Stubbe -Elements Of System Analysis, Fourth Edition, Galgotia Book Source.
2. K K Aggarwal, Yogesh Singh - Software Engineering,Third Edition, New Age International Publications.

References :

1. Roger S Pressman - Software Engineering: A Practitioner's Approach, Sixth Edition, McGraw-Hill Higher Education.
2. Ian Sommerville - Software Engineering , Seventh Edition, Pearson Education.
3. Pankaj Jalote - An Integrated approach to Software Engineering, Second Edition, Narosa Publishing Company.

CA4CRT12 - Linux Administration (Core)

Theory:4 hrs. per week

Credits:4

Unit-1 (12 hrs.)

Overview of Linux : What is Linux, Linux's root in Unix, Common Linux Features, advantage of Linux, Overview of Unix and Linux architectures, Linux files system, hardware requirements for Linux, Linux standard directories. Commands for files and directories cd, ls, cp, rm, mkdir, rmdir, pwd, file, more, less, Creating and viewing files using cat, file comparisons.

Unit 2 (15 hrs.)

Essential Linux commands: Processes in Linux, process fundamentals, connecting processes with pipes, redirecting input/output, Background processing, managing multiple processes, process scheduling – (at, batch), nohup command, kill, ps, who, find, sort, touch, file, file processing commands - wc, cut, paste etc Mathematical commands - expr, factor etc. Creating and editing files with vi editor.

Unit 3 (15 hrs.)

Shell programming - Basics of shell programming, various types of shell available in Linux, comparisons between various shells, shell programming in bash.Conditional and looping statements, case

statement, parameter passing and arguments, Shell variables, system shell variables, shell keywords, Creating Shell programs for automating system tasks

Unit-4 (18 hrs.)

System administration - Common administrative tasks, identifying administrative files configuration and log files, Role of system administrator, Managing user accounts-adding & deleting users, changing permissions and ownerships, Creating and managing groups, modifying group attributes, Temporary disabling of users accounts, creating and mounting file system, checking and monitoring system performance - file security & Permissions, becoming super user using su. Getting system information with uname, host name, disk partitions & sizes, users, kernel, installing and removing packages with rpm command.

Unit-5: (12 hrs.)

Simple filter commands: pr, head, tail, cut, sort, uniq, tr - Filter using regular expression grep, egrep, sed **Understanding various Servers :**DHCP, DNS, Squid, Apache, Telnet, FTP,Samba.

Book of study :

1. Cristopher Negus - Red Hat Linux Bible, Wiley Dreamtech India 2005 edition.
2. Yeswant Kanethkar - UNIX Shell Programming, First edition, BPB.

References :

1. Official Red Hat Linux Users guide by Redhat, Wiley Dreamtech India
2. Graham Glass & King Ables - UNIX for programmers and users, Third Edition, Pearson Education.
3. Neil Mathew & Richard Stones - Beginning Linux Programming, Fourth edition, Wiley Dreamtech India.

CA4CRT13 -Web Programming Using PHP

Theory:3 hrs. per week

Credits:3

Unit 1 (8 hrs.)

Introduction to web, WWW architecture, Fundamentals of HTML, text formatting tags, marquee, inserting images, links, lists, creating tables, frames, working with form elements.

Unit 2 (10 hrs.)

CSS introduction, <link> and <style> elements, CSS properties, Controlling Fonts, Text formatting, Text- pseudo classes, Selectors, Links, Backgrounds, lists

Introduction to Java Script, Java Script variables, operators, decision control statements, looping, functions, arrays, events, popup boxes-alert, prompt, conform box, built-in objects, writing JavaScript, form validation

Unit 3 (10 hrs.)

Introduction to PHP, server side scripting, role of web server software, php comments, variables, echo and print, PHP operators, data types, branching statements, loops, arrays

Unit 4 (12 hrs.)

PHP functions, PHP form, Passing information between pages, \$_GET, \$_POST, \$_REQUEST. String functions, include and require, session and cookie management, error handling in PHP, Object Oriented Programming using PHP

Unit 5 (14 hrs.)

Introduction to MySQL, datatypes, SQL commands-CREATE, UPDATE, INSERT, DELETE, SELECT, PHP functions for MySQL connectivity and operation- mysql_connect, mysql_select_db, mysql_query, mysql_fetch_row, mysql_fetch_array, mysql_result, mysql_list_fields, mysql_num_fields, insertion, updation and deletion of data using PHP, displaying data from MySQL in webpage.

Book of Study:

1. Dave W Mercer, Allan Kent, Steven D Nowicki, David Mercer, Dan Squier, Wankyu Choi - "Beginning PHP", Wiley Publishing, Inc
2. Ivan Bayross - "HTML, DHTML, JavaScript, Pearl & CGI ", Fourth Revised Edition, BPB Publication.
3. "Programming PHP",Rasmus Lerdorf and Kevin Tatore, Shroff Publishers & Distributors Pvt. Ltd
4. "Beginning PHP", Dave W Mercer, Allan Kent, Steven D Nowicki, David Mercer, Dan Squier, Wankyu Choi, Wiley Publishing, Inc

CA4CRP04 - Software Lab IV (Core)

Software Lab: 6 hrs. per week

Credits:2

I. Linux (2 hrs. per week)

Sl.No	Topic and Details
1	Getting started –Commands
2	The Linux Architecture and command usage – Commands, General-purpose utilities
3	The File system –Commands
4	Process related commands
5	Handling ordinary files, Basic file attributes
6	The vi editor
7	Simple Filters, Filters using regular expressions-use of grep command
8	Introduction to shell concept and writing shell script
9	Introduction to shell concept and writing shell script, Essential Shell Programming
10	User management, monitoring system performance, disk usage etc.

II. Web Programming using PHP (4 hrs. per week)

1. Creating programs based on HTML
2. Creating Java script based programs
3. Creating simple programs based on PHP
4. Programs using PHP functions
5. Programs based on MY SQL

Scheme of Evaluation for software lab IV external is as follows:

(There will be two questions; the first from LINUX and second from PHP)

Division of Marks (Practical - 3 hours External)

First program - questions from LINUX **- 25 marks**

1. Logic – 10 marks
2. Successful compilation – 8 marks
3. Result – 7 marks

Second program – questions from PHP **- 35 marks**

1. Logic – 15 marks
2. Successful compilation – 15 marks
3. Result – 5 marks

Viva Voce **- 10 marks**

Lab Record **- 10 marks**

(LINUX -Minimum of 10 Programs

PHP -Minimum of 15 Programs)

Total Marks - 80 marks

BCA - SEMESTER V

CA5CRT14 : Computer Networks (Core)

Theory:3 hrs. per week

Credits:4

Unit 1: (10 hrs.)

Introduction to Networks, Data and signals-analog and digital, periodic analog signals, digital signals, bit rate, baud rate, bandwidth. Transmission impairments- attenuation, distortion and noise.

Data communication protocols and standards, Network models - OSI model-layers and their functions. TCP/IP protocol suite.

Unit 2: (10 hrs.)

Bandwidth utilization Multiplexing: FDM, TDM, spread spectrum.

Transmission Media- guided media and unguided media.

Switching: message, Circuit and packet switched networks, datagram networks, virtual- circuit networks.

Unit 3: (12 hrs.)

Data link layer: Error Detection and Correction, Framing, flow and error control, Protocols - Noiseless channels (Simplest, Stop and Wait) and Noisy channels (Stop and Wait and Piggy Backing).

Multiple Access Protocols. Random Access-ALOHA, CSMA. Wired LANs-IEEE standards, wireless LANs-Bluetooth, Cellular Telephony

Unit 4: (12 hrs.)

Network layer and Transport layer: Repeaters, Bridges, Gateways and routers. Logical addressing – IPV4 and IPV6 addressing, Internet protocol - IPV4 and IPV6. Connectionless and Connection Oriented Services: UDP and TCP. Congestion Control, Quality of Service.

Unit 5: (10 hrs.)

Application layer: HTTP, FTP, SMTP, DNS. Network security: Common Threats- Firewalls (advantages and disadvantages), Cryptography.

Book of study:

1. B. A. Forouzan - Data communication and Networking, Fourth edition-,TMH
2. Andrew S Tanenbaum - Computer Networks ,Fourth Edition, Prentice Hall of India.

CA5CRT15 - IT & Environment (Core)

Theory:4 hrs. per week

Credits:4

Unit 1 : (18 hrs.)

Multidisciplinary nature of environmental studies : Definition, scope and importance, Need for public awareness. (2 hrs)

Natural Resources: Renewable and non-renewable resources: Natural resources and associated problems. a) **Forest resources**: Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forest and tribal people. b) **Water resources**: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems. c) **Mineral resources**: Use and exploitation, environmental effects of extracting and using mineral resources, case studies. d) **Food resources**: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies. e) **Energy resources**: Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources, Case studies. f) **Land resources**: Land as a resource, land degradation, man induced landslides, soil erosion and desertification. Role of individual in conservation of natural resources. Equitable use of resources for sustainable life styles. (10hrs)

Ecosystems : Concept of an ecosystem, Structure and function of an ecosystem, Producers, consumers and decomposers, Energy flow in the ecosystem, Ecological succession, Food chains, food webs and ecological pyramids., Introduction, types, characteristic features, structure and function of the given ecosystem:- Forest ecosystem

(6 hrs)

Unit 2: (26 hrs)

Biodiversity and its conservation: Introduction, Biogeographical classification of India, Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values., India as a mega-diversity nation, Hot-spots of biodiversity, Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts, Endangered and endemic species of India

(8 hrs)

Environmental Pollution :Definition, Causes, effects and control measures of: - Air pollution, Water pollution, Soil pollution, Marine pollution, Noise pollution, Thermal pollution, Nuclear hazards, Solid waste Management: Causes, effects and control measures of urban and industrial wastes., Role of an individual in prevention of pollution, Pollution case studies, Disaster management: floods, earthquake, cyclone and landslides. (8 hrs)

Social Issues and the Environment :Urban problems related to energy, Water conservation, rain water harvesting, watershed management, Resettlement and rehabilitation of people: its problems and concerns,

Case studies, Environmental ethics: Issues and possible solutions, Climate change, global warming, acid rain, ozone layer depletion , nuclear accidents and holocaust, Case studies, Consumerism and waste products, Environment Protection Act , Air (Prevention and Control of Pollution) Act, Water (Prevention and control of Pollution) Act, Wildlife Protection Act, Forest Conservation Act, Issues involved in enforcement of environmental legislation, Public awareness. (10hrs)

Unit 3: (10 hrs.)

Internet as a knowledge repository, academic search techniques, creating cyber presence. Academic websites, open access initiatives, opens access publishing models, Introduction to use of IT in teaching and learning -Educational software, Academic services–INFLIBNET, NPTEL, NICNET, BRNET . (10hrs)

Unit 4: (10 hrs.)

IT & Society- issues and concerns- digital divide, IT & development, the free software movement , IT industry: new opportunities and new threats, software piracy, cyber ethics, cyber crime, cyber threats, cyber security, privacy issues, cyber laws, cyber addictions, information overload, health issues- guide lines for proper usage of computers, internet and mobile phones. e-wastes and green computing, impact of IT on language & culture-localization issues- Unicode- IT and regional languages, Green Computing Concept. (10hrs)

Unit 5: (8 hrs.)

Human Rights– An Introduction to Human Rights, Meaning, concept and development, Three Generations of Human Rights (Civil and Political Rights; Economic, Social and Cultural Rights).

Human Rights and United Nations – contributions, main human rights related organs - UNESCO, UNICEF, WHO, ILO, Declarations for women and children, Universal Declaration of Human Rights. **Human Rights in India** – Fundamental rights and Indian Constitution, Rights for children and women, Scheduled Castes, Scheduled Tribes, Other Backward Castes and Minorities

Environment and Human Rights - Right to Clean Environment and Public Safety: Issues of Industrial Pollution, Prevention, Rehabilitation and Safety Aspect of New Technologies such as Chemical and Nuclear Technologies, Issues of Waste Disposal, Protection of Environment **Conservation of natural resources and human rights:** Reports, Case studies and policy formulation. Conservation issues of western ghats- mention Gadgil committee report, Kasthuriengan report. Over exploitation of ground water resources, marine fisheries, sand mining etc. (8 Hrs)

Internal: Field study

- Visit to a local area to document environmental grassland/ hill /mountain
- Visit a local polluted site – Urban/Rural/Industrial/Agricultural Study of common plants, insects, birds etc

- Study of simple ecosystem-pond, river, hill slopes, etc

(Field work Equal to 5 lecture hours)

References:

1. "Technology in Action" Alan Evans, Kendall Martin, Mary Anne Poatsy, Pearson
2. Bharucha Erach, Text Book of Environmental Studies for undergraduate Courses. University Press, IInd Edition 2013 (TB)
3. Clark.R.S., Marine Pollution, Clanderson Press Oxford (Ref)
4. Cunningham, W.P.Cooper, T.H.Gorhani, E & Hepworth, M.T.2001 Environmental Encyclopedia, Jaico Publ. House. Mumbai. 1196p .(Ref)
5. Dc A.K.Environmental Chemistry, Wiley Eastern Ltd.(Ref)
6. Down to Earth, Centre for Science and Environment (Ref)
7. Heywood, V.H & Watson, R.T. 1995. Global Biodiversity Assessment, Cambridge University Press 1140pb (Ref)
8. Jadhav.H & Bhosale.V.M. 1995. Environmental Protection and Laws. Himalaya Pub. House, Delhi 284p (Ref)
9. Mekinney, M.L & Schock.R.M. 1996 Environmental Science Systems & Solutions. Web enhanced edition 639p (Ref)
10. Miller T.G. Jr., Environmental Science, Wadsworth Publishing Co. (TB)
11. Odum.E.P 1971. Fundamentals of Ecology. W.B. Saunders Co. USA 574p (Ref)
12. Rao.M.N & Datta.A.K. 1987 Waste Water treatment Oxford & IBII Publication Co.Pvt.Ltd.345p (Ref)
13. Rajagopalan. R, Environmental Studies from crisis and cure, Oxford University Press, Published: 2016 (TB)
14. Sharma B.K., 2001. Environmental Chemistry. Geol Publ. House, Meerut (Ref)
15. Townsend C., Harper J, and Michael Begon, Essentials of Ecology, Blackwell Science (Ref)
16. Trivedi R.K., Handbook of Environmental Laws, Rules Guidelines, Compliances and Stadards, Vol I and II, Enviro Media (Ref)
17. Trivedi R. K. and P.K. Goel, Introduction to air pollution, Techno-Science Publication (Ref)

18. Wanger K.D., 1998 Environmental Management. W.B. Saunders Co. Philadelphia, USA 499p
(Ref)
19. M-Magazine, R-Reference TB- Text Book

CA5CRT16 – Java Programming using Linux (Core)

Theory:3 hrs. per week

Credits:3

UNIT 1 (10 hrs.)

Concepts of Object oriented programming, Benefits of OOP, Features of java. Java environment, java tokens, Constant, variables, data types, operators, Control Statements-branching statements, looping statements, jump statements, labeled loops.

UNIT 2 (10 hrs.)

Defining a Class, Fields declaration, Method declaration, Creating object, Accessing class members, method overloading, Constructors, constructor overloading, super keyword, static Members, Inheritance, overriding methods, dynamic method dispatch, final(variables, methods and classes), abstract methods and classes, interfaces, visibility control.

UNIT 3 (12 hrs.)

Arrays- One dimensional arrays, declaration, creation, initialization of arrays, two dimensional arrays, String class. Packages: - java API packages overview (lang, util, io, awt, swing, applet), user defined packages-creating packages, using packages

Exception Handling Techniques-try-catch-throw-throws-finally -Multithreading- creation of multithreaded program-Thread class-Runnable interface, Thread life cycle.

UNIT 4 (10 hrs.)

Event Handling-Delegation Event Model-Event Classes-Sources of Events-Event Listeners- Event classes- Swing- architecture, components of swing- JLabel, JButton, JCheckBox, JRadioButton, JList, JComboBox, JTextField, JText Area, JPanel, JFrame, Layout Managers(Flow Layout, Grid Layout, Card Layout, Border Layout, Box Layout, Null Layout).

UNIT 5 (10 hrs.)

Applet Fundamentals -applet tag, applet life cycle, passing parameters to applets. Working with graphics -Line, Rectangle, Oval, Arc, color setting. JDBC architecture- JDBC connection, JDBC statement object, JDBC drivers.

Book of study :

1. E. Balagurusamy- Programming with Java , Third Edition, McGraw Hill Companies.
2. K. Somasundaram - PROGRAMMING IN JAVA2, First Edition, Jaico Publishing House.

Reference:

1. Patrick Naughton - Java2 The Complete Reference, Seventh Edition:
2. Cay S Horstmann & Gary Cornell - Core Java Volume 1- Fundamentals, Eighth edition.
3. Java 6 Programming Black Book 2007 Edition, Dreamtech press.

CA5CRP05 : Software Lab V (core)

Software Lab: 5 hrs. per week

Credits: 2

Syllabus

Part I. Applet, JDBC connection and swing based Programs

Part II (using class and read inputs from keyboard)

Java Programs: Method Overloading- Method Overriding-inheritance-abstract class, interfaces- packages- Exception Handling-Multithreading

Scheme of Evaluation for software lab V external is as follows:

(There will be two questions; the first from Part I and second from Part II)

Division of Marks (Practical - 3 hours External)

First program - questions from Part I **- 25 marks**

1. Logic – 10 marks

2.Successful compilation – 8 marks

3. Result – 7 marks

Second program – questions from Part II **- 35 marks**

- | | |
|---------------------------|------------|
| 1. Logic | – 20 marks |
| 2. Successful compilation | –10 marks |
| 3. Result | – 5 marks |

Viva Voce - 10 marks

Lab Record - 10 marks

(Minimum of 25 Programs)

Total Marks - 80 marks

CA5CRP06 : Software Development Lab I (core)

Software Development Lab: 6 hrs. per week

Credits: 2

Mini project can be a small complete application project, to make the student confident in designing a system based on Software engineering course. The internal and external evaluation is to be done with the project demonstration and presentation, viva and modification. It must be done in the college lab under the guidance of a faculty.

Scheme of Evaluation for Software Development Lab I external is as follows:

Division of Marks (Software Development Lab I)

Project demonstration and Presentation - 25 marks

Modification - 15 marks

Viva Voce - 15 marks

Project report with proper content and binding - 25 marks

Total Marks - 80 marks

OPEN COURSES

CA5OPT01 -Informatics and Cyber Ethics

Theory:4 hrs. per week, Credits:4

Unit I (12 hrs.)

The Internet, TCP/IP, IP Addressing, Client Server Communication, Intranet, WWW, Web Browser and Web Server, Hyperlinks, URLs, Electronic mail.

Unit II (16 hrs.)

Internet as a knowledge repository, academic search techniques, creating cyber presence. Academic websites, open access initiatives, opens access publishing models, Introduction to use of IT in teaching and learning -Educational software, Academic services–INFLIBNET, NPTEL, NICNET, BRNET.

Unit III (16 hrs.)

Introduction to purchase of technology, License, Guarantee, Warranty, Basic concepts of IPR, copyrights and patents, plagiarism. IT & development, the free software movement

Unit IV (14 hrs.)

Cyber space, information overload, cyber ethics, cyber addictions, cybercrimes– categories –person, property, Government–types-stalking, harassment, threats, security & privacy issues.

Unit V(14 hrs.)

Cyber Addiction, Information Overload, Health Issues, e-Waste and Green computing impact of IT on language & culture-localization issues- Unicode- IT and regional languages e-Governance in India, IT for National Integration, Role of IT.

Book of Study:

1. Alan Evans, Kendall Martin, Mary Anne Poatsy - “Technology in Action”, Pearson

References:

1. Dinesh Maidasani “Learning Computer Fundamentals, MS Office and Internet & Web Technology”, Firewall Media, Lakshmi Publications.
2. V Rajaraman - “Introduction to Information Technology”, Prentice- Hall of India.
3. Barkhs and U. Rama Mohan - HTML Black Book 3. “Cyber Law Crimes”, Asia Law House, New Edition
4. Peter Nortons- Introduction to Computers, Sixth Edition, Published by Tata McGraw Hill

CA5OPT02 - Computer Fundamentals, Internet & MS Office

Theory:4 hrs. per week

Credits:4

Unit I (12 hrs.)

Computer Fundamentals: History, Generations, Classifications, Operating Systems, Types of Networks

Unit II (12 hrs.)

The Internet, TCP/IP, IP Addressing, Client Server Communication, Intranet, WWW, Web Browser and Web Server, Hyperlinks, URLs, Electronic Email

Unit III (14 hrs.)

Word processing: Introduction, Microsoft Word, Basic Menus, Formatting the text & paragraph, Working with Index

Unit IV (18 hrs.)

Spread Sheet: Introduction, Microsoft Excel, Basic Menus, Formulas, Basic functions, Charts and Graphs.

Unit V (16 hrs.)

Microsoft PowerPoint: Introduction, Basic Menus, Template, Slide Basics, Charts, Adding Multimedia & Animation.

Book of Study:

1. Dinesh Maidasani, Firewall Media - "Learning Computer Fundamentals, MS Office and Internet & WebTechnology", , Lakshmi Publications.

References:

1. Harley Hahn - "Internet Complete Reference", , Second Edition, Tata McGraw Hill Education
2. Gary B. Shelly, Misty E. Vermaat - "Microsoft Office 2010: Advanced" , CENGAGE Learning 2010

CA6CRT17 - CLOUD COMPUTING (Core)

Theory:4 hrs. per week

Credits:4

Unit 1: (14 hrs.)

Introduction: Cloud Computing at a Glance, Historical Developments, Building Cloud Computing Environments, Computing Platforms and Technologies, Principles of Parallel and Distributed Computing: Eras of Computing, Parallel vs. Distributed Computing, Elements of Parallel Computing, Elements of Distributed Computing.

Unit 2: (14 hrs.)

Virtualization: Introduction, Virtualization and Cloud Computing, Pros and Cons of Virtualization, Technology Examples.

Unit 3: (14 hrs.)

Cloud Computing Architecture :Introduction, Cloud Reference Model, Types of Clouds, Economics of the Cloud, Open Challenges.

Unit 4: (16 hrs.)

Aneka: Cloud Application Platform: Framework Overview, Anatomy of the Aneka Container, Building Aneka Clouds, Cloud Programming and Management, Data Intensive Computing: Map-Reduce Programming - What is Data-Intensive Computing?, Technologies for Data-Intensive Computing, Aneka MapReduce Programming.

Unit 5: (16 hrs.)

Cloud Platforms in Industry: Amazon Web Services, Google AppEngine, Microsoft Azure, Cloud Applications: Scientific Applications, Business and Consumer Applications.

Book of Study:

1. Rajkumar Buyya, Christian Vecchiola, S ThamaraiSelvi- Mastering Cloud Computing, Tata McGraw Hill Publications.

References:

1. Kumar Saurabha, “Cloud Computing “ Wiley Publication Krutz ,Vines “Cloud Security”.
Wiley Publication.
2. A Srinivasan & J. Suresh “ Cloud Computing : A Practical Approach for learning and
Implementation “ , First edition ,Pearson

CA6CRT18 -Mobile Application Development – Android (Core)

Theory:4 hrs. per week

Credits:4

Unit 1 (10 hrs.)

Introduction to Android, Android Versions, Android Activity, Android Features and Architecture, Java JDK, Android SDK, Android Development Tools, Android Virtual Devices,

Emulators, Dalvik Virtual Machine, Layouts – Linear, Absolute, Frame, Relative and Table.

Unit 2 (16 hrs.)

Android User Interface- Fundamental UI design , User interface with View- Text View, Buttons, Image Button, Edit Text, Check Box, Toggle Button, Radio Button and Radio Group, Progress Bar, Autocomplete Text View, Spinner, List View, Grid View, Image View, Scroll View, Custom Toast Alert and Time and Date Picker.

Unit 3 (14 hrs.)

Activity - Introduction, Intent, Intent_filter, Activity Life Cycle, Broadcast Life Cycle, Services, multimedia-Android System Architecture, Play Audio and Video, Text to Speech.

Unit 4 (16 hrs.)

SQLite Database in Android- Introduction to SQLite Database, Creation and Connection of the

Database, Extracting values from Cursors, Transactions, Telephoning and Messaging-SMS Telephony, Sending SMS, Receiving SMS, Wi-Fi Activity.

Unit 5 (16 hrs.)

Introduction to JSON and XML, Use of JSON, Syntax and Rule of JSON, JSON Name, JSON Values, JSON Objects, JSON Arrays, Parsing JSON and XML.
Google Play services, Location services, Maps

Book of Study:

1. Prasanna Kumar Dixit - ANDROID, Vikas Publishing House.
2. Anubhav Pradhan, Anil Deshpande, Composing Mobile Apps using Android, Wiley India Pvt.Ltd,2014

References:

1. Kevin Grant and Chris Haseman, Beginning Android Programming – Develop and Design, Pearson.

Software Lab Work (Four hours per week)

Module II

Installation and configuration of Eclipse and Development Tools

Module III

Creating simple apps using Interface Tools

Module IV

Creating Android Apps using SQLite

Module V

Familiarizing with JSON and XML, Creation and distribution of Android Apps.

Elective papers (core)

CA6ELT01- DATA MINING (Core)

Theory:4 hrs. per week

Credits:4

Unit 1: (12 hrs.)

Introduction Data Mining, Data Ware House, Transactional Databases, Data Mining Functionalities Characterization and Discrimination, Mining frequent patterns, Association and correlation, Classification and Prediction, Cluster Analysis, Classification of Data Mining Systems, Data Mining Task Primitive, Integration of Data Mining systems, Major issues in Data Mining, Data integration and transformation, Data reduction, Data discretization.

Unit 2: (12 hrs.)

Data Warehouse and OLAP technology Data Warehouse, Multidimensional data Model, Data warehouse architecture, Data Warehouse implementation, OLAP, Data Warehouse and data mining.

Unit 3: (18 hrs.)

Association Rules and Classification Concepts Efficient and Scalable Frequent item set Mining methods, Mining various kind of association rules, from association mining to Co-relation analysis, Classification and prediction, Issues, Classification by Decision tree induction, Bayesian Classification, Rule-based classification, Support Vector Machines, Learning from your neighbors, Prediction.

Unit 4: (18 hrs.)

Cluster Analysis Definition, Types of data in cluster analysis, A categorization major Clustering methods- Partitioning methods, K-means and k-medoids, from k-medoids to CLARANS, Hierarchical methods, Density based methods.

Unit 5: (12 hrs.)

Mining Complex Data Spatial Data Mining, Multimedia Data Mining, Text Mining and Mining WWW.

Book of study:

1. Jiawei Han and Micheline Kamber - Data Mining - Concepts and Techniques, Second Edition, Elsevier, 2006

Reference:

1. Witten and Frank - Data Mining Practical Machine Learning Tools and Techniques, Second Edition, Elsevier, 2005
2. Soman, Divakar and Ajay, Data Mining Theory and Practice, PHI, 2006
3. Margaret H Dunham- Data Mining –Introductory and Advanced Topics, Fourth Edition, Person 2006

CA6ELT02 -Digital Image Processing

Theory:4 hrs. per week

Credits:4

Unit 1: (10 hrs.)

Digital Image Fundamentals

Image, Digital Image, Digital image processing-definitions, Examples of fields that use Digital Image Processing, Fundamental steps in Digital Image Processing, Components of Image processing system.

Unit 2 : (14 hrs.)

Elements of visual perception

Elements of visual perception- Image Formation, Brightness adaptation and Discrimination, Image sampling and quantization- basic concepts, spatial and Intensity resolution, Basic relationship among Pixels.

Unit 3: (16 hrs.)

Image Enhancement in Spatial and Frequency Domain

Intensity Transformation and spatial Filtering Basics, Intensity transformation functions- Image Negatives, Log Transformations, Power Law Transformations, Histogram Processing, Spatial filtering- correlation and convolution; Fourier transform and frequency domain.

Unit 4: (15 hrs.)

Morphological Image Processing

Introduction, basis of set theory, Dilation, Erosion, Structuring elements, Opening and Closing, Hit or miss transformation.

Unit 5: (17 hrs.)

Image Segmentation

Point, Line, Edge detection-detection of isolated points, Basic edge detection- Gradient operators; Pixel based approach-Basics of intensity thresholding, Basic global thresholding; Region based segmentation-region growing, region splitting and merging.

Book of Study:

1. Rafael C. Gonzalez, Richard E. Woods- Digital Image Processing, Third Edition, Pearson.

References:

1. Anil K Jain- Fundamentals of Digital Image Processing , Pearson Education.
2. Er. Rishabh Anand, Digital Image Processing, MEDTEC Publications.

CA6ELT03- Soft Computing Techniques

Theory:4 hrs. per week

Credits:4

Unit 1 (14 hrs.)

Soft Computing, Difference between soft computing and hard computing. **Neural Networks:** Basic concepts of Neural Networks, Human Brain, Artificial Neuron model, Activation functions, Neural network architecture, Single layer and multilayer feedforward networks, Recurrent networks, Neural network characteristics, Learning methods, Rosenblatt's perceptron, Perceptron and linearly separable tasks, XOR problem, Neural network applications.

Unit 2 : (14 hrs.)

Back Propagation Networks: Architecture- perceptron model, solution, single layer artificial neural network, multilayer perceptron model, back propagation learning- input layer computation, hidden layer computation, output layer computation, calculation of error, Training of neural network, effect of learning rate coefficient, Back propagation algorithm.

Unit 3: (15 hrs.)

Fuzzy Set Theory: Fuzzy versus crisp, Crisp sets, Operations on crisp sets, Properties of crisp sets, Partition and covering, Fuzzy sets, Membership functions, Basic fuzzy set operations, Properties of fuzzy sets, Crisp relations, Operations on crisp relations, Fuzzy relations, Fuzzy cartesian product, Operations on fuzzy relations.

Unit 4 : (15 hrs.)

Fuzzy Systems: Crisp logic, Laws of propositional logic, Inference in propositional logic, Predicate logic, Interpretations of predicate logic formula, Inference in predicate logic, Fuzzy logic, Fuzzy propositions, Fuzzy connectives, Fuzzy quantifiers, Fuzzy inference, Fuzzy rule based system, Defuzzification methods, Applications.

Unit 5: (14 hrs.)

Genetic Algorithm: History, Basic concepts, Biological background, Creation of offsprings, Encoding, Fitness function, Reproduction, **Genetic Modeling:**Crossover, Inversion and deletion, Mutation, Bit-wise operators used in geneticalgorithm, Generational cycle, Convergence of a genetic algorithm, Issues and benefits of GA, Application domains.

Book of study:

1. S. Rajasekaran and G.A VijayalakshmiPai- Neural Networks, Fuzzy Logic, and Genetic Algorithms Synthesis and Applications, Prentice-Hall of India Pvt.Ltd ,2004.

References:

1. S. N. Sivanandan and S. N. Deepa, Principles of Soft Computing, Wiley India 2nd Ed, 2011.
2. B K Tripathy, J. Anuradha, Soft computing Advances and Applications, Cengage Learning.
3. B Yegnanarayana, Prentice, Artificial Neural Network, Hall of India Pvt.Ltd ,2012.

CA6CRP07 : Seminar (core)

Seminar Presentation: 2 hrs. per week

Credits: 2

Each student can choose a latest topic of current day interest in the areas of Computer Science / Information Technology and present a seminar presentation using appropriate presentation media. A seminar presentation report in bound form in the pattern of a complete technical report (with contents page, well structured presentation, references etc.) should be submitted. There will not be any external evaluation for Seminar Presentation.

Scheme of Evaluation of Seminar Presentation (core) for INTERNAL is as follows:

Division of Marks

Seminar Presentation Internal (100 marks)

Presentation	- 40 marks
Discussion(Questions and Answers)	- 30 marks
Documentation	10 marks
Seminar report with proper Content and Binding	- 20 marks
Total Marks	-100 marks

CA6CRP08 : Software Development Lab II (Main Project) (Core)

Software development lab: 7 hrs. per week

Credits: 3

Individual project.

The project topic shall be chosen from areas of current day interest using latest packages / languages running on appropriate platforms (Except the tools used in software development-I), so that the student can be trained to meet the requirements of the Industry. A project report should be submitted in hard bound complete in all aspects. For internal evaluation, the progress of the student shall be systematically assessed through various stages of evaluation at periodic intervals.

Scheme of Evaluation for Software Development Lab II external is as follows:

Division of Marks (Software Development Lab II)

Project demonstration and Presentation	- 40 marks
Viva related to project	- 20 marks
Project report with proper content and binding	-20 marks
Total Marks	- 80marks

CA6VVT01 –VIVA VOCE (Core)

Credit :1

Scheme of Evaluation of Viva voce (core) for External is as follows:

Each student should attend a course viva voce based on syllabus from semester I to semester IV.

Total Marks – 100 marks

SYLLABUS- B.Sc. Computer Science

SEMESTER I

CS1CRT01 : Computer Fundamentals and Basics of PC Hardware (Core)

Theory: 4 hrs. per week

Credits : 4

Unit I:

Introduction to Computers: Generations of Computer (I-V), Classification of Computers: Analog, Digital and Hybrid Computers, Micro, Mini, Mainframe, Super Computers, Servers, Laptop and Block Diagram of a Computer, Functions of the Different Units: Input unit, Output unit, Memory unit, CPU (ALU+CU). Booting Process- POST, BIOS, clock speed, memory speed, memory capacity.

Unit II:

Introduction to Computer Hardware, DC regulated power supply- Block Diagram, Concepts of Switch Mode Power supply, Inverters, UPS and their applications. Basic Components of CPU, Mother Board.

Unit III:

Expansion Slots- ISA, EISA, MCA, VESA, PCI local bus, Processor, Connectors, CMOS memory, SMPS, Serial and Parallel Ports, USB, BIOS chip, Steps for assembling a PC.

Unit IV:

Input Devices: Keyboard, Point and draw devices: mouse, joystick, track ball, light pen, Data Scanning devices: image scanner, OCR, OMR, MICR, Bar code reader, Voice Recognition Device: Microphone, Output Devices: Monitor- CRT displays, Non-CRT displays, TFT: LED, LCD, Plasma. Printer, Impact and non-impact, Character, line and Page Printers.

Unit V:

Memory: Primary Memory, RAM- SRAM, DRAM, ROM, PROM, EPROM, EEPROM, flash memory, Secondary memory: Hard Disk: Structure of a hard disk, how data is stored in a hard disk, concept of tracks, sectors, clusters, cylinders, CD-R, RW, DVD-RW, Blue-ray disk, HVD, PC memory Units: SIMM, DIMM, RIMM.

Book of study:

1. Pradeep Sinha and Priti Sinha - Computer Fundamentals, Fourth Edition- 2007, BPB Publications
2. B. RAM, "Computer Fundamentals: Architecture and Organization", New age international (P) Limited.

Reference:

1. Balagurusamy - Fundamentals of Computer, First Edition- 2009, McGraw-Hill
2. Anita Goel - Computer Fundamentals, First Edition-2010, Pearson.
3. Peter Norton, "Introduction to Computers", McGraw Hill

CS1CRT02 : Methodology Of Programming And C Language (Core)

Theory: 4 hrs. per week

Credits: 3

UNIT 1

Introduction to programming, Classification of computer languages, Language translators (Assembler, Compiler, Interpreter), Linker, Characteristics of a good programming language, Factors for selecting a language, Subprogram, Purpose of program planning, Algorithm, Flowchart, Pseudocode, Control structures (sequence, selection, Iteration), Testing and debugging

UNIT 2

C Character Set, Delimiters, Types of Tokens, C Keywords, Identifiers, Constants, Variables, Rules for defining variables, Data types, C data types, Declaring and initialization of variables, Type modifiers, Type conversion, Operators and Expressions- Properties of operators, Priority of operators, Comma and conditional operator, Arithmetic operators, Relational operators, Assignment operators and expressions, Logical Operators, Bitwise operators

UNIT 3

Input and Output in C – Formatted functions, unformatted functions, commonly used library functions, Decision Statements If, if-else, nested if-else, if-else-if ladder, break, continue, goto, switch, nested switch, switch case and nested if. Loop control- for loops, nested for loops, while loops, do while loop.

UNIT 4

Array, initialization, array terminology, characteristics of an array, one dimensional array and operations, two dimensional arrays and operations. Strings and standard functions, Pointers, Features of Pointer, Pointer and address, Pointer declaration, void wild constant pointers, Arithmetic operations with pointers, pointer and arrays, pointers and two dimensional arrays.

UNIT 5

Basics of a function, function definition, return statement, Types of functions, call by value and reference. Recursion -Types of recursion, Rules for recursive function, direct and indirect recursion, recursion vs iterations, Advantages and disadvantages of recursion. Storage class, Structure and union, Features of structures, Declaration and initialization of structures, array of structures, Pointer to structure, structure and functions, typedef, bitfields , enumerated data types, Union, Dynamic memory allocation, memory models, memory allocation functions.

Book Of Study:

1. Ashok Kamthane - Programming in C, Third Edition, Pearson Education
2. P K Sinha & Priti Sinha - Computer Fundamentals , Fourth Edition, BPB Publications.

Reference :

1. E. Balaguruswamy -Programming in ANSI C ,Seventh Edition , McGraw Hill Education
2. Byron Gotfried - Programming with C, Second Edition, Schaums Outline series. McGraw Hill

CS1CMT01 : Fundamentals of Digital Systems (Complementary)

Theory: 4 hrs. per week

Credits: 4

Unit I: Number Systems, Operations and Codes

Decimal Numbers, Binary Numbers, Decimal to Binary Conversion, Binary Arithmetic,

1's and 2's complement of binary numbers, Signed numbers, Arithmetic operations with signed numbers, Hexadecimal numbers, Binary to hexadecimal conversion, Hexadecimal to binary conversion, Hexadecimal to decimal conversion, Decimal to Hexadecimal conversion, Hexadecimal addition and subtraction, Octal numbers, Octal to decimal conversion, Decimal to Octal conversion, Octal to binary conversion, Binary to Octal conversion, Binary coded decimal, 8421 BCD code, BCD addition, Digital codes- gray code, binary to gray code conversion, Alphanumeric codes, parity codes.

Unit II: Logic Gates, Logic Levels and Waveforms

Logic Levels and Digital waveforms, Logic Gates: AND, OR, NOT, XOR, XNOR, NAND (Definition, Symbols, Truth Tables and Operation). Universal Property of NAND and NOR gates. Logic gate operations with pulse waveforms.

Unit III: Boolean Algebra and Logic Simplifications. Boolean operations and expressions, Laws and rules of Boolean algebra, De-morgans theorems, Boolean analysis of logic circuits, simplification using Boolean algebra, standard forms of Boolean expression, Boolean expressions and truth tables. The Karnaugh Map, Karnaugh SOP minimization, Karnaugh POS minimization, Five variable Karnaugh maps.

Unit IV: Combinational Logic and its functions.

Basic combinational Logic circuits, Implementing combinational logic, combinational logic using NAND and NOR gates, Basic overview of logic functions, Basic adders, parallel binary adders, comparators, decoders, encoders, code converters, multiplexers, demultiplexers, parity generators/ checkers.

Unit V: Sequential Circuits.

Latches, RS flip flop using NAND/ NOR gates, Clocked RS, D, JK and T flip flops, Edge triggered flip flops, Master slave flip flops, Asynchronous counter operation, Synchronous counter operations, Up/ Down Synchronous counter, Design of synchronous counters. Basic shift register functions. Serial in-Parallel out shift registers, Parallel in -Serial out shift registers, Serial in- Serial out shift registers, Parallel in Parallel out shift registers.

Book of Study:

1. Floyd and Jain- Digital Fundamentals, Eighth Edition, Pearson Education

Reference:

1.A P Malvino and D P Leach - Digital Principles and Applications, Fourth edition, Tata McGraw Hill Publishers, co Ltd.

CS1CRP01 : Software Lab - I

Software Lab: 4 hrs. per week

Credits:2

Syllabus

1. Programs to familiarize printf() and scanf() functions.
2. Programs Based on Decision statements , break, goto, continue, switch and Loop controls statements.
3. Programs Based on One dimensional and two dimensional arrays.
4. Programs on Strings and string handling functions.
5. Programs based on Pointers, operations on pointers, Arrays & Pointers,
6. Programs based on functions, Call by value, Call by reference, Recursion,
7. Programs based on structure and union, array of structures, Pointer to structure, structure and functions
8. Simple programs using pointers and malloc().

Scheme of Evaluation for software lab I external is as follows:

Division of Marks (Practical - 3 hours External)

First program from part 1& 2	- 25 marks
1.Flowchart	- 5 marks
2.Logic	- 10 marks

3.Successful compilation – 5 marks

4.Result – 5 marks

Second program should be based on advanced concepts ,part 3 to part 8 - **35 marks**

1.Logic – 20 marks

2.Successful compilation – 10 marks

3. Result – 5 marks)

Viva Voce - **10 marks**

Lab Record (minimum of 25 Programs) - **10 marks**

Total Marks - 80 marks

B.Sc. Computer Science - SEMESTER II

CS2CRT03 : Data Communication

Theory: 4 hrs. per week

Credits: 3

Unit I: Data and Signals

Analog and Digital Data, Analog and Digital Signals, Periodic and Nonperiodic, Periodic Analog signals, Time and Frequency Domains, Composite Signals, Bandwidth, Digital Signals, Bit Rate, Digital Signal as a Composite Analog Signal, Transmission of Digital and Analog Signals, Transmission Impairment, Attenuation, Distortion, Noise, Data rate limits, Noiseless channel: Nyquist bit rate, Noisy Channel: Shannon Capacity, Simplified Communication & Data Communication models. Data Flow-Simplex, Half Duplex, Full Duplex.

Unit II : Transmission Media

Guided media, Twisted-pair cable – UTP, STP, Connectors Coaxial Cable, Connectors Fiber-Optic Cable Propagation Modes, Unguided Media - Wireless Transmission - Terrestrial

Microwave, Satellite Microwave, Radio Waves. Infrared.

Unit III: Digital Transmission

Analog to Digital Conversion : Block Diagram of Digital Communication System. Parallel and serial ports Pulse Code Modulation(PCM), Sampling, Sampling Rate, Quantization, Delta modulation, Adaptive Delta Modulation, Transmission modes, Parallel Transmission, Serial Transmission, Asynchronous Transmission, Synchronous Transmission.

Unit IV: Analog Transmission

Digital to Analog Conversation, Modulation of Digital Data, Bit Rate, Baud Rate, Carrier signal, ASK, FSK, PSK, QAM. Analog to Analog modulation, Amplitude Modulation, Frequency Modulation, and Phase Modulation. Bandwidth Utilization : Multiplexing and Spectrum Spreading : Multiplexing, FDM, WDM, TDM, Synchronous TDM, Digital Signal Services, Statistical TDM, Spread Spectrum, FHSS, DSSS.

Unit V: Switching

Circuit-Switched Networks, Three Phases, Packet Switching, Datagram Networks, Virtual-Circuit networks, Three Phases, Connection Oriented and Connectionless Services.

Telephone Network :Major Components, Local Loops, Trunks, Switching Offices, Dial-Up service, Digital Subscriber Line, Cable Networks, Traditional Cable Networks, HFC Network, Cable TV for data transfer.

Book of Study:

1. Behrouz A.Forouzan - Data Communications and Networking, Fifth Edition, TATA McGraw Hill Education.

References:

1. William Stallings- Data and Computer communications,Eighth Edition, Pearson.
2. Willaim L.Sechwebar- Data Communications, First Edition, Tata McGraw Hill Publishing Co Ltd .

CS2CRT04: Computer Organization and Architecture (Core)

Theory: 4 hrs. per week

Credits: 4

Unit 1:Basic computer organization and design:

Operational concepts, Instruction codes, Computer Registers, Computer Instructions, Memory locations and addresses, Instruction cycle, Timing and control, Bus organization.

Unit 2: Central Processing Unit:

General Register Organization, Stack Organization, Addressing modes, Instruction Classification, Program control.

Unit 3: Memory Organization:

Memory Hierarchy, Main Memory, Organization of RAM, SRAM, DRAM, Read Only Memory-ROM-PROM,EROM,EEPROM, Auxiliary memory, Cache memory, Virtual Memory, Memory mapping Techniques.

Unit 4: Parallel Computer Structures:

Introduction to parallel processing, Pipeline computers, Multi processing systems, Architectural classification scheme-SISD, SIMD, MISD, MIMD.

Unit 5: Pipelining and Vector processing: Introduction to pipelining, Instruction and Arithmetic pipelines (design) Vector processing, Array Processors.

Book of study :

- 1.M.Morris Mano-Computer Systems Architecture, Third Edition, Pearson Education
- 2.Kai Hwang and F A Briggs-Computer Architecture and parallel processing, McGraw Hills,1990

Reference

- 1.Carl Hamacher -Computer Organization, Fifth Edition, Tata McGraw Hill.
2. John P Hayes -Computer Architecture & Organization–Mc Graw Hill
3. William Stallings-Computer Organization and Architecture , Seventh Edition, Pearson

Education

CS2CRT05 : Object Oriented Programming using C++

Theory: 4 hrs. per week

Credits: 3

Unit I:Principles of Object Oriented Programming, Beginning with C++

Procedure Oriented Programming-Object Oriented Programming-Basic concepts of object-oriented programming- Benefits of OOP- Applications of OOP-A simple C++program-Structure of C++ program-C++ data types- Symbolic constants- Reference by variables-Operators in C++- Operator precedence-Control structures- Function in C++ - The main function, Function prototyping- Call by reference- Return by reference- Inline function- Default arguments- Function overloading.

Unit II: Classes and Objects

Specifying a class- Defining member functions- Nesting of member functions -Private member functions - Arrays within a class - Memory allocation for objects-Static data members -Static member functions - Arrays of objects - objects as function arguments -Friendly functions- Returning Objects.

Unit III: Constructors and Destructors, Overloading

Constructors- Default constructor-Parameterized constructor-Copy constructor- Multiple constructors- Constructors with default arguments- Dynamic constructor-Destructors- Operator overloading- Unary and Binary operator overloading- Overloading using friends- Rules for overloading- Type conversion.

Unit IV: Inheritance

Inheritance- Defining derived classes-Visibility modes-Single, Multilevel, Multiple, Hierarchical and Hybrid inheritance- Virtual base classes- Abstract classes- Constructors in derived classes- Nesting of classes.

Unit V: Pointers, Virtual Functions and Polymorphism, Working with Files

Pointers- Pointers to objects- this pointer-Pointers to derived classes- Virtual functions- Pure virtual functions- File Stream classes, Opening and closing a file- File opening modes- File pointers and their manipulations- Sequential input and output operations.

Book of Study:

1.E. Balagurusamy - Object Oriented Programming with C++, Fifth edition, Tata McGraw Education Hill , 2011.

Reference:

- 1.Ashok N. Kamthane, Object oriented Programming with ANSI & Turbo C++, First Edition, Pearson India
- 2.Robert Lafore, Object Oriented Programming in Turbo C++, First Edition, Galgotia Publications.
- 3.D Ravichandran, Programming with C++, Second edition, Tata McGraw- Hill.

CS2CRP02 : Software Lab - II

1. Programs based on default arguments, function overloading.
2. Programs based on array of objects, friend functions, passing objects as arguments to function.
3. Programs based on operator overloading (binary, unary) using member functions and friend functions.
4. Programs based on constructors, different types of constructors.
5. Programs based on inheritance, different types of inheritance.

B.Sc.Computer Science- SEMESTER III

CS3CRT06 : Database Management Systems (Core)

Unit I: Introduction

Characteristics of the Database Approach – Database users :DBA , Database Designers ,End users – Advantages of using the DBMS Approach – Data models, Schemas , and Instances – Three-Schema Architecture and Data Independence.

DBMS Languages: DDL, DML – The Database System Environment: DBMS Component Modules.

Unit II: Relational Model

Entity Relationship Modeling: Introduction –Entity Types , Entity Sets , Attributes and Keys – Relationship Types ,Relationship Sets, Roles , and Structural Constraints – Weak Entity Types – Notation for ER diagrams – Sample ER diagrams.

Relational Model concepts: Domains ,Attributes , Tuples , and Relations – Characteristics of Relations – Relational Model Constraints and Relational Database Schemas : Domain Constraints, Key Constraints , Relational Database Schemas , Entity Integrity , Referential Integrity, and Foreign Keys .

Unit III: SQL

Data Types – Data Definition commands : CREATE , ALTER ,DROP - Adding constraints in SQL – Basic SQL Queries : INSERT ,SELECT ,DELETE ,UPDATE - Substring comparison using LIKE operator ,BETWEEN operator – Ordering of rows – SQL set operations :UNION , EXCEPT , INTERSECT – Complex Queries : Comparison involving NULL and Three-valued logic ,Nested queries , EXISTS and UNIQUE functions, Renaming of attributes and Joining of tables, Aggregate functions ,Grouping – Managing Views.

Unit: Normalization and Indexing Structures for Files

Normalization: Informal Design Guidelines for Relational Schemas –Functional Dependencies – Normal forms : First Normal Form , Second Normal Form , Third Normal Form – General Definitions of Second and Third Normal Forms –Boyce-Codd Normal Form.

Indexing Structures for files: -Types of Single-Level Ordered Indexes: Primary Indexes, Clustering Indexes, and Secondary Indexes.

Unit V: Transaction Processing and Database Security

Transaction Processing: Introduction to Transaction Processing - Transaction and System Concepts – Desirable properties of Transactions.

Database Security and Authorization: Types of Security – Control measures – Database Security and DBA – Access Control , User Accounts, and Database Audits –Access Control based on Granting and Revoking Privileges.

Books of study:

1.Ramez Elmasri and Shamkant B.Bavathe - DATABASE SYSTEMS , Sixth Edition, Pearson Education.

References:

1. C.J Date- An Introduction to Database Systems, Eighth edition, Pearson Education,2003
2. Reghu Ramakrishnan and Johannes Gehrke- Database Management Systems , Third edition, Mc Graw Hill International Edition.
3. Dipin Desai , An Introduction to Database Systems , First Edition, Galgoria Publications .

CS3CRT07 : System Analysis And Design

Unit1

Information systems concepts, Business information systems; Describing the business organization – organization chart , organization function list ; information system levels - operational, lower, middle, top management; the system development life cycle concepts;hardware and software end products. Life cycle activities- life cycle flow chart, task,

management review, baseline specifications, role of system analyst.

Unit II

Basic tool of system analysis: identification codes – definition, need for codes, code plan, code dictionary, common type of codes, forms design – basic parts of form, style and types of form, principles of form design .Tools for structure analysis and design: Types of basic charts, decision tables, decision trees,

structured English, data flow diagram, data dictionary, system flow charts, flow charting symbols, information oriented flow charts, process oriented flow charts, HIPO charts.

Unit III

Study phase: Study phase activities, information service request, initial investigation, fact finding techniques, fact analysis techniques, steps in feasibility analysis, study phase report.

Unit IV

Design phase: Design phase activities, structure design, input design- input data, input media and devices, output design, design phase report.

Unit V

Development phase: Development phase activities, bottom up and top down computer program development, training- programmer, operator, user trainings ; conversion; change over plan; steps in computer program development; structured programming; development phase report.

Unit VI

Operation phase: Operation phase activities; change over crisis; change over activities; routine operations; security; performance evaluation.

Book of study :

1. Marvin Gore & John Stubbe- Elements Of System Analysis, Galgotia Book Source.

References:

1. Elias M Awad - System Analysis And Design , Second Edition, Galgotia Publications.
2. Richard Fairley - Software Engineering Concepts , Tata McGraw Publication, 2001.

CS3CRT08 : Networking Fundamentals

Unit I

Network: Definition-Models-LAN, WAN, MAN, Network Criteria, Type of connections-point-to-point, multipoint. Topology-Categories-Mesh, Star, Bus, Ring. Internet-History, service providers. Protocol and standards

Connecting Devices: Hubs, Repeaters, Bridges, Switches, Gateways. Connecting remote LANS

Unit II

Reference Models : OSI Reference model, TCP/IP Reference model, Addressing. Data Link Layer: Error Detection and Correction, Block Coding-Linear Block Codes, Cyclic Codes, Cyclic Redundancy Check-Advantages, Checksum-One's Complement

Unit III

Framing- Flow Control, Error Control, Noisy and Noiseless Channels. Network Layer: Logical Addressing, IPV4 Address-Address Space Notation, Network Address Translation.IPV6 address-structure, address space, advantages, tunnelling, Address mapping.

Unit IV

Routing and Forwarding: Forwarding techniques, Routing table, Distance vector routing, multicast routing, and routing protocols. User Datagram Protocol-ports, user datagram, uses, TCP-features, segment, connection.

Unit V

Congestion Control- Open loop and Closed loop, Quality of Service. Application Layer -Domain Name Space, Distribution, TELNET, FTP, SMTP, URL, Cookies, HTTP-Definition, Proxy Sever

Book of study:

1. Behrouz A Forouzan - Data communication and Networking , Fourth Edition, McGraw Hill

References:

1. Andrew S Tanenbaum - Computer Networks, Fourth Edition, Prentice Hall.
2. .William Stallings- Data and Computer Communications , Eighth Edition, Prentice Hall
3. Fred Halsall, Lingana Gauda Kulkarni - Computer Networking & Internet, Fifth Edition, Addison-Wesley .

CS3CRT09 Data Structures using C++ (Core)

Unit I

Concept of Structured data - Data structure definition, Different types and classification of data structures, Arrays – Memory allocation and implementation of arrays in memory, array operations, Applications - sparse matrix representation and operations, polynomials representation and addition, Concept of search and sort – linear search, binary search, selection sort, insertion sort, quick sort.

Unit II

Stacks – Concepts, organization and operations on stacks using arrays (static), examples, Applications - Conversion of infix to postfix and infix to prefix, postfix evaluation, subprogram calls and execution, Multiple stacks representation.

Queues - Concepts, organization and operations on queues, examples.

Circular queue – limitations of linear queue, organization and operations on circular queue. Double ended queue, Priority queue.

Unit III

Linked list: Concept of dynamic data structures, linked list, types of linked list, linked list using pointers, insertion and deletion examples, circular linked list, doubly linked lists

Applications- linked stacks and queues, memory management basic concepts, garbage collection.

Unit IV

Trees - Concept of recursion, trees, tree terminology, binary trees, representation of binary trees, strictly binary trees, complete binary tree, extended binary trees, creation and operations on binary tree, binary search trees, Creation of binary search tree, tree traversing methods – examples, binary tree representation of expressions.

Unit V

File - Definition, Operations on file (sequential), File organizations - sequential, Indexed sequential, random files, linked organization, inverted files, cellular partitioning, hashing – hash tables, hashing functions, collisions, collision resolving methods.

Books of study :

- 1.G.S Baluja - Data Structures Through C++ (A Practical Approach), Second Edition-2004, Danapat Rai & Co.
2. Ellis Horowitz and Sartaj Sahni - Fundamentals of Data Structures in C++ , Second Edition, Galgotia Publications.

References:

- 1.Seymour Lipschutz, Theory and Problems of Data Structures, Schaums Outline Series,2006, McGraw Hill
- 2.Yedidyah Lanngsam, Moshe Augustein, Aaron M Tenenbaum- Data structures using C and C++ , Second Edition, Prentice Hall

CS3CRP03 : Software Lab – III

(There will be two questions; the first from DBMS and second from Data structures.)

I. SQL Commands (2 hrs. per week)

1. Data definition commands - CREATE, ALTER, DROP, Adding Constraints Primary key, foreign key, unique key, check, not null.
2. Basic SQL queries INSERT, SELECT, DELETE, UPDATE, Using multiple tables, ordering of rows using ORDER BY option, Set operations using UNION, EXCEPT, INTERSECT, Substring Comparison using LIKE operator, BETWEEN operator.
3. Complex Queries Nested Queries, EXISTS and UNIQUE/DISTINCT functions, NULL values, Renaming of attributes and Joining of tables, Aggregate functions and grouping.
4. Managing views, Simple stored procedures.
5. Data Control commands - Access Control and Privilege commands

II. Data Structures using C++. (3 hours per week)

Section I

Array – Insertion , Deletion, Polynomial addition using arrays

Sort – Selection, Insertion, Quick

Search – Linear search, Binary search

Sparse matrix – Sparse form representation, transpose and addition using the sparse form

Section II

Stack - Implementation using arrays (linear stack)

Queue – Implementation using arrays (linear queue)

Section III

Singly linked list – Implementation using dynamic memory allocation techniques, arrange the list based on the ascending or descending order of the information field, concatenate two linked lists, interchange any two nodes in a list.

Section IV

Creation of binary search trees, Insertion and deletion of nodes.

B.Sc.Computer Science- SEMESTER IV

CS4CRT10: Linux Administration (Core)

Unit-I

Overview of Linux : What is Linux, Linux's root in Unix, Common Linux Features, advantage of Linux, Overview of Unix and Linux architectures, Linux files system, hardware requirements for Linux, Linux standard directories. Commands for files and directories cd, ls, cp, rm, mkdir, rmdir, pwd, file, more, less, Creating and viewing files using cat, file comparisons.

Unit II

Essential Linux commands: Processes in Linux, process fundamentals, connecting processes with pipes, redirecting input/output, Background processing, managing multiple processes, process scheduling – (at, batch), nohup command, kill, ps, who, find, sort, touch, file, file processing commands - wc, cut, paste etc Mathematical commands - expr, factor etc. Creating and editing files with vi editor.

Unit III

Shell programming - Basics of shell programming, various types of shell available in Linux, comparisons between various shells, shell programming in bash. Conditional and looping statements, case statement, parameter passing and arguments, Shell variables, system shell variables, shell keywords, Creating Shell programs for automating system tasks

Unit-IV

System administration- Common administrative tasks, identifying administrative files configuration and log files, Role of system administrator, Managing user accounts-adding & deleting users, changing permissions and ownerships, Creating and managing groups, modifying group attributes, Temporary disabling of users accounts, creating and mounting file system, checking and monitoring system performance - file security & Permissions, becoming super user using su. Getting system information with uname, host name, disk partitions & sizes, users, kernel, installing and removing packages with rpm command.

Unit-V:

Simple filter commands: pr, head, tail, cut, sort, uniq, tr - Filter using regular expression grep, egrep, sed **Understanding various Servers :**DHCP, DNS, Squid, Apache, Telnet, FTP,Samba.

Book of study :

1. Cristopher Negus - Red Hat Linux Bible, Wiley Dreamtech India 2005 edition.
2. Yeswant Kanethkar - UNIX Shell Programming, First edition, BPB.

References :

1. Official Red Hat Linux Users guide by Redhat, Wiley Dreamtech India
2. Graham Glass & King Ables - UNIX for programmers and users, Third Edition, Pearson Education.
4. Neil Mathew & Richard Stones - Beginning Linux Programming, Fourth edition, Wiley Dreamtech India.

CS4CRT11: Microprocessors and Assembly Language Programming (Core)

Unit I

Microprocessor architecture and its operations – microprocessor initiated operations and 8085 bus organization, internal data operations, 8085 registers, externally initiated operations. Memory – memory map, memory and instructions, peripheral mapped I/O. 8085 Microprocessor and its architecture.

Unit II

8086 Internal architecture. Basic 8086 microcomputer system – system overview, 8086 bus, Read machine cycle, Write machine cycle. Assembly language programming – program development steps, 8086 instructions – data transfer instructions, arithmetic instructions, bit manipulation instructions, string instructions, program execution, Constructing the machine codes for 8086 instructions. Implementing standard program in 8086 - unconditional jump instructions, condition flags, conditional jump instructions, If-then, If-then else, and multiple if-then-else, while-do , repeat-until , loop instructions, instruction timing and delay loops.

Unit III

Strings, Procedures and Macros – 8086 string instructions, writing and using procedures, CALL and RET instructions, stack, using PUSH and POP to save register contents, passing parameters, reentrant and recursive procedures, writing and using macros.

Unit IV

8086 interrupts – program examples, interrupt Types, 8254 software – programmable TIMER/ COUNTER – basic 8253 and 8254 operations, 8255A, 8259A Priority interrupt controller. Direct Memory Access data transfer – circuit connections and operations of the Intel 8257 DMA controller, DMA transfer timing diagram.

Unit V

Intel 80286 microprocessor – architecture, signals and system connections, Real address mode operation, protected mode operation. Intel 80386 32-bit microprocessor – architecture, pins and signals. Introduction to 80486 microprocessor. Introduction to RISC machines.

Book of study:

1. A.Nagoor Kani - Microprocessor 8086 programming & interfacing, Second edition, Tata McGraw Hill Education.
2. Microprocessors and Interfacing , Programming and Hardware, Douglas V- Hall. Tata McGraw-Hill, 1990.

References:

1. Barry B.Brey - Architecture, Programming and Interfacing , Eighth Edition, Prentice – Hall India.
2. The Intel Microprocessors 8086 / 8088 , 80186 / 80188 , 80286 , 80386 , 80486 , Pentium, and Pentium Pro processor

CS4CRT12 : Computer Aided Optimization Techniques (core)

Unit I

OR: Introduction, origin and development, nature and features, scientific methods, modelling, advantages and limitations of models, solution methods for models, methodology, OR and decision making, applications, opportunities and shortcomings.

Linear Programming Problem: Introduction, Mathematical formulation of LPP, Graphical solution method and exceptional cases, General LPP, Canonical and Standard forms of LPP.

Unit II

Linear Programming Problem: Simplex method - Introduction, Properties, Computational Procedure of simplex method, Artificial variables, Two-Phase method, Big-M method.

Duality in Linear Programming: Introduction, General Primal-Dual pair, Formulating Dual problem, Dual Simplex Method.

Unit III

Transportation Problem: Introduction, LP formulation, Existence of solution, Transportation Table, Loops, Solution – Initial Basic Feasible Solution (North West Corner method, Least Cost method and VAM) and Optimal Solution (MODI method and Stepping Stone method), Tran-shipment problems.

Assignment Problems: Introduction, Mathematical formulation, Solution – using Hungarian method, Special cases, Traveling Salesman problem.

Unit IV

Sequencing Problem: Introduction, Problem of Sequencing, Basic Terms, Processing n jobs through 2 machines, Processing n jobs through k machines, Processing 2 jobs through k machines and Maintenance Crew Scheduling.

Unit V

Network Routing Problems: Introduction, Network Flow Problems, Minimal Spanning Tree problem, Shortest Route problem, Maximal Flow problems – Augmenting path and Maxflow-Mincut methods.

Network Scheduling: Introduction, Basic Components, Logical Sequencing, Rules, Concurrent Activities, Critical Path Analysis – CPM, Probability Considerations and PERT method, Distinction between PERT and CPM, Applications, Advantages and Limitations.

Book of study:

1. Kanti Swarup, P.K. Gupta, Man Mohan, Operations Research, 16th edition , Sultan Chand & Sons.

References:

1. Hamdy A. Taha, Operations Research: An Introduction, 9th edition, Pearson
2. Prem Kumar Gupta and D.S. Hira, Problems in Operations Research, Sultan Chand & Sons.
3. K. V Mital and C. Mohan, Optimization Methods in Operations Research and System Analysis, Third edition, New Age International.

CS4CRT13 : Web Programming Using PHP(Core)

Unit I

Introduction to web, WWW architecture, Fundamentals of HTML, text formatting tags, marquee, inserting images, links, lists, creating tables, frames, working with form elements.

Unit II

CSS introduction, <link> and <style> elements, CSS properties, Controlling Fonts, Text formatting, Text- pseudo classes, Selectors, Links, Backgrounds, lists

Introduction to Java Script, Java Script variables, operators, decision control statements, looping, functions, arrays, events, popup boxes-alert, prompt, conform box, built-in objects, writing JavaScript, form validation

Unit III

Introduction to PHP, server side scripting, role of web server software, php comments, variables, echo and print, PHP operators, data types, branching statements, loops, arrays

Unit IV

PHP functions, PHP form, Passing information between pages, \$_GET, \$_POST, \$_REQUEST. String functions, include and require, session and cookie management, error handling in PHP, Object Oriented Programming using PHP

Unit V

Introduction to MySQL, data types, SQL commands-CREATE, UPDATE, INSERT, DELETE, SELECT, PHP functions for MySQL connectivity and operation- mysql_connect, mysql_select_db, mysql_query, mysql_fetch_row, mysql_fetch_array, mysql_result, mysql_list_fields, mysql_num_fields, insertion, updation and deletion of data using PHP, displaying data from MySQL in webpage.

Book of Study:

1. Dave W Mercer, Allan Kent, Steven D Nowicki, David Mercer, Dan Squier, Wankyu Choi-“Beginning PHP5”, Wiley Publishing, Inc
2. Ivan Bayross -“HTML, DHTML, JavaScript, Pearl & CGI”, , BPB Publication

Reference Books:

1. Rasmus Lerdorf and Kevin Tatore, “Programming PHP”, Shroff Publishers & Distributors Pvt. Ltd
2. Dave W Mercer, Allan Kent, Steven D Nowicki, David Mercer, Dan Squier, Wankyu Choi, “Beginning PHP” Wiley Publishing, Inc

CS4CRP04 : Assembly Language Programming Lab (Core)

(Five programs from each section and 12 hrs per section.)

1. Simple Arithmetic Calculations
2. Conditional Statements
3. Control Statements
4. Loop and Arrays
5. Character Strings
6. Subroutines and Stack Operations

Scheme of Evaluation for lab external is as follows:

Division of Marks (Practical - 3 hours External)

First program - questions from 1 to 3 - 25 marks

(Logic – 12 marks, Successful compilation – 8 marks, Result – 5 marks)

Second program should be based on advanced concepts – questions from 4 to 6 - 35 marks

(Logic – 20 marks, Successful compilation – 10 marks, Result – 5 marks)

Viva Voce - 10 marks

Lab Record (minimum of 20 Programs) - 10 marks

Total 80 marks

CS4CRP05 : Software Lab - IV

Section 1 : Module I,II,III

- Creating simple webpages using HTML tags and CSS.
- Simple validation programs using Java Script.
- PHP including Loops, decision statements and arrays

Section 2 : Module IV,V

- PHP programs using session.
- PHP programs using Data base connectivity

Division of Marks (Practical - 3 hours External)

First program - questions from Modules 1 to 3	- 25 marks
Second program should be based on advanced concepts – questions from modules 4 to 6	- 35 marks
Viva Voce	- 10 marks
Lab Record (minimum of 20 Programs)	- 10 marks
Total	80marks

B.Sc. Computer Science - SEMESTER V

CS5CRT14 : System Software and Operating Systems (Core)

Unit I

System software- General concepts, Language processing concepts, Fundamentals of Language processing, Fundamentals of language specification - Programming Language Grammar, Classification of grammar. Assemblers: Elements of assembly language programming – assembly language statements, Design specification of an assembler. Macros: Definition- Call- Expansion.

Unit II

Scanning & Parsing : Finite State Automata. Parsing - Parse trees ,topdown parsing,bottom up parsing. Compilers - Phases of compiler- Aspects of compilations- code optimization. Linkers and Loaders - Relocation and linking concepts- Design of linker-Type of loaders.

Unit III

Operating System: OS Definition, Functions, OS as a resource manager, types of OS Evolution of OS, Operating System Services. Process:Basic Concepts, Process Scheduling, Operations on Processes, Inter process communication, CPU Scheduling - Scheduling Criteria, Scheduling Algorithms.

Unit IV

Process Synchronization -The Critical Section problem,Semaphores. Dead Locks : System Model, Dead Lock Characterization, Methods of Handling Dead Locks, Dead Lock Prevention, Dead Lock Avoidance, Dead Lock Detection, Recovery from Dead Lock.

Unit V

Memory Management:Memory Management Strategies -Swapping, Contiguous memory allocation, Paging, Segmentation, Page Replacement.File System :- File Concept, Access Methods, Allocation Methods.

Book of study:

1. D M Dhamdhare - System programming and operating Systems , Tata McGraw Hill
2. Abraham Silberschatz, Peter Galvin and Greg Gagne - Operating System Principles, Seventh Edition, John Wiley

Reference :

1. John J Donovan - System Programming, First edition, Tata McGraw Hill 2009.
2. William Stallings - Operating Systems, Sixth edition, Prentice Hall of India 2010.

CS5CRT15 : IT & Environment (Core)

Unit 1 : (18 hrs.)

Multidisciplinary nature of environmental studies : Definition, scope and importance, Need for public awareness. (2 hrs)

Natural Resources: Renewable and non-renewable resources: Natural resources and associated problems. a) **Forest resources**: Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forest and tribal people. b) **Water resources**: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems. c) **Mineral resources**: Use and exploitation, environmental effects of extracting and using mineral resources, case studies. d) **Food resources**: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies. e) **Energy resources**: Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources, Case studies. f) **Land resources**: Land as a resource, land degradation, man induced landslides, soil erosion and desertification. Role of individual in conservation of natural resources. Equitable use of resources for sustainable life styles. (10hrs)

Ecosystems : Concept of an ecosystem, Structure and function of an ecosystem, Producers, consumers and decomposers, Energy flow in the ecosystem, Ecological succession, Food chains, food webs and ecological pyramids., Introduction, types, characteristic features, structure and function of the given ecosystem:- Forest ecosystem

(6 hrs)

Unit 2: (26 hrs)

Biodiversity and its conservation: Introduction, Biogeographical classification of India, Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values., India as a mega-diversity nation, Hot-spots of biodiversity, Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts, Endangered and endemic species of India

(8 hrs)

Environmental Pollution :Definition, Causes, effects and control measures of: - Air pollution, Water pollution, Soil pollution, Marine pollution, Noise pollution, Thermal pollution, Nuclear hazards, Solid waste Management: Causes, effects and control measures of urban and industrial wastes., Role of an individual in prevention of pollution, Pollution case studies, Disaster management: floods, earthquake, cyclone and landslides. (8 hrs)

Social Issues and the Environment :Urban problems related to energy, Water conservation, rain water harvesting, watershed management, Resettlement and rehabilitation of people: its problems and concerns, Case studies, Environmental ethics: Issues and possible solutions, Climate change, global warming, acid rain, ozone layer depletion , nuclear accidents and holocaust, Case studies, Consumerism and waste products, Environment Protection Act , Air (Prevention and Control of Pollution) Act, Water

(Prevention and control of Pollution) Act, Wildlife Protection Act, Forest Conservation Act, Issues involved in enforcement of environmental legislation, Public awareness. (10hrs)

Unit 3: (10 hrs.)

Internet as a knowledge repository, academic search techniques, creating cyber presence. Academic websites, open access initiatives, opens access publishing models, Introduction to use of IT in teaching and learning -Educational software, Academic services–INFLIBNET, NPTEL, NICNET, BRNET . (10hrs)

Unit 4: (10 hrs.)

IT & Society- issues and concerns- digital divide, IT & development, the free software movement , IT industry: new opportunities and new threats, software piracy, cyber ethics, cyber crime, cyber threats, cyber security, privacy issues, cyber laws, cyber addictions, information overload, health issues- guide lines for proper usage of computers, internet and mobile phones. e-wastes and green computing, impact of IT on language & culture-localization issues- Unicode- IT and regional languages, Green Computing Concept. (10hrs)

Unit 5: (8 hrs.)

Human Rights– An Introduction to Human Rights, Meaning, concept and development, Three Generations of Human Rights (Civil and Political Rights; Economic, Social and Cultural Rights).

Human Rights and United Nations – contributions, main human rights related organs - UNESCO, UNICEF, WHO, ILO, Declarations for women and children, Universal Declaration of Human Rights. **Human Rights in India** – Fundamental rights and Indian Constitution, Rights for children and women, Scheduled Castes, Scheduled Tribes, Other Backward Castes and Minorities

Environment and Human Rights - Right to Clean Environment and Public Safety: Issues of Industrial Pollution, Prevention, Rehabilitation and Safety Aspect of New Technologies such as Chemical and Nuclear Technologies, Issues of Waste Disposal, Protection of Environment **Conservation of natural resources and human rights:** Reports, Case studies and policy formulation. Conservation issues of western ghats- mention Gadgil committee report, Kasthuriengan report. Over exploitation of ground water resources, marine fisheries, sand mining etc. (8 Hrs)

Internal: Field study

- Visit to a local area to document environmental grassland/ hill /mountain
- Visit a local polluted site – Urban/Rural/Industrial/Agricultural Study of common plants, insects, birds etc
- Study of simple ecosystem-pond, river, hill slopes, etc

References:

- 1 .“Technology in Action” Alan Evans, Kendall Martin, Mary Anne Poatsy, Pearson
2. Bharucha Erach, Text Book of Environmental Studies for undergraduate Courses. University Press, IInd Edition 2013 (TB)
- 3 .Clark.R.S., Marine Pollution, Clanderson Press Oxford (Ref)
4. Cunningham, W.P.Cooper, T.H.Gorhani, E & Hepworth, M.T.2001 Environmental Encyclopedia, Jaico Publ. House. Mumbai. 1196p .(Ref)
5. Dc A.K.Enviornmental Chemistry, Wiley Eastern Ltd.(Ref)
- 6 .Down to Earth, Centre for Science and Environment (Ref)
7. Heywood, V.H & Watson, R.T. 1995. Global Biodiversity Assessment, Cambridge University Press 1140pb (Ref)
8. Jadhav.H & Bhosale.V.M. 1995. Environmental Protection and Laws. Himalaya Pub. House, Delhi 284p (Ref)
9. Mekinney, M.L & Schock.R.M. 1996 Environmental Science Systems & Solutions. Web enhanced edition 639p (Ref)
- 10 .Miller T.G. Jr., Environmental Science, Wadsworth Publishing Co. (TB)
- 11 .Odum.E.P 1971. Fundamentals of Ecology. W.B. Saunders Co. USA 574p (Ref)
12. Rao.M.N & Datta.A.K. 1987 Waste Water treatment Oxford & IBII Publication Co.Pvt.Ltd.345p (Ref)
13. Rajagopalan. R, Environmental Studies from crisis and cure, Oxford University Press, Published: 2016 (TB)
14. Sharma B.K., 2001. Environmental Chemistry. Geol Publ. House, Meerut (Ref)
15. Townsend C., Harper J, and Michael Begon, Essentials of Ecology, Blackwell Science (Ref)
16. Trivedi R.K., Handbook of Environmental Laws, Rules Guidelines, Compliances and Stadards, Vol I and II, Enviro Media (Ref)
17. Trivedi R. K. and P.K. Goel, Introduction to air pollution, Techno-Science Publication (Ref)
18. Wanger K.D., 1998 Environmental Management. W.B. Saunders Co. Philadelphia, USA 499p (Ref)
- 19.M-Magazine, R-Reference TB- Text Book

CS5CRT16 : Java Programming using Linux (Core)

Unit I

Concepts of Object oriented programming, Benefits of OOP, Features of Java. Java environment, Java tokens, Constant, variables, data types, operators, Control Statements-branching statements, looping statements, jump statements, labeled loops.

Unit II

Defining a Class, Fields declaration, Method declaration, Creating object, Accessing class members, method overloading, Constructors, constructor overloading, super keyword, static Members, Inheritance, overriding methods, dynamic method dispatch, final(variables, methods and classes), abstract methods and classes, interfaces, visibility control.

UNIT III

Arrays- One dimensional arrays, declaration, creation, initialization of arrays, two dimensional arrays, String class. Packages: - Java API packages overview (lang, util, io, awt, swing, applet), user defined packages-creating packages, using packages

Exception Handling Techniques-try-catch-throw-throws-finally -Multi-threading- creation of multi-threaded program-Thread class-Runnable interface, Thread life cycle.

UNIT IV

Event Handling-Delegation Event Model-Event Classes-Sources of Events-Event Listeners- Event classes- Swing- architecture, components of swing- JLabel, JButton, JCheckBox, JRadioButton, JList, JComboBox, JTextField, JText Area, JPanel, JFrame, Layout Managers(Flow Layout, Grid Layout, Card Layout, Border Layout, Box Layout, Null Layout).

UNIT V

Applet Fundamentals -applet tag, applet life cycle, passing parameters to applets. Working with graphics - Line, Rectangle, Oval, Arc, color setting. JDBC architecture- JDBC connection, JDBC statement object, JDBC drivers.

Book of study :

1. E. Balagurusamy- Programming with Java , Third Edition, McGraw Hill Companies.
2. K. Somasundaram - PROGRAMMING IN JAVA2, First Edition, Jaico Publishing House.

Reference:

1. Patrick Naughton - Java2 The Complete Reference, Seventh Edition:
2. Cay S Horstmann & Gary Cornell - Core Java Volume 1- Fundamentals, Eighth edition.
3. Java 6 Programming Black Book 2007 Edition, Dreamtech press.

CS5CRT17 : Computer Security (Core)

Unit I

Introduction-Principles of Security- Need for Security- Threats- Attacks

Unit II

Cryptography :Cipher Methods: Caesar cipher -One time pad – Mono alphabetic Cipher -Play fair cipher- Poly alphabetic cipher -Vigenère – Cipher, Transposition ciphers – Cryptographic Algorithms: Symmetric & Asymmetric- Cryptographic tools: PKI- Digital Signatures-Stenography

Unit III

System Security :

Intrusion Detection and Prevention Systems, Why IDPS? Types of IDPS,Password Management, Countermeasures

Unit IV

Network Security:Electronic Mail Security, Pretty Good Privacy, S/MIME, IP Security Overview, IP Security Architecture, Authentication Header, Encapsulating Security Payload.

Unit V

Web Security: Web Security considerations- Secure Socket Layer -Transport layer Security-Secure electronic transaction. Firewalls-Packet filters- Application Level Gateway-Circuit Level Gateway.

Book of Study:

- 1.Michael E. Whitman, Herbert J. Mattord, “Principles of Information Security” Fourth Edition

2. William Stallings, "Cryptography and Network Security – Principles and Practices", Fourth Edition, 2006, Pearson Education.

Reference :

1. Behrouz A. Forouzan, Dedeep Mukhopadhyay "Cryptography & Network Security", Second Edition, Tata McGraw Hill, New Delhi, 2010.
2. Atul Kahate, "Cryptography and Network Security", Second Edition, Tata McGraw Hill

OPEN COURSE

CS5OPT01 Informatics and Cyber Ethics

Unit I

The Internet, TCP/IP, IP Addressing, Client Server Communication, Intra-net, WWW, Web Browser and Web Server, Hyper links, URLs, Electronic mail.

Unit II

Internet as a knowledge repository, academic search techniques, creating cyber presence. Academic websites, open access initiatives, open access publishing models, Introduction to use of IT in teaching and learning -Educational software, Academic services–INFLIBNET, NPTEL, NICNET, BRNET.

Unit III

Introduction to purchase of technology, License, Guarantee, Warranty, Basic concepts of IPR, copyrights and patents, plagiarism. IT & development, the free software movement

Unit IV

Cyber space, information overload, cyber ethics, cyber addictions, cybercrimes– categories

–person, property, Government–types-stalking, harassment, threats, security & privacy issues.

Unit V

Cyber Addiction, Information Overload, Health Issues, e-Waste and Green computing impact of IT on language & culture-localization issues- Unicode- IT and regional languages e-Governance in India, IT for National Integration, Role of IT.

Book of Study:

1. Alan Evans, Kendall Martin, Mary Anne Poatsy -“Technology in Action”, Pearson

References:

1. Dinesh Maidasani “Learning Computer Fundamentals, MS Office and Internet & Web Technology”, Firewall Media, Lakshmi Publications.
2. V Rajaraman - “Introduction to Information Technology”, Prentice- Hall of India.
3. Barkhs and U. Rama Mohan - HTML Black Book 3. “Cyber Law Crimes”, Asia Law House, New Edition
4. Peter Nortons- Introduction to Computers, Sixth Edition, Published by Tata McGraw Hill

CS5OPT02 – Computer Fundamentals, Internet & MS Office

Unit I

Computer Fundamentals: History, Generations, Classifications, Operating Systems, Types of Networks

Unit II

The Internet, TCP/IP, IP Addressing, Client Server Communication, Intra-net, WWW, Web Browser and Web Server, Hyper-links, URLs, Electronic Email

Unit III

Word processing: Introduction, Microsoft Word, Basic Menus, Formatting the text & paragraph, Working with Index

Unit IV

Spread Sheet: Introduction, Microsoft Excel, Basic Menus, Formulas, Basic functions, Charts and Graphs.

Unit V

MicrosoftPower Point: Introduction, Basic Menus, Template, Slide Basics, Charts, Adding Multimedia & Animation.

Book of Study:

1. “Learning Computer Fundamentals, MS Office and Internet & Web Technology”, Dinesh Maidasani, Firewall Media, Lakshmi Publications.

References:

1. Harley Hahn - “Internet Complete Reference”, , Second Edition, Tata McGraw Hill Education
2. Gary B. Shelly, Misty E. Vermaat - “Microsoft Office 2010: Advanced” , CENGAGE Learning 2010

CS5CRP06 : Software Development Lab - I

Part I. Java Programs: using class and read inputs from keyboard , Method Overloading- Method Overriding- inheritance- JDBC connection -Exception Handling

Part II Mini Project using Java

Scheme of Evaluation for software Development lab I external is as follows:

Division of Marks (Practical - 3 hours External)

First program - part I - 20 marks

(Logic – 10 marks, Successful compilation – 6 marks, Result – 4 marks)

Lab Record (minimum of 10 Programs) - 5 marks

Project demonstration and Presentation - 30 marks

Viva Voce - 15 marks

Project Report - 10 marks

B.Sc.Computer Science - SEMESTER VI

CS6CRT18 : Computer Graphics (Core)

Unit 1 : (12 hrs.)

Introduction: A survey of Computer Graphics, overview of graphics systems-Video display devices-Refresh CRT, Raster-Scan and Random-Scan Displays ,Color CRT Monitors, DVST, Flat-Panel Displays , Raster Scan systems, Random scan systems, Input devices, Hard copy devices, Graphics software.

Unit 2: (14 hrs.)

Output primitives: Line drawing algorithms: DDA algorithm, Bresenham's line algorithm, Circle generating algorithm- Midpoint circle algorithm, Character generation.

Unit 3: (18 hrs.)

2D geometric Transformations: Basic transformations: Translation, Rotation, Scaling; Other transformations-Reflection and shear, Matrix representation and homogenous coordinates, Composite transformation, Interactive picture construction Techniques.

Two-dimensional viewing: viewing pipeline, window and viewport, window to viewport transformation. Clipping operations- Point clipping, Line clipping:- Cohen Sutherland line clipping, Polygon clipping:- Sutherland- Hodgeman polygon clipping, Text Clipping.

Unit 4: (14 hrs.)

Three-dimensional concepts: Three dimensional display methods, Three dimensional object representations- Polygon surfaces, Sweep representations, Constructive solid geometry methods, octrees and quadtrees.

Unit 5 (14 Hrs)

Computer Animation: Design of animation sequences, raster animations, computer animation languages, key-frame systems, morphing, motion specifications.

Book of study :

1.Donald D.Hearn & M. Pauline Baker, Computer Graphics C Version, Second Edition,, PHI Pvt. Ltd.

References:

- 1.Newman W M & R F Sproul, Principles of Interactive Computer Graphics, Second Edition Mc-Graw Hill Publishers.
- 2.Plastock R & Xiang Z, Theory and problems of computer Graphics, Second Edition Schaum Series, McGraw Hill Publishers.

CS6CRT19 : Big Data Analytics

Unit I: Introduction to Big Data

Introduction to BigData Platform – Challenges of Conventional Systems - Intelligent data analysis – Nature of Data - Analytic Processes and Tools - Analysis vs Reporting - Modern Data Analytic Tools - Statistical Concepts: Sampling Distributions - Re-Sampling - Statistical Inference - Prediction Error.

Unit II: Mining Data Streams

Introduction To Streams Concepts – Stream Data Model and Architecture - Stream Computing - Sampling Data in a Stream – Filtering Streams – Counting Distinct Elements in a Stream – Estimating Moments – Counting Oneness in a Window – Decaying Window - Real time Analytics Platform(RTAP) Applications - Case Studies - Real Time Sentiment Analysis, Stock Market Predictions.

Unit III : Hadoop

History of Hadoop- The Hadoop Distributed File System – Components of Hadoop-Analyzing the Data with Hadoop- Scaling Out- Hadoop Streaming- Design of HDFS-Java interfaces to HDFS- Basics- Developing a Map Reduce Application-How Map Reduce Works-Anatomy of a Map Reduce Job run-Failures-Job Scheduling-Shuffle and Sort – Task execution - Map Reduce Types and Formats- Map Reduce Features.

Unit IV : Hadoop Environment

Setting up a Hadoop Cluster - Cluster specification - Cluster Setup and Installation - Hadoop Configuration-Security in Hadoop - Administering Hadoop – HDFS - Monitoring-Maintenance-Hadoop benchmarks- Hadoop in the cloud

Unit V : Frameworks

Applications on Big Data Using Pig and Hive – Data processing operators in Pig – Hive services – HiveQL – Querying Data in Hive - fundamentals of HBase and ZooKeeper - IBM InfoSphere BigInsights and Streams. Visualizations - Visual data analysis techniques, interaction techniques; Systems and applications

Book of Study:

1. Michael Berthold, David J. Hand, “Intelligent Data Analysis”, Springer, 2007.
2. Tom White “ Hadoop: The Definitive Guide” Third Edition, O’reilly Media, 2012.
3. Chris Eaton, Dirk DeRoos, Tom Deutsch, George Lapis, Paul Zikopoulos, “Understanding Big Data: Analytics for Enterprise Class Hadoop and Streaming Data”, McGrawHill Publishing, 2012

References:

1. Anand Rajaraman and Jeffrey David Ullman, “Mining of Massive Datasets”, Cambridge University Press, 2012.
2. Bill Franks, “Taming the Big Data Tidal Wave: Finding Opportunities in Huge Data Streams with Advanced Analytics”, John Wiley & sons, 2012.
3. Glenn J. Myatt, “Making Sense of Data”, John Wiley & Sons, 2007
4. Pete Warden, “Big Data Glossary”, O’Reilly, 2011.

Elective Papers

CS6PET01: Python and LateX

Module I - Introduction to Python

The Python Programming Language , Variables , Basic expressions and statements , Arithmetic Operators , Data types - Type conversion , Numbers, Floats , String operations

Module II - Control Flow and Data Structures

Logical operators , if , If-Else , While loop , For loop , List value, length, operation and deletion , Dictionary operation & methods , Tuples

Module III – Functions

Basic inbuilt functions , User defined functions , Function Calls , Parametrized function calls , Function returns , Recursive functions , Scope concepts - local, global

Module IV - Files and user I/O

User input , Reading files , Writing to files , Directories , Interactive programming , Pickling , Exceptions

Module V - Basic LaTeX

What is LaTeX , Structure -Layout - Margin, Header/Footer , Sectioning , Bullets and Numbering , Images

Book of Study:

1. Downey, A. et al., "How to think like a Computer Scientist: Learning with Python", John Wiley, 2015
2. Stefan Kottwitz "LaTeX: Beginner's Guide"Packt Publishing, 2011

References:

- 1.Swaroop C H, "Byte of Python", CreateSpace Independent Publishing Platform, 2015
2. Zed Shaw, "Learn Python the Hard Way",Addison-Wesley, 2014
- 3.WikiBooks - <https://en.wikibooks.org/wiki/LaTeX/>
4. F. Mittelbach and M Goossens with Braams, Carlisle, and Rowley, "The LaTeX Companion", Addison-Wesley Second edition

CS6PET02: Digital Image Processing

Module I: Digital Image Fundamentals

Definition of an image, different types of images, digital image processing-definition, advantages, applications. Basic steps in DIP, elements of visual perception, pixel relationship.

Module II: Image Enhancement In Spatial Domain

Basics, histogram manipulation. Spatial filtering: smoothing linear filters, order- statistics filter- median filter and mean filter; sharpening filters-the Laplacian.

Module III: Image Enhancement In Frequency Domain

Fourier transform and frequency domain, basis of filtering in frequency domain. Smoothing filters-Ideal, Butterworth, Gaussian low pass filter; Sharpening filters- Ideal, Butterworth, Gaussian high pass filters.

Module IV: Morphological Image Processing

Introduction, basis of set theory, Dilation, Erosion, Structuring elements, Opening and Closing, Top hat and bottom hat transformation.

Module V: Image Segmentation Point, line, edge detection-detection of isolated points, basic edge detection; Pixel based approach-Basics of intensity thresholding, Basic global thresholding; region based segmentation-region growing, region splitting and merging.

Book of Study :

1. Rafael C. Gonzalez, Richard E. Woods, Digital Image Processing, Third Edition
2. S. Jayaraman, S. Esakkirajan, T. Veerakumar , Digital Image Processing

References :

1. Anil K Jain, Fundamentals of Digital Image Processing , Pearson Education 2003

CS6PET03 : Cloud Computing

Unit 1: (14 hrs.)

Introduction: Cloud Computing at a Glance, Historical Developments, Building Cloud Computing Environments, Computing Platforms and Technologies, Principles of Parallel and Distributed Computing: Eras of Computing, Parallel vs. Distributed Computing, Elements of Parallel Computing, Elements of Distributed Computing.

Unit 2: (14 hrs.)

Virtualization: Introduction, Virtualization and Cloud Computing, Pros and Cons of Virtualization, Technology Examples.

Unit 3: (14 hrs.)

Cloud Computing Architecture :Introduction, Cloud Reference Model, Types of Clouds, Economics of the Cloud, Open Challenges.

Unit 4: (16 hrs.)

Aneka: Cloud Application Platform: Framework Overview, Anatomy of the Aneka Container, Building Aneka Clouds, Cloud Programming and Management, Data Intensive Computing: Map-Reduce Programming - What is Data-Intensive Computing?, Technologies for Data-Intensive Computing, Aneka MapReduce Programming.

Unit 5: (16 hrs.)

Cloud Platforms in Industry: Amazon Web Services, Google AppEngine, Microsoft Azure, Cloud Applications: Scientific Applications, Business and Consumer Applications.

Book of Study:

1. Rajkumar Buyya, Christian Vecchiola, S ThamaraiSelvi- Mastering Cloud Computing, Tata McGraw Hill Publications.

References:

1. Kumar Saurabha, “Cloud Computing “ Wiley Publication Krutz ,Vines “Cloud Security”.
Wiley Publication.
2. A Srinivasan & J. Suresh “ Cloud Computing : A Practical Approach for learning and Implementation “ , First edition ,Pearson

CS6SMP07 : Seminar

Each student can choose a latest topic of current day interest in the areas of Computer Science / Information Technology and present a seminar presentation using appropriate presentation media. A seminar presentation report in bound form in the pattern of a complete technical report (with contents page, well structured presentation, references etc.) should be submitted. There will not be any external evaluation for the Software lab VI and Seminar Presentation

Scheme of Evaluation of Seminar Presentation (core) (INTERNAL) is as follows:

Division of Marks

Seminar Presentation Internal (100 marks)

Presentation	- 40 marks
Questions and Answers	- 30 marks
Documentation	10 marks
Seminar report with proper Content and Binding	- 20 marks
Total Marks	-100 marks

CA6CRP08 : Software Development Lab II (Main Project) (Core)

Software development lab: 7 hrs. per week

Individual project.

The project topic shall be chosen from areas of current day interest using latest packages / languages running on appropriate platforms (Except the tools used in software development-I), so that the student can be trained to meet the requirements of the Industry. A project report should be submitted in hard bound complete in all aspects. For internal evaluation, the progress of the student shall be systematically assessed through various stages of evaluation at periodic intervals.

Scheme of Evaluation for Software Development Lab II external is as follows:

Division of Marks (Software Development Lab II)

Project demonstration and Presentation	- 40 marks
Viva related to project	- 20 marks
Project report with proper content and binding	-20 marks
Total Marks	- 80marks

CS6VVT01 –VIVA VOCE (Core)

Credit :1

Scheme of Evaluation of Viva voce (core) for External is as follows:

Each student should attend a course viva voce based on syllabus from semester I to semester IV.

Total Marks – 100 marks

SYLLABUS- B.Sc. Computer Application(Triple Main)

SEMESTER I

CA1CRT01 : Computer fundamentals and digital principles (Core)

Unit-1:

Introduction: Functional units of a computer system, Different types of computers, Computer Software and Hardware, Types of software-System software and Application programme. Characteristic of computers. Input Devices – Keyboard, Mouse, Optical input devices, Output devices – Monitors and Printers.

Unit-2:

Introduction to Operating Systems and Networking: Definition of an Operating System - Different types of PC Operating Systems. Computer Networks- categories of networks - LAN, WAN,MAN. The Internet - Working of Internet - Major Features of Internet.

Unit 3:

Number Systems: Base or radix ,Positional number system, Popular number systems(Decimal, Binary, Octal and Hexadecimal), Conversion-From one number system to another, Concept of binary addition and subtraction, Complements in binary number systems,1^s Complement, 2^s Complement and their applications, Signed magnitude form, BCD numbers- concept and addition.

Unit 4:

Boolean Algebra and Gate Networks: Logic gates- AND, OR, NOT, NAND and NOR Truth tables and graphical representation, Basic laws of Boolean Algebra, Simplification of Expressions, De Morgans theorems, Dual expressions, Canonical expressions, Min terms and Max terms, SOP and POS expressions, Simplification of expression using K-MAP (up to 4 variables), Representation of simplified expressions using NAND/NOR Gates, Dont care conditions, XOR and its applications, parity generator and checker.

Unit 5:-

Sequential and Combinational Logic. Flip flops- Latch, Clocked, RS, JK, T, D and Master slave , Adders-Half adder, Full adder(need and circuit diagram), Encoders, Decodes, Multiplexers and Demultiplexers(working of each with diagram), Analog to digital and digital to analog converters (Diagram and working principle), : Concept of Registers, Shift Registers

Books of study :

1. Peter Nortons- Introduction to Computers, Sixth Edition, Published by Tata McGraw Hill
2. P K Sinha & Priti Sinha - Computer Fundamentals , Fourth Edition, BPB Publications.
3. M Morris Mano-Digital Logic and Computer design, Fourth Edition, Prentice Hall.

References :

1. Thomas C Bartee- Digital computer Fundamentals, Sixth Edition, TATA McGraw Hill Edition
2. Thomas L Floyd- Digital Fundamentals, Ninth edition, PEARSON Prentice Hall.
3. Malvino & Leach- Digital Principles and Applications, Sixth Edition, Tata McGraw Hill, 2006

CA1CRT02-Methodology Of Programming And C Language (Core)

UNIT 1

Introduction to programming, Classification of computer languages, Language translators (Assembler, Compiler, Interpreter), Linker, Characteristics of a good programming language, Factors for selecting a language, Subprogram, Purpose of program planning, Algorithm, Flowchart, Pseudocode, Control structures (sequence, selection, Iteration), Testing and debugging.

UNIT 2

C Character Set, Delimiters, Types of Tokens, C Keywords, Identifiers, Constants, Variables, Rules for defining variables, Data types, C data types, Declaring and initialization of variables, Type modifiers, Type conversion, Operators and Expressions- Properties of operators, Priority of operators, Comma and conditional operator, Arithmetic operators, Relational operators, Assignment operators and expressions, Logical Operators, Bitwise operators

UNIT 3

Input and Output in C – Formatted functions, unformatted functions, commonly used library functions, Decision Statements If, if-else, nested if-else, if-else-if ladder, break, continue, goto, switch, nested switch, switch case and nested if. Loop control- for loops, nested for loops, while loops, do while loop.

UNIT 4

Array, initialization, array terminology, characteristics of an array, one dimensional array and operations, two dimensional arrays and operations. Strings and standard functions, Pointers, Features of Pointer,

Pointer and address, Pointer declaration, void wild constant pointers, Arithmetic operations with pointers, pointer and arrays, pointers and two dimensional arrays.

UNIT 5

Basics of a function, function definition, return statement, Types of functions, call by value and reference. Recursion -Types of recursion, Rules for recursive function, direct and indirect recursion, recursion vs iterations, Advantages and disadvantages of recursion. Storage class, Structure and union, Features of structures, Declaration and initialization of structures, array of structures, Pointer to structure, structure and functions, typedef, bitfields , enumerated data types, Union, Dynamic memory allocation, memory models, memory allocation functions.

Book Of Study:

1. Ashok Kamthane - Programming in C, Third Edition, Pearson Education
2. P K Sinha & Priti Sinha - Computer Fundamentals , Fourth Edition, BPB Publications.

Reference Text

1. E. Balaguruswamy -Programming in ANSI C ,Seventh Edition , McGraw Hill Education
2. Byron Gotfried - Programming with C, Second Edition, Schaums Outline series. McGraw Hill

CA1CRP01-Software Lab I (Core)

Software Lab: 4 hrs. per week

Credits:2

Syllabus

1. Programs to familiarize printf() and scanf() functions.
2. Programs Based on Decision statements , break, goto, continue, switch and Loop controls statements.
3. Programs Based on One dimensional and two dimensional arrays.
4. Programs on Strings and string handling functions.
5. Programs based on Pointers, operations on pointers, Arrays & Pointers,
6. Programs based on functions, Call by value, Call by reference, Recursion,
7. Programs based on structure and union, array of structures, Pointer to structure, structure and functions
8. Simple programs using pointers and malloc().

Scheme of Evaluation for software lab I external is as follows:

Division of Marks (Practical - 3 hours External)

First program from part 1& 2	- 25 marks
1.Flowchart	- 5 marks
2.Logic	- 10 marks
3.Successful compilation	- 5 marks
4.Result	- 5 marks
Second program should be based on advanced concepts ,part 3 to part 5	- 35 marks
1.Logic	- 20 marks
2.Successful compilation	- 10 marks
3. Result	- 5 marks)
Viva Voce	- 10 marks
Lab Record (minimum of 25 Programs)	- 10 marks
Total Marks	- 80 marks

B.Sc.Computer Application- SEMESTER II

CA2CRT03-Database Management Systems (Core)

Theory:4 Hours per week

Credit:3

Unit 1: Introduction (12 hrs.)

Characteristics of the Database Approach – Database users :DBA , Database Designers ,End users – Advantages of using the DBMS Approach – Data models, Schemas , and Instances – Three-Schema Architecture and Data Independence.

DBMS Languages: DDL, DML – The Database System Environment: DBMS Component Modules.

Unit 2: Relational Model (16 hrs.)

Entity Relationship Modeling: Introduction –Entity Types , Entity Sets , Attributes and Keys – Relationship Types ,Relationship Sets, Roles , and Structural Constraints – Weak Entity Types – Notation for ER diagrams – Sample ER diagrams.

Relational Model concepts: Domains ,Attributes , Tuples , and Relations – Characteristics of Relations – Relational Model Constraints and Relational Database Schemas : Domain Constraints, Key Constraints , Relational Database Schemas , Entity Integrity , Referential Integrity, and Foreign Keys .

Unit 3: SQL(14 hrs.)

Data Types – Data Definition commands : CREATE , ALTER ,DROP - Adding constraints in SQL –

Basic SQL Queries : INSERT ,SELECT ,DELETE ,UPDATE - Substring comparison using LIKE operator ,BETWEEN operator – Ordering of rows – SQL set operations UNION , EXCEPT , INTERSECT – Complex Queries : Comparison involving NULL and Three-valued logic ,Nested queries , EXISTS and UNIQUE functions, Renaming of attributes and Joining of tables, Aggregate functions ,Grouping – Managing Views.

Unit 4: Normalization and Indexing Structures for Files(15 hrs.)

Normalization: Informal Design Guidelines for Relational Schemas –Functional Dependencies – Normal forms : First Normal Form , Second Normal Form , Third Normal Form – General Definitions of Second and Third Normal Forms –BCNF.

Indexing Structures for files: -Types of Single-Level Ordered Indexes: Primary Indexes, Clustering Indexes, and Secondary Indexes.

Unit 5: Transaction Processing and Database Security (15 hrs.)

Transaction Processing: Introduction to Transaction Processing - Transaction and System Concepts – Desirable properties of Transactions.

Database Security and Authorization: Types of Security – Control measures – Database Security and DBA – Access Control , User Accounts, and Database Audits –Access Control based on Granting and Revoking Privileges.

Books of study:

1.Ramez Elmasri and Shamkant B.Bavathe - DATABASE SYSTEMS , Sixth Edition, Pearson Education.

.

References:

1. C.J Date- An Introduction to Database Systems, Eighth edition, Pearson Education,2003

2. Reghu Ramakrishnan and Johannes Gehrke- Database Management Systems , Third edition, Mc Graw Hill International Edition.

3. Dipin Desai , An Introduction to Database Systems , First Edition, Galgoria Publications

CA2CRT04-Object Oriented Programming using C++

Unit I:Principles of Object Oriented Programming, Beginning with C++

Procedure Oriented Programming-Object Oriented Programming-Basic concepts of object-oriented programming- Benefits of OOP- Applications of OOP-A simple C++program-Structure of C++ program- C++ data types- Symbolic constants- Reference by variables-Operatorsin C++- Operator precedence- Control structures- Function in C++ - The main function, Function prototyping- Call byreference- Return by reference- Inline function- Default arguments- Functionoverloading.

Unit II:Classes and Objects

Specifying a class- Defining member functions- Nesting of member functions -Private member functions - Arrays within a class - Memory allocation for objects-Staticdata members -Static member functions - Arrays of objects - objects asfunction arguments -Friendly functions- Returning Objects.

Unit III: Constructors and Destructors, Overloading

Constructors- Default constructor-Parameterized constructor-Copy constructor- Multiple constructors- Constructors with default arguments- Dynamic constructor-Destructors- Operator overloading- Unary and Binary operator overloading- Overloading using friends- Rules for overloading- Type conversion.

Unit IV: Inheritance

Inheritance- Defining derived classes-Visibility modes-Single, Multilevel, Multiple, Hierarchical and Hybrid inheritance- Virtual base classes- Abstract classes- Constructors in derived classes- Nesting of classes.

Unit V: Pointers, Virtual Functions and Polymorphism, Working with Files

Pointers- Pointers to objects- this pointer-Pointers to derived classes- Virtual functions- Pure virtual functions- File Stream classes, Opening and closing a file- File opening modes- File pointers and their manipulations- Sequential input and output operations.

Book of Study:

1. E. Balagurusamy - Object Oriented Programming with C++, Fifth edition, Tata McGraw Education Hill , 2011.

Reference:

1. Ashok N. Kamthane, Object oriented Programming with ANSI & Turbo C++, First Edition, Pearson India
2. Robert Lafore, Object Oriented Programming in Turbo C++, First Edition, Galgotia Publications.
3. D Ravichandran, Programming with C++, Second edition, Tata McGraw- Hill

CA2CRP02-Software Lab II

I. SQL Commands (2 hrs. per week)

1. Data definition commands - CREATE, ALTER, DROP, Adding Constraints Primary key, foreign key, unique key, check, not null.
2. Basic SQL queries INSERT, SELECT, DELETE, UPDATE, Using multiple tables, ordering of rows using ORDER BY option, Set operations using UNION, EXCEPT, INTERSECT, Substring Comparison using LIKE operator, BETWEEN operator.
3. Complex Queries Nested Queries, EXISTS and UNIQUE/DISTINCT functions, NULL values, Renaming of attributes and Joining of tables, Aggregate functions and grouping.
4. Managing views, Simple stored procedures.

5. Data Control commands - Access Control and Privilege commands.

II. Object Oriented Programming using C++ (3 hrs. per week)

1. Programs based on default arguments, function overloading.
2. Programs based on array of objects, friend functions, passing objects as arguments to function.
3. Programs based on operator overloading (binary, unary) using member functions and friend functions.
4. Programs based on constructors, different types of constructors.
5. Programs based on inheritance, different types of inheritance.

Scheme of Evaluation for software lab II external is as follows:

(There will be two questions; the first from DBMS and second from C++)

Division of Marks (Practical - 3 hours External)

First program - questions from DBMS

- 25 marks

1. Logic – 10 marks
2. Successful compilation – 8 marks
3. Result – 7 marks

Second program – questions from Object Oriented Programming using C++ - **35 marks**

1. Logic – 20 marks
2. Successful compilation – 10 marks
3. Result – 5 marks

Viva Voce

- 10 marks

Lab Record

- 10 marks

(DBMS -Minimum of 10 Programs

C++ -Minimum: of 15 Programs)

Total Marks

- 80 marks

B.Sc. Computer Application - SEMESTER III

CA3CRT05-Data Structures using C++ (Core)

Module I

Concept of Structured data - Data structure definition, Different types and classification of data structures, Arrays – Memory allocation and implementation of arrays in memory, array operations, Applications - sparse matrix representation and operations, polynomials representation and addition, Concept of search and sort – linear search, binary search, selection sort, insertion sort, quick sort.

Module II

Stacks – Concepts, organization and operations on stacks using arrays (static), examples, Applications - Conversion of infix to postfix and infix to prefix, postfix evaluation, subprogram calls and execution, Multiple stacks representation. Queues - Concepts, organization and operations on queues, examples. Circular queue – limitations of linear queue, organization and operations on circular queue. Double ended queue, Priority queue.

Module III

Linked list: Concept of dynamic data structures, linked list, types of linked list, linked list using pointers, insertion and deletion examples, circular linked list, doubly linked lists, Applications- linked stacks and queues, memory management basic concepts, garbage collection.

Module IV

Trees - Concept of recursion, trees, tree terminology, binary trees, representation of binary trees, strictly binary trees, complete binary tree, extended binary trees, creation and operations on binary tree, binary search trees, Creation of binary search tree, tree traversing methods – examples, binary tree representation of expressions.

Module V

File - Definition, Operations on file (sequential), File organizations - sequential, Indexed sequential, random files, linked organization, inverted files, cellular partitioning, hashing – hash tables, hashing functions, collisions, collision resolving methods.

Books of study :

1. G.S Baluja - Data Structures Through C++ (A Practical Approach), Second Edition-2004, Danapat Rai & Co.
2. Ellis Horowitz and Sartaj Sahni - Fundamentals of Data Structures in C++ , Second Edition, Galgotia Publications.

References:

1. Seymour Lipschutz, Theory and Problems of Data Structures, Schaums Outline Series,2006, McGraw Hill

2. Yedidyah Lanngsam, Moshe Augustein, Aaron M Tenenbaum- Data structures using C and C++ , Second Edition, Prentice Hall

CA3CRT06- Computer Networks

Unit 1:

Introduction to Networks, Data and signals-analog and digital, periodic analog signals, digital signals, bit rate, baud rate, bandwidth. Transmission impairments- attenuation, distortion and noise.

Data communication protocols and standards, Network models - OSI model-layers and their functions. TCP/IP protocol suite.

Unit 2:

Bandwidth utilization Multiplexing: FDM, TDM, spread spectrum. Transmission Media- guided media and unguided media. Switching: message, Circuit and packet switched networks, datagram networks, virtual- circuit networks.

Unit 3:

Data link layer: Error Detection and Correction, Framing, flow and error control, Protocols - Noiseless channels (Simplest, Stop and Wait) and Noisy channels (Stop and Wait and Piggy Backing).

Multiple Access Protocols. Random Access-ALOHA, CSMA. Wired LANs-IEEE standards, wireless LANs-Bluetooth, Cellular Telephony

Unit 4:

Network layer and Transport layer: Repeaters, Bridges, Gateways and routers. Logical addressing – IPV4 and IPV6 addressing, Internet protocol - IPV4 and IPV6. Connectionless and Connection Oriented Services: UDP and TCP. Congestion Control, Quality of Service.

Unit 5:

Application layer: HTTP, FTP, SMTP, DNS. Network security: Common Threats- Firewalls (advantages and disadvantages), Cryptography.

Book of study:

1. B. A. Forouzan - Data communication and Networking, Fourth edition-,TMH
2. Andrew S Tanenbaum - Computer Networks ,Fourth Edition, Prentice Hall of India.

CA3CRT07-SYSTEM ANALYSIS AND SOFTWARE ENGINEERING

Module 1:

Information systems concepts, Business information systems; Describing the business organization – organization chart , organization function list ; information system levels - operational, lower, middle, top management; the system development life cycle concepts; hardware and software end products. Life cycle activities- life cycle flow chart, task, management review, baseline specifications, role of system analyst.

Module 2:

Introduction to Software Engineering - Definition, Program Vs Software, and Software process, Software Characteristics, Brief introduction about product and process, Software process and product matrices. Software life cycle models - Definition, Waterfall model, Increment process models, Evolutionary process models, Selection of a life cycle model.

Module 3:

Software Requirement Analysis and Specification Requirements Engineering type of requirements, Feasibility Studies, Requirement Elicitation, Various steps for requirement analysis, Requirement documentation, Requirement validation, an example to illustrate the various stages in Requirement analysis. Project planning-Size estimation, cost estimation, the constructive cost model (COCOMO).

Module 4:

Software Design - Definition, Various types, Objectives and importance of Design phase, Modularity, Strategy of design, Function oriented design, IEEE recommended practice for software design descriptions. Steps to Analyze and Design Objected Oriented System. Software Reliability Definition, McCall software quality model, Capability Maturity Model.

Module 5:

Software Testing What is testing?, Test, Test case and Test Suit, Verification and Validation, Alpha, beta and acceptance testing, functional testing, techniques to design test cases, boundary value analysis, Equivalence class testing, decision table based testing, cause effect graphing technique, Structural testing path testing, Graph matrices, Data flow testing; Levels of testing Unit testing, integration testing, system testing, validation testing, a brief introduction about debugging and various testing tools.

Book of Study:

1. Marvin Gore & John Stubbe -Elements Of System Analysis, Fourth Edition, Galgotia Book Source.
2. K K Aggarwal, Yogesh Singh - Software Engineering,Third Edition, New Age International Publications.

References :

1. Roger S Pressman - Software Engineering: A Practitioner's Approach, Sixth Edition, McGraw-Hill Higher Education.
2. Ian Sommerville - Software Engineering , Seventh Edition, Pearson Education.
3. Pankaj Jalote - An Integrated approach to Software Engineering, Second Edition, Narosa Publishing Company.

CA3CRP03-Software Lab III (Core)

Software Lab: 6 hrs. per week

Credits:2

Syllabus

Module I

Array – Insertion , Deletion, Polynomial addition using arrays

Sort – Selection, Insertion, Quick

Search – Linear search, Binary search

Sparse matrix – Sparse form representation, transpose and addition using the sparse form

Module II

Stack - Implementation using arrays (linear stack), Infix to postfix conversion, Postfix evaluation

Queue – Implementation using arrays (linear queue), Implementation of circular queue

Module III

Singly linked list – Implementation using dynamic memory allocation techniques, arrange the list based on the ascending or descending order of the information field, concatenate two linked lists, interchange any two nodes in a list, Implementation of circular list, Implementation of linked stacks and queues.

Doubly linked list – Implementation of doubly linked list, Implementation of circular doubly linked list.

Module IV

Creation of binary search trees, Insertion and deletion of nodes, Tree traversals.

Scheme of Evaluation for software lab III external is as follows:

(There will be two questions)

Division of Marks (Practical - 3 hours External)

First program - questions from module 1 & II **- 25 marks**

- 1. Logic – 10 marks
- 2. Successful compilation – 8 marks
- 3. Result – 7 marks

Second program – questions from module III & IV **- 35 marks**

- 1. Logic – 20 marks
- 2. Successful compilation – 10 marks
- 3. Result – 5 marks

Viva Voce **- 10 marks**

Lab Record **- 10 marks**

(Minimum of 25 Programs)

Total Marks - 80 marks

B.Sc. Computer Application - SEMESTER IV

CA4CRT08-Linux Administration (Core)

Unit-I

Overview of Linux : What is Linux, Linux's root in Unix, Common Linux Features, advantage of Linux, Overview of Unix and Linux architectures, Linux files system, hardware requirements for Linux, Linux standard directories. Commands for files and directories cd, ls, cp, rm, mkdir, rmdir, pwd, file, more, less, Creating and viewing files using cat, file comparisons.

Unit II

Essential Linux commands: Processes in Linux, process fundamentals, connecting processes with pipes, redirecting input/output, Background processing, managing multiple processes, process scheduling – (at, batch), nohup command, kill, ps, who, find, sort, touch, file, file processing commands - wc, cut, paste etc Mathematical commands - expr, factor etc. Creating and editing files with vi editor.

Unit III

Shell programming - Basics of shell programming, various types of shell available in Linux, comparisons between various shells, shell programming in bash. Conditional and looping statements, case statement, parameter passing and arguments, Shell variables, system shell variables, shell keywords, Creating Shell programs for automating system tasks

Unit-IV

System administration - Common administrative tasks, identifying administrative files configuration and log files, Role of system administrator, Managing user accounts-adding & deleting users, changing permissions and ownerships, Creating and managing groups, modifying group attributes, Temporary disabling of users accounts, creating and mounting file system, checking and monitoring system performance - file security & Permissions, becoming super user using su. Getting system information with uname, host name, disk partitions & sizes, users, kernel, installing and removing packages with rpm command.

Unit-V:

Simple filter commands: pr, head, tail, cut, sort, uniq, tr - Filter using regular expression grep, egrep, sed Understanding various Servers :DHCP, DNS, Squid, Apache, Telnet, FTP,Samba.

Book of study :

1. Cristopher Negus - Red Hat Linux Bible, Wiley Dreamtech India 2005 edition.
2. Yeswant Kanethkar - UNIX Shell Programming, First edition, BPB.

References :

1. Official Red Hat Linux Users guide by Redhat, Wiley Dreamtech India
2. Graham Glass & King Ables - UNIX for programmers and users, Third Edition, Pearson Education.
5. Neil Mathew & Richard Stones - Beginning Linux Programming, Fourth edition, Wiley Dreamtech India.

CA4CRT09- Web Programming Using PHP

MODULE I

Introduction to web, WWW architecture, Fundamentals of HTML, text formatting tags, marquee, inserting images, links, lists, creating tables, frames, working with form elements.

MODULE II

CSS introduction, <link> and <style> elements, CSS properties, Controlling Fonts, Text formatting, Text- pseudo classes, Selectors, Links, Backgrounds, lists

Introduction to Java Script, Java Script variables, operators, decision control statements, looping, functions, arrays, events, popup boxes-alert, prompt, conform box, built-in objects, writing JavaScript, form validation

MODULE III

Introduction to PHP, server side scripting, role of web server software, php comments, variables, echo and print, PHP operators, datatypes, branching statements, loops, arrays

MODULE IV

PHP functions, PHP form, Passing information between pages, \$_GET, \$_POST, \$_REQUEST. String functions, include and require, session and cookie management, error handling in PHP, Object Oriented Programming using PHP

MODULE V

Introduction to MySQL, datatypes, SQL commands-CREATE, UPDATE, INSERT, DELETE, SELECT, PHP functions for MySQL connectivity and operation- mysql_connect, mysql_select_db, mysql_query,

mysql_fetch_row, mysql_fetch_array, mysql_result, mysql_list_fields, mysql_num_fields, insertion, updation and deletion of data using PHP, displaying data from MySQL in webpage.

Book of Study:

1. Dave W Mercer, Allan Kent, Steven D Nowicki, David Mercer, Dan Squier, Wankyu Choi - “Beginning PHP”, Wiley Publishing, Inc
2. Ivan Bayross - “HTML, DHTML, JavaScript, Pearl & CGI ”, Fourth Revised Edition, BPB Publication.
3. “Programming PHP”,Rasmus Lerdorf and Kevin Tatore, Shroff Publishers & Distributors Pvt. Ltd
4. “Beginning PHP”, Dave W Mercer, Allan Kent, Steven D Nowicki, David Mercer, Dan Squier, Wankyu Choi, Wiley Publishing, Inc

CA4CRP04 - Software Lab IV (Core)

Software Lab: 6 hrs. per week

Credits:2

I. Linux (2 hrs. per week)

Sl.No	Topic and Details
1	Getting started –Commands
2	The Linux Architecture and command usage – Commands, General-purpose utilities
3	The File system –Commands
4	Process related commands
5	Handling ordinary files, Basic file attributes
6	The vi editor
7	Simple Filters, Filters using regular expressions-use of grep command
8	Introduction to shell concept and writing shell script
9	Introduction to shell concept and writing shell script, Essential Shell Programming
10	User management, monitoring system performance, disk usage etc.

II. Web Programming using PHP (4 hrs. per week)

1. Creating programs based on HTML
2. Creating Java script based programs
3. Creating simple programs based on PHP
4. Programs using PHP functions
5. Programs based on MY SQL

Scheme of Evaluation for software lab IV external is as follows:

(There will be two questions; the first from LINUX and second from PHP)

Division of Marks (Practical - 3 hours External)

First program - questions from LINUX	- 25 marks
1. Logic	– 10 marks
2. Successful compilation	– 8 marks
3. Result	– 7 marks
Second program – questions from PHP	- 35 marks
1. Logic	– 15 marks
2. Successful compilation	– 15 marks
3. Result	– 5 marks
Viva Voce	- 10 marks
Lab Record	- 10 marks
(LINUX	-Minimum of 10 Programs
PHP	-Minimum of 15 Programs)
Total Marks	- 80 marks

B.Sc. Computer Application - SEMESTER V

CA5CRT10 – Java Programming using Linux (Core)

Theory:3 hrs. per week

Credits:3

UNIT 1 (10 hrs.)

Concepts of Object oriented programming, Benefits of OOP, Features of java. Java environment, java tokens, Constant, variables, data types, operators, Control Statements-branching statements, looping statements, jump statements, labeled loops.

UNIT 2 (10 hrs.)

Defining a Class, Fields declaration, Method declaration, Creating object, Accessing class members, method overloading, Constructors, constructor overloading, super keyword, static Members, Inheritance, overriding methods, dynamic method dispatch, final(variables, methods and classes), abstract methods and classes, interfaces, visibility control.

UNIT 3 (12 hrs.)

Arrays- One dimensional arrays, declaration, creation, initialization of arrays, two dimensional arrays, String class. Packages: - java API packages overview (lang, util, io, awt, swing, applet), user defined packages-creating packages, using packages

Exception Handling Techniques-try-catch-throw-throws-finally -Multithreading- creation of multithreaded program-Thread class-Runnable interface, Thread life cycle.

UNIT 4 (10 hrs.)

Event Handling-Delegation Event Model-Event Classes-Sources of Events-Event Listeners- Event classes- Swing- architecture, components of swing- JLabel, JButton, JCheckBox, JRadioButton, JList, JComboBox, JTextField, JText Area, JPanel, JFrame, Layout Managers(Flow Layout, Grid Layout, Card Layout, Border Layout, Box Layout, Null Layout).

UNIT 5 (10 hrs.)

Applet Fundamentals -applet tag, applet life cycle, passing parameters to applets. Working with graphics -Line, Rectangle, Oval, Arc, color setting. JDBC architecture- JDBC connection, JDBC statement object, JDBC drivers.

Book of study :

1. E. Balagurusamy- Programming with Java , Third Edition, McGraw Hill Companies.

2. K. Somasundaram - PROGRAMMING IN JAVA2, First Edition, Jaico Publishing House.

Reference:

1. Patrick Naughton - Java2 The Complete Reference, Seventh Edition:
2. Cay S Horstmann & Gary Cornell - Core Java Volume 1- Fundamentals, Eighth edition.
3. Java 6 Programming Black Book 2007 Edition, Dreamtech press.

CA5CRP05 : Software Lab V (core)

Software Lab: 5 hrs. per week

Credits: 2

Syllabus

Part I. Applet, JDBC connection and swing based Programs

Part II (using class and read inputs from keyboard)

Java Programs: Method Overloading- Method Overriding-inheritance-abstract class
interfaces- packages-Exception Handling-Multithreading

Scheme of Evaluation for software lab V external is as follows:

(There will be two questions; the first from Part I and second from Part II)

Division of Marks (Practical - 3 hours External)

First program - questions from Part I

- 25 marks

- | | |
|--------------------------|------------|
| 1. Logic | – 10 marks |
| 2.Successful compilation | – 8 marks |
| 3. Result | – 7 marks |

Second program – questions from Part II **- 35 marks**

1. Logic – 20 marks

2. Successful compilation –10 marks

3. Result – 5 marks

Viva Voce **- 10 marks**

Lab Record **- 10 marks**

(Minimum of 25 Programs)

Total Marks - 80 marks

OPEN COURSES

CA5OPT01 -Informatics and Cyber Ethics

Theory:4 hrs. per week

Credits:4

Unit I (12 hrs.)

The Internet, TCP/IP, IP Addressing, Client Server Communication, Intranet, WWW, Web Browser and Web Server, Hyperlinks, URLs, Electronic mail.

Unit II (16 hrs.)

Internet as a knowledge repository, academic search techniques, creating cyber presence. Academic websites, open access initiatives, opens access publishing models, Introduction to use of IT in teaching and learning -Educational software, Academic services–INFLIBNET, NPTEL, NICNET, BRNET.

Unit III (16 hrs.)

Introduction to purchase of technology, License, Guarantee, Warranty, Basic concepts of IPR, copyrights and patents, plagiarism. IT & development, the free software movement

Unit IV (14 hrs.)

Cyber space, information overload, cyber ethics, cyber addictions, cybercrimes– categories –person, property, Government–types-stalking, harassment, threats, security & privacy issues.

Unit V(14 hrs.)

Cyber Addiction, Information Overload, Health Issues, e-Waste and Green computing impact of IT on language & culture-localization issues- Unicode- IT and regional languages e-Governance in India, IT for National Integration, Role of IT.

Book of Study:

1. Alan Evans, Kendall Martin, Mary Anne Poatsy - “Technology in Action”, Pearson

References:

1. Dinesh Maidasani “Learning Computer Fundamentals, MS Office and Internet & Web Technology”, Firewall Media, Lakshmi Publications.
2. V Rajaraman - “Introduction to Information Technology”, Prentice- Hall of India.
3. Barkhs and U. Rama Mohan - HTML Black Book 3. “Cyber Law Crimes”, Asia Law House, New Edition
4. Peter Nortons- Introduction to Computers, Sixth Edition, Published by Tata McGraw Hill

CA5OPT02 - Computer Fundamentals, Internet & MS Office (Open Course)

Theory:4 hrs. per week

Credits:4

Unit I (12 hrs.)

Computer Fundamentals: History, Generations, Classifications, Operating Systems, Types of Networks

Unit II (12 hrs.)

The Internet, TCP/IP, IP Addressing, Client Server Communication, Intranet, WWW, Web Browser and Web Server, Hyperlinks, URLs, Electronic Email

Unit III (14 hrs.)

Word processing: Introduction, Microsoft Word, Basic Menus, Formatting the text & paragraph, Working with Index

Unit IV (18 hrs.)

Spread Sheet: Introduction, Microsoft Excel, Basic Menus, Formulas, Basic functions, Charts and Graphs.

Unit V (16 hrs.)

Microsoft PowerPoint: Introduction, Basic Menus, Template, Slide Basics, Charts, Adding Multimedia & Animation.

Book of Study:

1. Dinesh Maidasani, Firewall Media - “Learning Computer Fundamentals, MS Office and Internet & WebTechnology”, , Lakshmi Publications.

References:

1. Harley Hahn - “Internet Complete Reference”, , Second Edition, Tata McGraw Hill Education
2. Gary B. Shelly, Misty E. Vermaat - “Microsoft Office 2010: Advanced” , CENGAGE Learning 2010

B.Sc. Computer Application - SEMESTER VI

CA6CRT11- Operating Systems

Unit 1:

Introduction: OS Definition, Functions, Evolution of OS, OS Structure Operating System Operations, Operating System Services, User Operating System Interface, System Calls, Types of System Calls.

Unit 2:

Process: Basic Concepts, Process Scheduling, Operations on Processes, Inter process communication, Process Scheduling - Scheduling Criteria, Scheduling Algorithms, Multiple Processor Scheduling.

Unit 3:

Process Coordination: Synchronization - The Critical Section problem, Semaphores, Classic Problems of Synchronization, Monitors. Deadlocks: System Model, Deadlock Characterization, Methods of handling Deadlocks, Deadlock Prevention, Deadlock Avoidance, Deadlock Detection, Recovery from Deadlock.

Unit 4:

Memory Management: Memory Management Strategies - Swapping, Contiguous memory allocation, Paging, Segmentation. Virtual Memory Management- Demand paging, Page Replacement.

Unit 5:

Storage Management: File System: - File Concept, Access Methods, Directory structure. Implementing File Systems:-File System Structure, Allocation Methods, Free Space Management, Disk Scheduling.

Book of study:

1. Abraham Silberschatz, Peter Galvin and Greg Gagne - Operating System Principles, Seventh Edition, John Wiley
2. William Stallings - Operating Systems, Sixth Edition, Prentice Hall of India, Pearson

Reference:

1. Milan Kovic - Operating Systems, 2nd Edition, (TMH)

PROGRAMME ELECTIVES

CA6PET01- DATA MINING (Core)

Theory:4 hrs. per week

Credits:4

Unit 1: (12 hrs.)

Introduction Data Mining, Data Ware House, Transactional Databases, Data Mining Functionalities Characterization and Discrimination, Mining frequent patterns, Association and correlation, Classification and Prediction, Cluster Analysis, Classification of Data Mining Systems, Data Mining Task Primitive, Integration of Data Mining systems, Major issues in Data Mining, Data integration and transformation, Data reduction, Data discretization.

Unit 2: (12 hrs.)

Data Warehouse and OLAP technology Data Warehouse, Multidimensional data Model, Data warehouse architecture, Data Warehouse implementation, OLAP, Data Warehouse and data mining

Unit 3: (18 hrs.)

Association Rules and Classification Concepts Efficient and Scalable Frequent item set Mining methods, Mining various kind of association rules, from association mining to Co-relation analysis, Classification and prediction, Issues, Classification by Decision tree induction, Bayesian Classification, Rule-based classification, Support Vector Machines, Learning from your neighbors, Prediction

Unit 4: (18 hrs.)

Cluster Analysis Definition, Types of data in cluster analysis, A categorization major Clustering methods- Partitioning methods, K-means and k-medoids, from k-medoids to CLARANS, Hierarchical methods, Density based methods

Unit 5: (12 hrs.)

Mining Complex Data Spatial Data Mining, Multimedia Data Mining, Text Mining and Mining WWW.

Book of study:

1. Jiawei Han and Micheline Kamber - Data Mining - Concepts and Techniques, Second Edition, Elsevier, 2006

Reference:

1. Witten and Frank - Data Mining Practical Machine Learning Tools and Techniques, Second Edition, Elsevier, 2005
2. Soman, Divakar and Ajay, Data Mining Theory and Practice, PHI, 2006
3. Margaret H Dunham- Data Mining –Introductory and Advanced Topics, Fourth Edition, Person 2006

CA6PET02 -Digital Image Processing

Theory:4 hrs. per week

Credits:4

Unit 1: (10 hrs.)

Digital Image Fundamentals

Image, Digital Image, Digital image processing-definitions, Examples of fields that use Digital Image Processing, Fundamental steps in Digital Image Processing, Components of Image processing system.

Unit 2 : (14 hrs.)

Elements of visual perception

Elements of visual perception- Image Formation, Brightness adaptation and Discrimination, Image sampling and quantization- basic concepts, spatial and Intensity resolution, Basic relationship among Pixels.

Unit 3: (16 hrs.)

Image Enhancement in Spatial and Frequency Domain

Intensity Transformation and spatial Filtering Basics, Intensity transformation functions- Image Negatives, Log Transformations, Power Law Transformations, Histogram Processing, Spatial filtering- correlation and convolution; Fourier transform and frequency domain.

Unit 4: (15 hrs.)

Morphological Image Processing

Introduction, basis of set theory, Dilation, Erosion, Structuring elements, Opening and Closing, Hit or miss transformation.

Unit 5: (17 hrs.)

Image Segmentation

Point, Line, Edge detection-detection of isolated points, Basic edge detection- Gradient operators; Pixel based approach-Basics of intensity thresholding, Basic global thresholding; Region based segmentation-region growing, region splitting and merging.

Book of Study:

1. Rafael C. Gonzalez, Richard E. Woods- Digital Image Processing, Third Edition, Pearson.

References:

1. Anil K Jain- Fundamentals of Digital Image Processing , Pearson Education.
2. Er. Rishabh Anand, Digital Image Processing, MEDTEC Publications.

CA6PET03- Soft Computing Techniques

Theory:4 hrs. per week

Credits:4

Unit 1 (14 hrs.)

Soft Computing, Difference between soft computing and hard computing. **Neural Networks:** Basic concepts of Neural Networks, Human Brain, Artificial Neuron model, Activation functions, Neural network architecture, Single layer and multilayer feedforward networks, Recurrent networks, Neural network characteristics, Learning methods, Rosenblatt's perceptron, Perceptron and linearly separable tasks, XOR problem, Neural network applications.

Unit 2 : (14 hrs.)

Back Propagation Networks: Architecture- perceptron model, solution, single layer artificial neural network, multilayer perception model, back propagation learning- input layer computation, hidden layer computation, output layer computation, calculation of error, Training of neural network, effect of learning rate coefficient, Back propagation algorithm.

Unit 3: (15 hrs.)

Fuzzy Set Theory: Fuzzy versus crisp, Crisp sets, Operations on crisp sets, Properties of crisp sets, Partition and covering, Fuzzy sets, Membership functions, Basic fuzzy set operations, Properties of fuzzy sets, Crisp relations, Operations on crisp relations, Fuzzy relations, Fuzzy cartesian product, Operations on fuzzy relations.

Unit 4 : (15 hrs.)

Fuzzy Systems: Crisp logic, Laws of propositional logic, Inference in propositional logic, Predicate logic, Interpretations of predicate logic formula, Inference in predicate logic, Fuzzy logic, Fuzzy propositions, Fuzzy connectives, Fuzzy quantifiers, Fuzzy inference, Fuzzy rule based system, Defuzzification methods, Applications.

Unit 5: (14 hrs.)

Genetic Algorithm: History, Basic concepts, Biological background, Creation of offsprings, Encoding, Fitness function, Reproduction, **Genetic Modeling:**Crossover, Inversion and deletion, Mutation, Bit-wise operators used in geneticalgorithm, Generational cycle, Convergence of a genetic algorithm, Issues and benefits of GA, Application domains.

Book of study:

1. S. Rajasekaran and G.A VijayalakshmiPai- Neural Networks, Fuzzy Logic, and Genetic Algorithms Synthesis and Applications, Prentice-Hall of India Pvt.Ltd ,2004.

References:

1. S. N. Sivanandan and S. N. Deepa, Principles of Soft Computing, Wiley India 2nd Ed, 2011.
2. B K Tripathy, J. Anuradha, Soft computing Advances and Applications, Cengage Learning.
3. B Yegnanarayana, Prentice, Artificial Neural Network, Hall of India Pvt.Ltd ,2012.

CA6CRP08 : Software Development Lab (Main Project) (Core)

Software development lab: 7 hrs. per week

Credits: 3

Individual project.

The project topic shall be chosen from areas of current day interest using latest packages / languages running on appropriate platforms (Except the tools used in software development-I), so that the student can be trained to meet the requirements of the Industry. A project report should be submitted in hard bound complete in all aspects. For internal evaluation, the progress of the student shall be systematically assessed through various stages of evaluation at periodic intervals.

Scheme of Evaluation for Software Development Lab II external is as follows:

Division of Marks (Software Development Lab II)

Project demonstration and Presentation	- 40 marks
Viva related to project	- 20 marks
Project report with proper content and binding	-20 marks
Total Marks	- 80marks

CA6VVT01 –VIVA VOCE (Core)

Credit :1

Scheme of Evaluation of Viva voce (core) for External is as follows:

Each student should attend a course viva voce based on syllabus from semester I to semester IV.

Total Marks – 100 marks

SYLLABUS- B.Sc. IT

SEMESTER I

IT1CRT01-Computer Fundamentals and Basics of PC Hardware (Core)

Theory: 4 hrs. per week

Credits: 4

Unit I:

Introduction to Computers: Generations of Computer (I-V), Classification of Computers: Analog, Digital and Hybrid Computers, Micro, Mini, Mainframe, Super Computers, Servers, Laptop and Block Diagram of a Computer, Functions of the Different Units: Input unit, Output unit, Memory unit, CPU (ALU+CU). Booting Process- POST, BIOS, clock speed, memory speed, memory capacity.

Unit II:

Introduction to Computer Hardware, DC regulated power supply- Block Diagram, Concepts of Switch Mode Power supply, Inverters, UPS and their applications. Basic Components of CPU, Mother Board.

Unit III:

Expansion Slots- ISA, EISA, MCA, VESA, PCI local bus, Processor, Connectors, CMOS memory, SMPS, Serial and Parallel Ports, USB, BIOS chip, Steps for assembling a PC.

Unit IV:

Input Devices: Keyboard, Point and draw devices: mouse, joystick, track ball, light pen, Data Scanning devices: image scanner, OCR, OMR, MICR, Bar code reader, Voice Recognition Device: Microphone, Output Devices: Monitor- CRT displays, Non-CRT displays, TFT: LED, LCD, Plasma. Printer, Impact and non-impact, Character, line and Page Printers.

Unit V:

Memory: Primary Memory, RAM- SRAM, DRAM, ROM, PROM, EPROM, EEPROM, flash memory, Secondary memory: Hard Disk: Structure of a hard disk, how data is stored in a hard disk, concept of tracks, sectors, clusters, cylinders, CD-R, RW, DVD-RW, Blue-ray disk, HVD, PC memory Units: SIMM, DIMM, RIMM.

Book of study:

1. Pradeep Sinha and Priti Sinha - Computer Fundamentals, Fourth Edition- 2007, BPB Publications
2. B. RAM, "Computer Fundamentals: Architecture and Organization", New age International (P) Limited.

Reference:

1. Balagurusamy - Fundamentals of Computer, First Edition- 2009, McGraw-Hill
2. Anita Goel - Computer Fundamentals, First Edition-2010, Pearson.
3. Peter Norton, "Introduction to Computers", McGraw Hill

IT1CRT02 : Digital Electronics

Theory: 4 hrs. per week

Credits: 3

Unit I: Number Systems, Operations and Codes (15 hrs.)

Decimal Numbers, Binary Numbers, Decimal to Binary Conversion, Binary Arithmetic, 1's and 2's complement of binary numbers, Signed numbers, Arithmetic operations with signed numbers, Hexadecimal numbers, Binary to hexadecimal conversion, Hexadecimal to binary conversion, hexadecimal to decimal conversion, Decimal to Hexadecimal conversion, Hexadecimal addition and subtraction, Octal numbers, Octal to decimal conversion, Decimal to Octal conversion, Octal to binary conversion, Binary to Octal conversion, Binary coded decimal, 8421 BCD code, BCD addition, Digital codes- gray code, binary to gray code conversion, Alphanumeric codes, parity codes.

Unit II: Logic Gates, Logic Levels and Waveforms(12 hrs.)

Logic Levels and Digital waveforms, Logic Gates: AND, OR, NOT, XOR, XNOR, NAND (Definition, Symbols, Truth Tables and Operation). Universal Property of NAND and NOR gates. Logic gate operations with pulse waveforms.

Unit III: Boolean Algebra and Logic Simplifications. (15 hrs.)

Boolean operations and expressions, Laws and rules of Boolean algebra, De-morgans theorems, Boolean analysis of logic circuits, simplification using Boolean algebra, standard forms of Boolean expression, Boolean expressions and truth tables. The Karnaugh Map, Karnaugh SOP minimization, Karnaugh POS minimization Four variable Karnaugh maps.

Unit IV: Combinational Logic and its functions. (15 hrs.)

Basic combinational Logic circuits, Implementing combinational logic, combinational logic using NAND and NOR gates, Basic overview of logic functions, Basic adders, parallel binary adders, comparators, decoders, encoders, code converters, multiplexers, demultiplexers, parity generators/ checkers.

Unit V: Sequential Circuits.(15 hrs.)

Latches, RS flip flop using NAND/ NOR gates, Clocked RS, D, JK and T flip flops, Edge triggered flip flops, Master slave flip flops, Asynchronous counter operation, Synchronous counter operations, Up/ Down Synchronous counter, Design of synchronous counters. Basic shift register functions. Serial in- Parallel out shift registers, Parallel in -Serial out shift registers, Serial in- Serial out shift registers,

Parallel in Parallel out shift registers.

Book of Study:

1. Floyd and Jain- Digital Fundamentals, Eighth Edition, Pearson Education

Reference:

1.A P Malvino and D P Leach - Digital Principles and Applications, Fourth edition, Tata McGraw Hill Publishers, co Ltd.

IT1CRT03-Methodology Of Programming And C Language (Core)

Theory:4 hrs. per week

Credits:3

UNIT 1 (12 hrs.)

Introduction to programming, Classification of computer languages, Language translators (Assembler, Compiler, Interpreter), Linker, Characteristics of a good programming language, Factors for selecting a language, Subprogram, Purpose of program planning, Algorithm, Flowchart, Pseudocode, Control structures (sequence, selection, Iteration), Testing and debugging

UNIT 2:(12 hrs.)

C Character Set, Delimiters, Types of Tokens, C Keywords, Identifiers, Constants, Variables, Rules for defining variables, Data types, C data types, Declaring and initialization of variables, Type modifiers, Type conversion, Operators and Expressions- Properties of operators, Priority of operators, Comma and conditional operator, Arithmetic operators, Relational operators, Assignment operators and expressions, Logical Operators, Bitwise operators

UNIT 3: (15 hrs.)

Input and Output in C – Formatted functions, unformatted functions, commonly used library functions, Decision Statements If, if-else, nested if-else, if-else-if ladder, break, continue, goto, switch, nested switch, switch case and nested if. Loop control- for loops, nested for loops, while loops, do while loop.

UNIT 4:(15 hrs.)

Array, initialization, array terminology, characteristics of an array, one dimensional array and operations, two dimensional arrays and operations. Strings and standard functions, Pointers, Features of Pointer,

Pointer and address, Pointer declaration, void wild constant pointers, Arithmetic operations with pointers, pointer and arrays, pointers and two dimensional arrays.

UNIT 5 :(18 hrs.)

Basics of a function, function definition, return statement, Types of functions, call by value and reference. Recursion -Types of recursion, Rules for recursive function, direct and indirect recursion, recursion vs iterations, Advantages and disadvantages of recursion. Storage class, Structure and union, Features of structures, Declaration and initialization of structures, array of structures, Pointer to structure, structure and functions, typedef , bitfields , enumerated data types, Union, Dynamic memory allocation, memory models, memory allocation functions.

Book Of Study:

1. Ashok Kamthane - Programming in C, Third Edition, Pearson Education
2. P K Sinha & Priti Sinha - Computer Fundamentals , Fourth Edition, BPB Publications.

Reference :

1. E. Balaguruswamy -Programming in ANSI C ,Seventh Edition , McGraw Hill Education
2. Byron Gotfried - Programming with C, Second Edition, Schaums Outline series. McGraw Hill

IT1CRP01-Software Lab I (Core)

Software Lab: 4 hrs. per week

Credits:2

Syllabus

1. Programs to familiarize printf() and scanf() functions.
2. Programs Based on Decision statements , break, goto, continue, switch and Loop controls statements.
3. Programs Based on One dimensional and two dimensional arrays.
4. Programs on Strings and string handling functions.
5. Programs based on Pointers, operations on pointers, Arrays & Pointers,
6. Programs based on functions, Call by value, Call by reference, Recursion,

7. Programs based on structure and union, array of structures, Pointer to structure, structure and functions
8. Simple programs using pointers and malloc().

Scheme of Evaluation for software lab I external is as follows:

Division of Marks (Practical - 3 hours External)

First program from part 1& 2	- 25 marks
1.Flowchart	- 5 marks
2.Logic	- 10 marks
3.Successful compilation	- 5 marks
4.Result	- 5 marks
Second program should be based on advanced concepts ,part 3 to part 8	- 35 marks
1.Logic	- 20 marks
2.Successful compilation	- 10 marks
3. Result	- 5 marks)
Viva Voce	- 10 marks
Lab Record (minimum of 25 Programs)	- 10 marks
Total Marks	- 80 marks

B.Sc. IT - SEMESTER II

IT2CRT04-Operating Systems (Core)

Theory:4 hrs. per week

Credits:4

Unit 1: (10 hrs.)

Introduction: OS Definition, Functions, Evolution of OS, OS Structure Operating System Operations, Operating System Services, User Operating System Interface, System Calls, Types of System Calls.

Unit 2: (14 hrs.)

Process: Basic Concepts, Process Scheduling, Operations on Processes, Inter process communication, Process Scheduling - Scheduling Criteria, Scheduling Algorithms, Multiple Processor Scheduling.

Unit 3: (18 hrs.)

Process Coordination: Synchronization - The Critical Section problem, Semaphores, Classic Problems of Synchronization, Monitors. Deadlocks: System Model, Deadlock Characterization, Methods of handling Deadlocks, Deadlock Prevention, Deadlock Avoidance, Deadlock Detection, Recovery from Deadlock.

Unit 4: (16 hrs.)

Memory Management: Memory Management Strategies - Swapping, Contiguous memory allocation, Paging, Segmentation. Virtual Memory Management- Demand paging, Page Replacement.

Unit 5: (14 hrs.)

Storage Management: File System: - File Concept, Access Methods, Directory structure. Implementing File Systems:-File System Structure, Allocation Methods, Free Space Management, Disk Scheduling.

Book of study:

1. Abraham Silberschatz, Peter Galvin and Greg Gagne - Operating System Principles, Seventh Edition, John Wiley
2. William Stallings - Operating Systems, Sixth Edition, Prentice Hall of India, Pearson

Reference:

1. Milan Kovic - Operating Systems, Second Edition, TMH.

IT2CRT05-Computer Organization and Architecture (Core)

Theory:4 hrs. per week

Credits:3

Unit 1: (12 hrs.)

Basic computer organization and design

Operational concepts, Instruction codes, Computer Registers, Computer Instructions, Memory locations and addresses, Instruction cycle, Timing and control, Bus organization.

Unit 2: (15 hrs.)

Central Processing Unit:

General Register Organization, Stack Organization, Addressing modes, Instruction Classification, Program control.

Unit 3: (16 hrs.)

Memory Organization

Memory Hierarchy, Main Memory, Organization of RAM, SRAM, DRAM, Read Only Memory-ROM-PROM,EROM,EEPROM, Auxiliary memory, Cache memory, Virtual Memory, Memory mapping Techniques.

Unit 4: (15 hrs.)

Parallel Computer Structures:

Introduction to parallel processing, Pipeline computers, Multi processing systems, Architectural classification scheme-SISD, SIMD, MISD, MIMD.

Unit 5: (14 hrs.)

Pipelining and Vector processing: Introduction to pipelining, Instruction and Arithmetic pipelines (design) Vector processing, Array Processors.

Book of study :

- 1.M.Morris Mano-Computer Systems Architecture, Third Edition, Pearson Education
- 2.Kai Hwang and F A Briggs-Computer Architecture and parallel processing, McGraw Hills,1990

Reference

1. Carl Hamacher -Computer Organization, Fifth Edition, Tata McGraw Hill.
2. John P Hayes -Computer Architecture & Organization–Mc Graw Hill
3. William Stallings-Computer Organization and Architecture , Seventh Edition, Pearson Education

IT2CRT06- Object Oriented Programming using C++ (Core)

Theory:3 hrs. per week

Credits:4

Unit 1: (10 hrs.)

Principles of Object Oriented Programming, Beginning with C++

Procedure Oriented Programming-Object Oriented Programming-Basic concepts of object-oriented programming- Benefits of OOP- Applications of OOP-A simple C++program-Structure of C++ program- C++ data types- Symbolic constants- Reference by variables-Operators in C++- Operator precedence- Control structures- Function in C++ - The main function, Function prototyping- Call by reference- Return by reference- Inline function- Default arguments- Function overloading.

Unit 2: (10 hrs.)

Classes and Objects :Specifying a class- Defining member functions- Nesting of member functions - Private member functions - Arrays within a class - Memory allocation for objects-Static data members - Static member functions -Arrays of objects - objects as function arguments -Friendly functions- Returning Objects.

Unit 3: (12 hrs.)

Constructors and Destructors, Overloading

Constructors- Default constructor-Parameterized constructor-Copy constructor- Multiple constructors- Constructors with default arguments- Dynamic constructor-Destructors- Operator overloading- Unary and Binary operator overloading- Overloading using friends- Rules for overloading- Type conversion.

Unit 4: (10 hrs.)

Inheritance: Inheritance - Defining derived classes-Visibility modes-Single, Multilevel, Multiple, Hierarchical and Hybrid inheritance- Virtual base classes- Abstract classes- Constructors in derived classes- Nesting of classes.

Unit 5: (12 hrs.)

Pointers, Virtual Functions and Polymorphism, Working with Files :Pointers- Pointers to objects- this pointer-Pointers to derived classes- Virtual functions- Pure virtual functions- File Stream classes, Opening and closing a file- File opening modes- File pointers and their manipulations- Sequential input and output operations.

Book of Study:

1. E. Balagurusamy - Object Oriented Programming with C++, Fifth edition, Tata McGraw Education Hill , 2011.

Reference:

1. Ashok N. Kamthane, Object oriented Programming with ANSI & Turbo C++, First Edition, Pearson India
2. Robert Lafore, Object Oriented Programming in Turbo C++, First Edition, Galgotia Publications.
3. D Ravichandran, Programming with C++, Second edition, Tata McGraw- Hill.

IT2CRP02-Software Lab II (Core)

Software Lab: 4 hrs. per week

Credits:2

I.Object Oriented Programming using C++ (3 hrs. per week)

- 1.Programs based on default arguments, function overloading.
- 2.Programs based on array of objects, friend functions, passing objects as arguments to function.
- 3.Programs based on operator overloading (binary, unary) using member functions and friend functions.
- 4.Programs based on constructors, different types of constructors.
- 5.Programs based on inheritance, different types of inheritance.

B.Sc. IT - SEMESTER III

IT3CRT07 : Software Engineering(Core)

Theory: 4 hrs. per week

Credits: 4

Module I: (12)

System Development Life Cycle- Introduction to system development life cycle (SDLC): Various phases- Study, Analysis, Design, tools, Development, Implementation and Maintenance. Introduction-Software Engineering - The Software process - Software Myths - Prescriptive Process Models-Agile Development- What is an Agile Process?-Agility Principles ,The Politics of Agile Development, Human Factors

Module II: (15)

Requirements Engineering-Software Engineering Knowledge-Core Principles- Principles that guide each Framework Activity- Requirements Engineering- Eliciting Requirements-Requirements Analysis- Scenario Based Modeling-UML Model That Supplement the Use Case-Data Modeling Concepts-Class Based Modeling

Module III: (18)

Software Design-The Design process- Design Concept-Design Model-Component Level Design-What is a Component? ,Designing Class Based Components, Designing Traditional Components.

Module IV: (15)

Testing- A Strategic Approach to Software Testing-Test strategies for Conventional Software-Test Strategies for Object Oriented Software-Validation Testing-System Testing

Module V: (12)

Quality Management-Software Configuration Management(SCM),SCM Process- Metrics in the Process and Project Domain-Software Measurement- Metrics for Software Quality.Project Scheduling- Basic Concepts-Project Scheduling-Defining a Task Set for the Software Projects-Defining a Task Network. Risk Management- Software Risks- Risk Identification- Risk Projection-Risk Refinement-Risk Mitigation Monitoring and Management.

Book of Study:

1. Elias M. Awad, Systems Analysis And Design, Second Edition, Galgotia Publications Pvt Ltd.
2. Richard Fairley, Software Engineering Concepts , 1997, Tata McGraw Hills.

Reference:

1. K K Aggarwal, Yogesh Singh, Software Engineering, Third Edition, New Age International Publications.
2. Eve Anderson, Philip Greenspun & Andrew Grumet, Software Engineering for Internet Applications, 2006, MIT press.

3. Ian Sommerville, Software Engineering, Seventh Edition, Pearson Education
4. Software Engineering Project Management – 2nd Edition, Wiley India.
5. Software Quality Engineering – Jeff Tian, Student edition, 2006, Wiley India
6. Pankaj Jalote, An Integrated approach to Software Engineering, Second Edition, Narosa Publishing Company, Pearson Education

IT3CRT08-Computer Graphics (Core)

Theory:4 hrs. per week

Credits:4

Unit 1 : (12 hrs.)

Introduction: A survey of Computer Graphics, overview of graphics systems-Video display devices-Refresh CRT, Raster-Scan and Random-Scan Displays ,Color CRT Monitors, DVST, Flat-Panel Displays , Raster Scan systems, Random scan systems, Input devices, Hard copy devices, Graphics software.

Unit 2: (14 hrs.)

Output primitives: Line drawing algorithms: DDA algorithm, Bresenham's line algorithm, Circle generating algorithm- Midpoint circle algorithm, Character generation.

Unit 3: (18 hrs.)

2D geometric Transformations: Basic transformations: Translation, Rotation, Scaling; Other transformations-Reflection and shear, Matrix representation and homogenous coordinates, Composite transformation, Interactive picture construction Techniques.

Two-dimensional viewing: viewing pipeline, window and viewport, window to viewport transformation. Clipping operations- Point clipping, Line clipping:- Cohen Sutherland line clipping, Polygon clipping:- Sutherland- Hodgeman polygon clipping, Text Clipping.

Unit 4: (14 hrs.)

Three-dimensional concepts: Three dimensional display methods, Three dimensional object representations- Polygon surfaces, Sweep representations, Constructive solid geometry methods, octrees and quadtrees.

Unit 5: (14 hrs.)

Computer Animation: Design of animation sequences, raster animations, computer animation languages, key-frame systems, morphing, motion specifications.

Book of study :

- 1 .Donald D.Hearn & M. Pauline Baker, Computer Graphics C Version, Second Edition,, PHI Pvt. Ltd.

References:

1. Newman W M & R F Sproul, Principles of Interactive Computer Graphics, Second Edition McGraw Hill Publishers.
2. Plastock R & Xiang Z, Theory and problems of computer Graphics, Second Edition Schaum Series, McGraw Hill Publishers.

IT3CRT09 Database Management Systems (Core)

Theory:4 hrs. per week

Credits:3

Unit 1: Introduction (12 hrs.)

Characteristics of the Database Approach – Database users :DBA , Database Designers ,End users – Advantages of using the DBMS Approach – Data models, Schemas , and Instances – Three-Schema Architecture and Data Independence.

DBMS Languages: DDL, DML – The Database System Environment: DBMS Component Modules.

Unit 2: Relational Model (16 hrs.)

Entity Relationship Modeling: Introduction –Entity Types , Entity Sets , Attributes and Keys – Relationship Types ,Relationship Sets, Roles , and Structural Constraints – Weak Entity Types – Notation for ER diagrams – Sample ER diagrams.

Relational Model concepts: Domains ,Attributes , Tuples , and Relations – Characteristics of Relations – Relational Model Constraints and Relational Database Schemas : Domain Constraints, Key Constraints , Relational Database Schemas , Entity Integrity , Referential Integrity, and Foreign Keys .

Unit 3: SQL(14 hrs.)

Data Types – Data Definition commands : CREATE , ALTER ,DROP - Adding constraints in SQL –

Basic SQL Queries : INSERT ,SELECT ,DELETE ,UPDATE - Substring comparison using LIKE operator ,BETWEEN operator – Ordering of rows – SQL set operations UNION , EXCEPT , INTERSECT – Complex Queries : Comparison involving NULL and Three-valued logic ,Nested queries , EXISTS and UNIQUE functions, Renaming of attributes and Joining of tables, Aggregate functions ,Grouping – Managing Views.

Unit 4: Normalization and Indexing Structures for Files(15 hrs.)

Normalization: Informal Design Guidelines for Relational Schemas –Functional Dependencies – Normal forms : First Normal Form , Second Normal Form , Third Normal Form – General Definitions of Second and Third Normal Forms –BCNF.

Indexing Structures for files: -Types of Single-Level Ordered Indexes: Primary Indexes, Clustering Indexes, and Secondary Indexes.

Unit 5: Transaction Processing and Database Security (15 hrs.)

Transaction Processing: Introduction to Transaction Processing - Transaction and System Concepts – Desirable properties of Transactions.

Database Security and Authorization: Types of Security – Control measures – Database Security and DBA – Access Control , User Accounts, and Database Audits –Access Control based on Granting and Revoking Privileges.

Books of study:

1.Ramez Elmasri and Shamkant B.Bavathe - DATABASE SYSTEMS , Sixth Edition, Pearson Education.

References:

1. C.J Date- An Introduction to Database Systems, Eighth edition, Pearson Education,2003
2. Reghu Ramakrishnan and Johannes Gehrke- Database Management Systems , Third edition, Mc Graw Hill International Edition.
3. Dipin Desai , An Introduction to Database Systems , First Edition, Galgoria Publications .

IT3CRT10- Data Structures using C++

Theory:4 hrs. per week

Credits:3

Unit 1 (12 hrs.)

Concept of Structured data - Data structure definition, Different types and classification of data structures, Arrays – Memory allocation and implementation of arrays in memory, array operations, Applications - sparse matrix representation and operations, polynomials representation and addition, Concept of search and sort – linear search, binary search, selection sort, insertion sort, quick sort.

Unit 2 (12 hrs.)

Stacks – Concepts, organization and operations on stacks using arrays (static), examples, Applications - Conversion of infix to postfix and infix to prefix, postfix evaluation, subprogram calls and execution, Multiple stacks representation.

Queues - Concepts, organization and operations on queues, examples.

Circular queue – limitations of linear queue, organization and operations on circular queue. Double ended queue, Priority queue.

Unit 3 (18 hrs.)

Linked list: Concept of dynamic data structures, linked list, types of linked list, linked list using pointers, insertion and deletion examples, circular linked list, doubly linked lists

Applications- linked stacks and queues, memory management basic concepts, garbage collection.

Unit 4 (15)

Trees - Concept of recursion, trees, tree terminology, binary trees, representation of binary trees, strictly binary trees, complete binary tree, extended binary trees, creation and operations on binary tree, binary search trees, Creation of binary search tree, tree traversing methods – examples, binary tree representation of expressions.

Unit 5 (15)

File - Definition, Operations on file (sequential), File organizations - sequential, Indexed sequential, random files, linked organization, inverted files, cellular partitioning, hashing – hash tables, hashing functions, collisions, collision resolving methods.

Books of study :

1. G.S Baluja - Data Structures Through C++ (A Practical Approach), Second Edition-2004, Danapat Rai & Co.
2. Ellis Horowitz and Sartaj Sahni - Fundamentals of Data Structures in C++ , Second Edition, Galgotia Publications.

References:

1. Seymour Lipschutz, Theory and Problems of Data Structures, Schaums Outline Series,2006, McGraw Hill
2. Yedidyah Lannsam, Moshe Augustein, Aaron M Tenenbaum- Data structures using C and C++ Second Edition, Prentice Hall

IT3CRP03- Software Lab III

I. SQL Commands (2 hours)

1. Data definition commands - CREATE, ALTER, DROP, Adding Constraints Primary key, foreign key, unique key, check, not null.
2. Basic SQL queries INSERT, SELECT, DELETE, UPDATE, Using multiple tables, ordering of rows using ORDER BY option, Set operations using UNION, EXCEPT, INTERSECT, Substring Comparison using LIKE operator, BETWEEN operator.
3. Complex Queries Nested Queries, EXISTS and UNIQUE/DISTINCT functions, NULL values, Renaming of attributes and Joining of tables, Aggregate functions and grouping.
4. Managing views, Simple stored procedures.

II. Data Structures using C++. (3 hours per week)

1. Array sort Bubble sort, selection sort, insertion sort, Quick sort, merge sort, linear search, binary search, operations on - sparse matrix, polynomial addition etc.(with and without user defined functions)

2. Stack- push and pop operations, implementation, Application of stacks Conversion of infix expression to postfix, infix expression to prefix, postfix expression evaluation (with and without user defined functions)
3. Queue- insertion and deletion operations, implementation, Implementation of circular queue (with and without user defined functions)
4. Linked list- implementation, concatenation, interchange nodes etc., circular list and doubly linked list implementation, implementation of stacks and queue using linked lists. Polynomial addition using linked list etc.
5. Creation and traversal of binary tree and binary search trees etc.
6. File operations using sequential files.

Scheme of Evaluation for software lab III external is as follows:

Division of Marks (Practical - 3 hours External)

First program - questions from DBMS - **20 marks**

(Logic – 10 marks, Successful compilation – 6 marks, Result – 4 marks)

Second program should be based on advanced concepts in Data Structure(2 to 5) - **35 marks**

(Logic – 20 marks, Successful compilation – 10 marks, Result – 5 marks)

Viva Voce - **15 marks**

Lab Record

(Minimum of 15 Programs from section I and 20 programs from section II) - **10 marks**

Total Marks - 80 marks

B.Sc. IT- SEMESTER IV

IT4CRT12-Design and Analysis of Algorithms (Core)

Theory:4 hrs. per week

Credits:4

Unit 1: (12 hrs.)

Introduction, Definition of Algorithm, Algorithm design techniques, Algorithm Analysis, performance analysis - space complexity, time complexity, Best, Worst, And average case complexity.

Unit 2 (14 hrs.)

Divide and Conquer General method, Binary search, finding the maximum and minimum, merge sort, quick sort, performance measurement of quick sort, Selection, Strassen's matrix multiplication.

Unit 3 (18 hrs.)

Greedy Algorithm General Characteristics of greedy algorithms, Problem solving using Greedy Algorithm - Knapsack problem, Minimum Spanning trees (Kruskal's algorithm, Prim's algorithm).

Unit 4: (16 hrs.)

Dynamic programming The general method, multistage graphs, all-pairs shortest path, Single source shortest path, 0/1 Knapsack problem, Traveling Sales person problem.

Unit 5: (12 hrs)

Basic traversal and search techniques - BFS and traversal, DFS and traversal, Bi-connected components and DFS, Backtracking General method, 8-queens problem, Sum of subsets problem, Graph coloring, Hamiltonian cycles.

Book of study:

1. Ellis Horowitz, Sartaj Sahni, Sanguthevar Rajasekharan, Computer algorithms/C++,Second Edition, Universities Press.

References:

1. Anany Levitin- Introduction to design and analysis of algorithms, Third Edition, Addison Wesley Low price edition.
2. Richard Neapolitan & Kumarss Naimipour, Foundation of Algorithms using C++ Pseudocode, Third edition, Jones And Bartlett Publishers.

IT4CRT12-Linux Administration

Theory:4 hrs. per week

Credits:4

Unit-1 (12 hrs.)

Overview of Linux : What is Linux, Linux's root in Unix, Common Linux Features, advantage of Linux, Overview of Unix and Linux architectures, Linux files system, hardware requirements for Linux, Linux standard directories. Commands for files and directories cd, ls, cp, rm, mkdir, rmdir, pwd, file, more, less, Creating and viewing files using cat, file comparisons.

Unit 2 (15 hrs.)

Essential Linux commands: Processes in Linux, process fundamentals, connecting processes with pipes, redirecting input/output, Background processing, managing multiple processes, process scheduling – (at, batch), nohup command, kill, ps, who, find, sort, touch, file, file processing commands - wc, cut, paste etc Mathematical commands - expr, factor etc. Creating and editing files with vi editor.

Unit 3 (15 hrs.)

Shell programming - Basics of shell programming, various types of shell available in Linux, comparisons between various shells, shell programming in bash. Conditional and looping statements, case statement, parameter passing and arguments, Shell variables, system shell variables, shell keywords, Creating Shell programs for automating system tasks

Unit-4 (18 hrs.)

System administration - Common administrative tasks, identifying administrative files configuration and log files, Role of system administrator, Managing user accounts-adding & deleting users, changing permissions and ownerships, Creating and managing groups, modifying group attributes, Temporary disabling of users accounts, creating and mounting file system, checking and monitoring system performance - file security & Permissions, becoming super user using su. Getting system information with uname, host name, disk partitions & sizes, users, kernel, installing and removing packages with rpm command.

Unit-5: (12 hrs.)

Simple filter commands: pr, head, tail, cut, sort, uniq, tr - Filter using regular expression grep, egrep, sed
Understanding various Servers :DHCP, DNS, Squid, Apache, Telnet, FTP,Samba.

Book of study :

1. Cristopher Negus - Red Hat Linux Bible, Wiley Dreamtech India 2005 edition.
2. Yeswant Kanethkar - UNIX Shell Programming, First edition, BPB.

References :

1. Official Red Hat Linux Users guide by Redhat, Wiley Dreamtech India
2. Graham Glass & King Ables - UNIX for programmers and users, Third Edition, Pearson Education.
- 3.Neil Mathew & Richard Stones - Beginning Linux Programming, Fourth edition, Wiley Dreamtech India.

IT4CRT13-Parallel Processing(core)

Theory: 4 hrs. per week

Credits: 4

Unit I:(12)

Introduction to parallel processing: Parallelism in uniprocessor systems, parallel computer structures, Architectural classification schemes (Flynn's, Feng's and handler's), parallel processing applications.

Unit II:(16)

Pipelining and vector processing: Linear pipelining, classification of pipeline processors, Instruction and arithmetic pipelines, principles of designing pipelined processors, characteristics of vector processing

Unit III: (14)

Structures and algorithms for Array processors: SIMD array processors, SIMD interconnection networks, parallel algorithms for array processors

Unit IV:(16)

Multiprocessor architecture and programming: functional structures of multiprocessor systems, interconnection networks, multiprocessor operating systems, interprocessor communication mechanisms

Unit V:(14)

Dataflow computers: Distinction between control flow and data flow computers, data flow graphs and languages, advantages and disadvantages of dataflow computers, dataflow computer architectures

Book of study:

1. Kai Hwang and F A Briggs - Computer Architecture and parallel processing, McGraw Hill Education

References:

1. Stone H S -Introduction to Computer Architecture-Stone H S,Galgotia publishers.
2. Peter M. Kogge - The Architecture of pipelined computers, First Edition, Mc Graw Hill

IT4CRT14 -WEB PROGRAMMING USING PHP

Theory:3 hrs. per week

Credits:3

Unit 1 (8 hrs.)

Introduction to web, WWW architecture, Fundamentals of HTML, text formatting tags, marquee, inserting images, links, lists, creating tables, frames, working with form elements.

Unit 2 (10 hrs.)

CSS introduction, <link> and <style> elements, CSS properties, Controlling Fonts, Text formatting, Text- pseudo classes, Selectors, Links, Backgrounds, lists

Introduction to Java Script, Java Script variables, operators, decision control statements, looping, functions, arrays, events, popup boxes-alert, prompt, conform box, built-in objects, writing JavaScript, form validation

Unit 3 (10 hrs.)

Introduction to PHP, server side scripting, role of web server software, php comments, variables, echo and print, PHP operators, data types, branching statements, loops, arrays

Unit 4 (12 hrs.)

PHP functions, PHP form, Passing information between pages, \$_GET, \$_POST, \$_REQUEST. String functions, include and require, session and cookie management, error handling in PHP, Object Oriented Programming using PHP

Unit 5 (14 hrs.)

Introduction to MySQL, datatypes, SQL commands-CREATE, UPDATE, INSERT, DELETE, SELECT, PHP functions for MySQL connectivity and operation- mysql_connect, mysql_select_db, mysql_query, mysql_fetch_row, mysql_fetch_array, mysql_result, mysql_list_fields, mysql_num_fields, insertion, updation and deletion of data using PHP, displaying data from MySQL in webpage.

Book of Study:

1. Dave W Mercer, Allan Kent, Steven D Nowicki, David Mercer, Dan Squier, Wankyu Choi - "Beginning PHP", Wiley Publishing, Inc
2. Ivan Bayross - "HTML, DHTML, JavaScript, Pearl & CGI ", Fourth Revised Edition, BPB Publication.
3. "Programming PHP",Rasmus Lerdorf and Kevin Tatore, Shroff Publishers & Distributors Pvt. Ltd
4. "Beginning PHP", Dave W Mercer, Allan Kent, Steven D Nowicki, David Mercer, Dan Squier, Wankyu Choi, Wiley Publishing, Inc

IT4CRP04 - Software Lab IV (Core)

Software Lab: 6 hrs. per week

Credits:2

II. Linux (2 hrs. per week)

Sl.No	Topic and Details
1	Getting started –Commands

2	The Linux Architecture and command usage – Commands, General-purpose utilities
3	The File system –Commands
4	Process related commands
5	Handling ordinary files, Basic file attributes
6	The vi editor
7	Simple Filters, Filters using regular expressions-use of grep command
8	Introduction to shell concept and writing shell script
9	Introduction to shell concept and writing shell script, Essential Shell Programming
10	User management, monitoring system performance, disk usage etc.

II. Web Programming using PHP (2 hrs. per week)

1. Creating programs based on HTML
2. Creating Java script based programs
3. Creating simple programs based on PHP
4. Programs using PHP functions
5. Programs based on MY SQL

B.Sc. IT - SEMESTER V

IT5CRT15-Computer Networks (Core)

Theory:3 hrs. per week

Credits:4

Unit 1: (10 hrs.)

Introduction to Networks, Data and signals-analog and digital, periodic analog signals, digital signals, bit rate, baud rate, bandwidth. Transmission impairments- attenuation, distortion and noise.

Data communication protocols and standards, Network models - OSI model-layers and their functions. TCP/IP protocol suite.

Unit 2: (10 hrs.)

Bandwidth utilization Multiplexing: FDM, TDM, spread spectrum. Transmission Media- guided media and unguided media. Switching: message, Circuit and packet switched networks, datagram networks, virtual- circuit networks.

Unit 3: (12 hrs.)

Data link layer: Error Detection and Correction, Framing, flow and error control, Protocols - Noiseless channels (Simplex, Stop and Wait) and Noisy channels (Stop and Wait and Piggy Backing).

Multiple Access Protocols. Random Access-ALOHA, CSMA. Wired LANs-IEEE standards, wireless LANs-Bluetooth, Cellular Telephony

Unit 4: (12 hrs.)

Network layer and Transport layer: Repeaters, Bridges, Gateways and routers. Logical addressing – IPV4 and IPV6 addressing, Internet protocol - IPV4 and IPV6. Connectionless and Connection Oriented Services: UDP and TCP. Congestion Control, Quality of Service.

Unit 5: (10 hrs.)

Application layer: HTTP, FTP, SMTP, DNS. Network security: Common Threats- Firewalls (advantages and disadvantages), Cryptography.

Book of study:

1. B. A. Forouzan - Data communication and Networking, Fourth edition-,TMH
2. Andrew S Tanenbaum - Computer Networks ,Fourth Edition, Prentice Hall of India.

IT5CRT16 – Java Programming using Linux (Core)

Theory:3 hrs. per week

Credits:3

UNIT 1 (10 hrs.)

Concepts of Object oriented programming, Benefits of OOP, Features of java. Java environment, java tokens, Constant, variables, data types, operators, Control Statements-branching statements, looping statements, jump statements, labeled loops.

UNIT 2 (10 hrs.)

Defining a Class, Fields declaration, Method declaration, Creating object, Accessing class members, method overloading, Constructors, constructor overloading, super keyword, static Members, Inheritance, overriding methods, dynamic method dispatch, final(variables, methods and classes), abstract methods and classes, interfaces, visibility control.

UNIT 3 (12 hrs.)

Arrays- One dimensional arrays, declaration, creation, initialization of arrays, two dimensional arrays, String class. Packages: - java API packages overview (lang, util, io, awt, swing, applet), user defined packages-creating packages, using packages

Exception Handling Techniques-try-catch-throw-throws-finally -Multithreading- creation of multithreaded program-Thread class-Runnable interface, Thread life cycle.

UNIT 4 (10 hrs.)

Event Handling-Delegation Event Model-Event Classes-Sources of Events-Event Listeners- Event classes- Swing- architecture, components of swing- JLabel, JButton, JCheckBox, JRadioButton, JList, JComboBox, JTextField, JText Area, JPanel, JFrame, Layout Managers(Flow Layout, Grid Layout, Card Layout, Border Layout, Box Layout, Null Layout).

UNIT 5 (10 hrs.)

Applet Fundamentals -applet tag, applet life cycle, passing parameters to applets. Working with graphics -Line, Rectangle, Oval, Arc, color setting. JDBC architecture- JDBC connection, JDBC statement object, JDBC drivers.

Book of study :

1. E. Balagurusamy- Programming with Java , Third Edition, McGraw Hill Companies.
2. K. Somasundaram - PROGRAMMING IN JAVA2, First Edition, Jaico Publishing House.

Reference:

1. Patrick Naughton - Java2 The Complete Reference, Seventh Edition:
2. Cay S Horstmann & Gary Cornell - Core Java Volume 1- Fundamentals, Eighth edition.
3. Java 6 Programming Black Book 2007 Edition, Dreamtech press.

IT5CRT17 - IT & Environment (Core)

Theory:4 hrs. per week

Credits:4

Unit 1 : (18 hrs.)

Multidisciplinary nature of environmental studies : Definition, scope and importance, Need for public awareness. **(2 hrs)**

Natural Resources: Renewable and non-renewable resources: Natural resources and associated problems. a) **Forest resources:** Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forest and tribal people. b) **Water resources:** Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems. c) **Mineral resources:** Use and exploitation, environmental effects of extracting and using mineral resources, case studies. d) **Food resources:** World food problems, changes caused by agriculture and

overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies. e) **Energy resources:** Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources, Case studies. f) **Land resources:** Land as a resource, land degradation, man induced landslides, soil erosion and desertification. **Role of individual in conservation of natural resources. Equitable use of resources for sustainable life styles.**

(10hrs)

Ecosystems : Concept of an ecosystem, Structure and function of an ecosystem, Producers, consumers and decomposers, Energy flow in the ecosystem, Ecological succession, Food chains, food webs and ecological pyramids., Introduction, types, characteristic features, structure and function of the given ecosystem:- Forest ecosystem

(6 hrs)

Unit 2: (26 hrs)

Biodiversity and its conservation: Introduction, Biogeographical classification of India, Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values., India as a mega-diversity nation, Hot-spots of biodiversity, Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts, Endangered and endemic species of India

(8 hrs)

Environmental Pollution :Definition, Causes, effects and control measures of: - Air pollution, Water pollution, Soil pollution, Marine pollution, Noise pollution, Thermal pollution, Nuclear hazards, Solid waste Management: Causes, effects and control measures of urban and industrial wastes., Role of an individual in prevention of pollution, Pollution case studies, Disaster management: floods, earthquake, cyclone and landslides.

(8 hrs)

Social Issues and the Environment :Urban problems related to energy, Water conservation, rain water harvesting, watershed management, Resettlement and rehabilitation of people: its problems and concerns, Case studies, Environmental ethics: Issues and possible solutions, Climate change, global warming, acid rain, ozone layer depletion , nuclear accidents and holocaust, Case studies, Consumerism and waste products, Environment Protection Act , Air (Prevention and Control of Pollution) Act, Water (Prevention and control of Pollution) Act, Wildlife Protection Act, Forest Conservation Act, Issues involved in enforcement of environmental legislation, Public awareness

(10hrs)

Unit 3: (10 hrs.)

Internet as a knowledge repository, academic search techniques, creating cyber presence. Academic websites, open access initiatives, opens access publishing models, Introduction to use of IT in teaching and learning -Educational software, Academic services–INFLIBNET, NPTEL, NICNET, BRNET

(10hrs)

Unit 4: (10 hrs.)

IT & Society- issues and concerns- digital divide, IT & development, the free software movement , IT industry: new opportunities and new threats, software piracy, cyber ethics, cyber crime, cyber threats, cyber security, privacy issues, cyber laws, cyber addictions, information overload, health issues- guide lines for proper usage of computers, internet and mobile phones. e-wastes and green computing, impact of IT on language & culture-localization issues- Unicode- IT and regional languages, Green Computing Concept

(10hrs)

Unit 5: (8 hrs.)

Human Rights– An Introduction to Human Rights, Meaning, concept and development, Three Generations of Human Rights (Civil and Political Rights; Economic, Social and Cultural Rights).

Human Rights and United Nations – contributions, main human rights related organs - UNESCO, UNICEF, WHO, ILO, Declarations for women and children, Universal Declaration of Human Rights. **Human Rights in India** – Fundamental rights and Indian Constitution, Rights for children and women, Scheduled Castes, Scheduled Tribes, Other Backward Castes and Minorities

Environment and Human Rights - Right to Clean Environment and Public Safety: Issues of Industrial Pollution, Prevention, Rehabilitation and Safety Aspect of New Technologies such as Chemical and Nuclear Technologies, Issues of Waste Disposal, Protection of Environment **Conservation of natural resources and human rights:** Reports, Case studies and policy formulation. Conservation issues of western ghats- mention Gadgil committee report, Kasthuriengan report. Over exploitation of ground water resources, marine fisheries, sand mining etc.

(8 Hrs)

Internal: Field study

- Visit to a local area to document environmental grassland/ hill /mountain
- Visit a local polluted site – Urban/Rural/Industrial/Agricultural Study of common plants, insects, birds etc
- Study of simple ecosystem-pond, river, hill slopes, etc

(Field work Equal to 5 lecture hours)

References:

1. Technology in Action” Alan Evans, Kendall Martin, Mary Anne Poatsy, Pearson

2. Bharucha Erach, Text Book of Environmental Studies for undergraduate Courses. University Press, IInd Edition 2013 (TB)
3. Clark.R.S., Marine Pollution, Clarendon Press Oxford (Ref)
4. Cunningham, W.P.Cooper, T.H.Gorhani, E & Hepworth, M.T.2001 Environmental Encyclopedia, Jaico Publ. House. Mumbai. 1196p .(Ref)
5. Dc A.K.Environmental Chemistry, Wiley Eastern Ltd.(Ref)
6. Down to Earth, Centre for Science and Environment (Ref)
7. Heywood, V.H & Watson, R.T. 1995. Global Biodiversity Assessment, Cambridge University Press 1140pb (Ref)
8. Jadhav.H & Bhosale.V.M. 1995. Environmental Protection and Laws. Himalaya Pub. House, Delhi 284p (Ref)
9. Mekinney, M.L & Schock.R.M. 1996 Environmental Science Systems & Solutions. Web enhanced edition 639p (Ref)
10. Miller T.G. Jr., Environmental Science, Wadsworth Publishing Co. (TB)
11. Odum.E.P 1971. Fundamentals of Ecology. W.B. Saunders Co. USA 574p (Ref)
12. Rao.M.N & Datta.A.K. 1987 Waste Water treatment Oxford & IBII Publication Co.Pvt.Ltd.345p (Ref)
13. Rajagopalan. R, Environmental Studies from crisis and cure, Oxford University Press, Published: 2016 (TB)
14. Sharma B.K., 2001. Environmental Chemistry. Geol Publ. House, Meerut (Ref)
15. Townsend C., Harper J, and Michael Begon, Essentials of Ecology, Blackwell Science (Ref)
16. Trivedi R.K., Handbook of Environmental Laws, Rules Guidelines, Compliances and Stadards, Vol I and II, Enviro Media (Ref)
17. Trivedi R. K. and P.K. Goel, Introduction to air pollution, Techno-Science Publication (Ref)
18. Wanger K.D., 1998 Environmental Management. W.B. Saunders Co. Philadelphia, USA 499p (Ref)
19. M-Magazine, R-Reference TB- Text Book

IT5OPT01 -Informatics and Cyber Ethics (Open Course)

Theory:4 hrs. per week

Credits:4

Unit I (12 hrs.)

The Internet, TCP/IP, IP Addressing, Client Server Communication, Intranet, WWW, Web Browser and Web Server, Hyperlinks, URLs, Electronic mail.

Unit II (16 hrs.)

Internet as a knowledge repository, academic search techniques, creating cyber presence. Academic websites, open access initiatives, opens access publishing models, Introduction to use of IT in teaching and learning -Educational software, Academic services–INFLIBNET, NPTEL, NICNET, BRNET.

Unit III (16 hrs.)

Introduction to purchase of technology, License, Guarantee, Warranty, Basic concepts of IPR, copyrights and patents, plagiarism. IT & development, the free software movement

Unit IV (14 hrs.)

Cyber space, information overload, cyber ethics, cyber addictions, cybercrimes– categories –person, property, Government–types-stalking, harassment, threats, security & privacy issues.

Unit V(14 hrs.)

Cyber Addiction, Information Overload, Health Issues, e-Waste and Green computing impact of IT on language & culture-localization issues- Unicode- IT and regional languages e-Governance in India, IT for National Integration, Role of IT.

Book of Study:

1. Alan Evans, Kendall Martin, Mary Anne Poatsy - “Technology in Action”, Pearson

References:

1. Dinesh Maidasani “Learning Computer Fundamentals, MS Office and Internet & Web Technology”, Firewall Media, Lakshmi Publications.
2. V Rajaraman - “Introduction to Information Technology”, Prentice- Hall of India.

3. Barkhs and U. Rama Mohan - HTML Black Book 3. “Cyber Law Crimes”, Asia Law House, New Edition
4. Peter Nortons- Introduction to Computers, Sixth Edition, Published by Tata McGraw Hill

IT5OPT02 - Computer Fundamentals, Internet & MS Office (Open Course)

Theory:4 hrs. per week

Credits:4

Unit I (12 hrs.)

Computer Fundamentals: History, Generations, Classifications, Operating Systems, Types of Networks

Unit II (12 hrs.)

The Internet, TCP/IP, IP Addressing, Client Server Communication, Intranet, WWW, Web Browser and Web Server, Hyperlinks, URLs, Electronic Email

Unit III (14 hrs.)

Word processing: Introduction, Microsoft Word, Basic Menus, Formatting the text & paragraph, Working with Index

Unit IV (18 hrs.)

Spread Sheet: Introduction, Microsoft Excel, Basic Menus, Formulas, Basic functions, Charts and Graphs.

Unit V (16 hrs.)

Microsoft PowerPoint: Introduction, Basic Menus, Template, Slide Basics, Charts, Adding Multimedia & Animation.

Book of Study:

1. Dinesh Maidasani, Firewall Media - “Learning Computer Fundamentals, MS Office and Internet & WebTechnology”, , Lakshmi Publications.

References:

1. Harley Hahn - “Internet Complete Reference”, , Second Edition, Tata McGraw Hill Education
2. Gary B. Shelly, Misty E. Vermaat - “Microsoft Office 2010: Advanced” , CENGAGE Learning 2010

IT5CRP05 : Software Lab V (core)

Software Lab: **5** hrs. per week

Credits: 2

Syllabus

Part I. Applet, JDBC connection and swing based Programs

Part II (using class and read inputs from keyboard)

Java Programs: Method Overloading- Method Overriding-inheritance-abstract class
interfaces- packages-Exception Handling-Multithreading

Scheme of Evaluation for software lab V external is as follows:

(There will be two questions; the first from Part I and second from Part II)

Division of Marks (Practical - 3 hours External)

First program - questions from Part I **- 25 marks**

1. Logic – 10 marks
- 2.Successful compilation – 8 marks
3. Result – 7 marks

Second program – questions from Part II **- 35 marks**

1. Logic – 20 marks
- 2.Successful compilation –10 marks
3. Result – 5 marks

Viva Voce	- 10 marks
Lab Record	- 10 marks
(Minimum of 25 Programs)	
Total Marks	- 80 marks

IT5CRP06 : Software Development Lab I (core)

Software Development Lab: 6 hrs. per week

Credits: 2

Mini project can be a small complete application project, to make the student confident in designing a system based on Software engineering course. The internal and external evaluation is to be done with the project demonstration and presentation, viva and modification. It must be done in the college lab under the guidance of a faculty.

Scheme of Evaluation for Software Development Lab I external is as follows:

Division of Marks (Software Development Lab I)

Project demonstration and Presentation	- 25 marks
Modification	- 15 marks
Viva Voce	- 15 marks
Project report with proper content and binding	- 25 marks
Total Marks	- 80 marks

B.Sc. IT - SEMESTER VI

IT6CRT18-Mobile Application Development – Android (Core)

Theory:4 hrs. per week

Credits:4

Unit 1 (10 hrs.)

Introduction to Android, Android Versions, Android Activity, Android Features and Architecture, Java JDK, Android SDK, Android Development Tools, Android Virtual Devices, Emulators, Dalvik Virtual Machine, Layouts – Linear, Absolute, Frame, Relative and Table.

Unit 2 (16 hrs.)

Android User Interface- Fundamental UI design , User interface with View- Text View, Buttons, Image Button, Edit Text, Check Box, Toggle Button, Radio Button and Radio Group, Progress Bar, Autocomplete Text View, Spinner, List View, Grid View, Image View, Scroll View, Custom Toast Alert and Time and Date Picker.

Unit 3 (14 hrs.)

Activity - Introduction, Intent, Intent_filter, Activity Life Cycle, Broadcast Life Cycle, Services, multimedia-Android System Architecture, Play Audio and Video, Text to Speech.

Unit 4 (16 hrs.)

SQLite Database in Android- Introduction to SQLite Database, Creation and Connection of the Database, Extracting values from Cursors, Transactions, Telephoning and Messaging-SMS Telephony, Sending SMS, Receiving SMS, Wi-Fi Activity.

Unit 5 (16 hrs.)

Introduction to JSON and XML, Use of JSON, Syntax and Rule of JSON, JSON Name, JSON Values, JSON Objects, JSON Arrays, Parsing JSON and XML.

Google Play services, Location services, Maps

Book of Study:

1. Prasanna Kumar Dixit - ANDROID, Vikas Publishing House.
2. Anubhav Pradhan, Anil Deshpande, Composing Mobile Apps using Android, Wiley India Pvt.Ltd,2014

References:

1. Kevin Grant and Chris Haseman, Beginning Android Programming – Develop and Design, Pearson.

IT6CRT19- System Software (core)

Theory: 4 hrs. per week

Credits: 4

Unit 1 (12)

Language processing concepts: Introduction, Language processing activities, Fundamentals of Language processing, Fundamentals of language specification. Programming Language Grammar, Classification of grammar, Regular Expression.

Unit 2 (12)

Assemblers: Elements of assembly language programming – two pass and one pass assembler- forward reference problem- cross assemblers.

Unit 3 (15)

Compilers Phases of compiler- Aspects of compilations- memory allocation – Compilation of expression, Compilation of control structures.

Unit 4 (15)

Scanning: finite state alternate, Building DFA's, Parsing, Parse trees, Abstract syntax trees, topdown parsing, predications and back tracking, top down parsing without backtracking, practical topdown parsing, bottom up parsing, operator precedence ,grammars, operator precedence parsing.

Unit 5 (18)

Macros: Macro definition- macro call- Macro expansion- nested macro calls – macro processors.

Linkers and Loaders, Relocation and linking concepts- Design of linker- Functions of loaders- Type of loaders.

Book of study:

- 1.D M Dhamdhare System programming and operating Systems B y, Tata McGraw Hill

References :

1. John J Donovan - System Programming , First edition, Tata McGraw Hill
2. A V Aho & J D Ullman - Principles of compiler Design, Second edition,Pearson education

B.Sc. IT - Elective Papers

IT6PET01- DATA MINING

Theory:4 hrs. per week

Credits:4

Unit 1: (12 hrs.)

Introduction Data Mining, Data Ware House, Transactional Databases, Data Mining Functionalities Characterization and Discrimination, Mining frequent patterns, Association and correlation, Classification and Prediction, Cluster Analysis, Classification of Data Mining Systems, Data Mining Task Primitive, Integration of Data Mining systems, Major issues in Data Mining, Data integration and transformation, Data reduction, Data discretization.

Unit 2: (12 hrs.)

Data Warehouse and OLAP technology Data Warehouse, Multidimensional data Model, Data warehouse architecture, Data Warehouse implementation, OLAP, Data Warehouse and data mining

Unit 3: (18 hrs.)

Association Rules and Classification Concepts Efficient and Scalable Frequent item set Mining methods, Mining various kind of association rules, from association mining to Co-relation analysis, Classification and prediction, Issues, Classification by Decision tree induction, Bayesian Classification, Rule-based classification, Support Vector Machines, Learning from your neighbors, Prediction

Unit 4: (18 hrs.)

Cluster Analysis Definition, Types of data in cluster analysis, A categorization major Clustering methods- Partitioning methods, K-means and k-medoids, from k-medoids to CLARANS, Hierarchical methods, Density based methods

Unit 5: (12 hrs.)

Mining Complex Data Spatial Data Mining, Multimedia Data Mining, Text Mining and Mining WWW.

Book of study:

1. Jiawei Han and Micheline Kamber - Data Mining - Concepts and Techniques, Second Edition, Elsevier, 2006

Reference:

1. Witten and Frank - Data Mining Practical Machine Learning Tools and Techniques, Second Edition, Elsevier, 2005
2. Soman, Divakar and Ajay, Data Mining Theory and Practice, PHI, 2006
3. Margaret H Dunham- Data Mining –Introductory and Advanced Topics, Fourth Edition, Person 2006

IT6PET02 -Digital Image Processing

Theory:4 hrs. per week

Credits:4

Unit 1: (10 hrs.)

Digital Image Fundamentals

Image, Digital Image, Digital image processing-definitions, Examples of fields that use Digital Image Processing, Fundamental steps in Digital Image Processing, Components of Image processing system.

Unit 2 : (14 hrs.)

Elements of visual perception

Elements of visual perception- Image Formation, Brightness adaptation and Discrimination, Image sampling and quantization- basic concepts, spatial and Intensity resolution, Basic relationship among Pixels.

Unit 3: (16 hrs.)

Image Enhancement in Spatial and Frequency Domain

Intensity Transformation and spatial Filtering Basics, Intensity transformation functions- Image Negatives, Log Transformations, Power Law Transformations, Histogram Processing, Spatial filtering- correlation and convolution; Fourier transform and frequency domain.

Unit 4: (15 hrs.)

Morphological Image Processing

Introduction, basis of set theory, Dilation, Erosion, Structuring elements, Opening and Closing, Hit or miss transformation.

Unit 5: (17 hrs.)

Image Segmentation

Point, Line, Edge detection-detection of isolated points, Basic edge detection- Gradient operators; Pixel based approach-Basics of intensity thresholding, Basic global thresholding; Region based segmentation-region growing, region splitting and merging.

Book of Study:

1. Rafael C. Gonzalez, Richard E. Woods, Digital Image Processing, Third Edition, Pearson

References:

1. Anil K Jain, Fundamentals of Digital Image Processing , Pearson Education.
2. Er. Rishabh Anand, Digital Image Processing, MEDTEC Publications.

IT6PET03- Soft Computing Techniques

Theory:4 hrs. per week

Credits:4

Unit 1 (14 hrs.)

Soft Computing, Difference between soft computing and hard computing. **Neural Networks:** Basic concepts of Neural Networks, Human Brain, Artificial Neuron model, Activation functions, Neural network architecture, Single layer and multilayer feedforward networks, Recurrent networks, Neural network characteristics, Learning methods, Rosenblatt's perceptron, Perceptron and linearly separable tasks, XOR problem, Neural network applications.

Unit 2 : (14 hrs.)

Back Propagation Networks: Architecture- perceptron model, solution, single layer artificial neural network, multilayer perception model, back propagation learning- input layer computation, hidden layer computation, output layer computation, calculation of error, Training of neural network, effect of learning rate coefficient, Back propagation algorithm.

Unit 3: (15 hrs.)

Fuzzy Set Theory: Fuzzy versus crisp, Crisp sets, Operations on crisp sets, Properties of crisp sets, Partition and covering, Fuzzy sets, Membership functions, Basic fuzzy set operations, Properties of fuzzy sets, Crisp relations, Operations on crisp relations, Fuzzy relations, Fuzzy cartesian product, Operations on fuzzy relations.

Unit 4 : (15 hrs.)

Fuzzy Systems: Crisp logic, Laws of propositional logic, Inference in propositional logic, Predicate logic, Interpretations of predicate logic formula, Inference in predicate logic, Fuzzy logic, Fuzzy propositions, Fuzzy connectives, Fuzzy quantifiers, Fuzzy inference, Fuzzy rule based system, Defuzzification methods, Applications.

Unit 5: (14 hrs.)

Genetic Algorithm: History, Basic concepts, Biological background, Creation of offsprings, Encoding, Fitness function, Reproduction, **Genetic Modeling:**Crossover, Inversion and deletion, Mutation, Bit-wise operators used in geneticalgorithm, Generational cycle, Convergence of a genetic algorithm, Issues and benefits of GA, Application domains.

Book of study:

1.S. Rajasekaran and G.A VijayalakshmiPai- Neural Networks, Fuzzy Logic, and Genetic Algorithms Synthesis and Applications, Prentice-Hall of India Pvt.Ltd ,2004.

References

- 1.S. N. Sivanandan and S. N. Deepa, Principles of Soft Computing, Wiley India 2nd Ed, 2011.
- 2.B K Tripathy, J. Anuradha, Soft computing Advances and Applications, Cengage Learning.
- 3.B Yegnaranayana, Prentice, Artificial Neural Network, Hall of India Pvt.Ltd ,2012.

COMPLEMENTARY/VOCATIONAL COURSES

I. B.Com COMPUTER APPLICATION VOCATIONAL MODEL II

Complementary Course 3: -Semester V

Programming in C

(Computer Application Stream)

Instructional hours- (54 theory and 36 practical)

Credit -4

Unit 1:

Basic concepts of programming. Algorithm and flowchart. Importance of C, Basic structure of C programs, C character set, Identifiers and keywords, Constants, variables, Data types- primary, derived and user defined datatypes. Defining symbolic constants, Declaration of variables, Operators and expressions- Arithmetic, Relational, Logical, Assignment, Increment & decrement and conditional operators, Evaluation of expressions, operator precedence. Input and output operations- Formatted input and formatted output.

(10 Hours)

Unit 2: Decision making and Branching : Simple If statement, if else , nesting of if .. else statement, Else if ladder, switch statements. Looping- while, do while, for statements,nested loop, break, continue and go to statements.

(24 Hours)

Unit 3:

Arrays- one dimensional and two dimensional arrays, Character arrays and strings, declaring string variables, Reading strings from terminal and writing strings to screen String handling functions.

(24 Hours)

Unit 4:

User defined functions – Need for user defined functions, Elements of function, Definition of functions, function call, Function declaration, Category of functions, Recursion, Scope, visibility and lifetime of variables. library functions: - Math.h, String.h, Conio.h and Stdio.h.

(12 Hours)

Unit 5:

Structures and Unions : Defining structure, Declaring structure variables, Accessing structure members, Unions- Definition, Difference between structure and Union, Pointer: Fundamentals - Understanding pointers, Declaration of pointer , Pointer expressions, **(20 Hours)**

Practical Session

1. Programs using branching statements
2. Programs using loops
3. Programs using one dimensional array and two dimensional array
4. Programs using User defined functions
5. Simple programs using pointers

Book of Study:

1.E Balaguruswamy Programming in ANSI C , Seventh Edition,Mc GrawHill Education

References:

1. Let Us C – Yashavant Kanetker – BpB Publications
2. Ashok Kamthane - Programming in C, Third Edition, Pearson Education
- 3.Byron Gotfried - Programming with C, Second Edition, Schaums Outline series. McGraw Hill

Complementary course 4: Semester VI

(For Computer Application Stream)

Data Base Management System

Instructional Hours 90 (Theory 54 and Practical 36)

Credit 4

Module I

Database Concepts: Meaning – Character- Field-Record-File-Database- Types of Databases- Entities, Attributes, Keys – DBMS - Advantages of Database Systems – Entity Relationship Concepts -Data Independence - Components of DBMS.

(10Hours)

Module II

RDBMS & Relationships in Database : Data Models - Relational Data Model - RDBMS - Relationships - Types of Relationships - One to One - One to Many - Many to Many – Functional Dependency - Normalization : Meaning , Schemas (1NF, 2NF, 3NF)- Defining Relationships -Referential Integrity- Key: Candidate key , Primary key Foreign Key.

(14 Hours)

Module III

Basic Elements of Ms- Access 2013 : Introduction - Objects in Ms- Access - Create, Open, and Close a Database - Creating a Data Table - Different ways of Creating Tables - Data Types - The Primary Key - Properties of the Fields - Saving a Table - Closing a Table - Modifying Data Tables - Creating Table Relationships -Editing Relationships.

(24 Hours)

Module IV

Queries & Forms in Access: Types of Queries - Creating a Query - Saving Queries -Summary Queries - Cross Tab Queries - Action Queries - Forms - The Form Wizard - Editing the Data in a Form - The Form Design View - The Form Design Bar - The Toolbox - Working with Controls.

(24 Hours)

Module -V

Reports in Access: The Report Wizard - The Report Design View - The Report Design Bar - The Toolbox - The Preview Window - Grouping and Sorting - Printing a Report

(18 Hours)

Practical Training: Creating and Modifying Data base - Creating Relationship between Tables - Using Queries for Viewing and Modifying Data from Tables -Working with Forms - Managing Controls in Forms -Generating Reports.

Book of Study:

1. Ritchie, Collin, Data base Principles and Design, Third edition, Thomson Learning.
2. C.J. Date, A.Kannan & S.Swamynathan -An Introduction to Database Systems: Pearson Education.
3. Elmasri,Ramez and Navathe ,Shamkant B, Fundamentals of Database Systems, Sixth Edition, Addison-Wesley
4. Viescas, John L and Conrad Jeff , Microsoft Office Access 2013 Inside Out.
5. Connolly, Thomas and Begg, Carolyn , Learning SQL A step-by-step guide.
6. Michael Alexander, Richard Kusleika, Access 2013 Bible, Wiley Books.
7. Joan Lambert & Joyce Cox, Microsoft Access 2013 Step by step, Microsoft

Optional Courses- B.Com Computer Applications

SEMESTER III

Optional Core I-INFORMATION TECHNOLOGY FOR BUSINESS

Instructional Hours: 90 (54 theory and 36 practical)

Credit: 4

Unit I

Introduction to Information Technology -Informatics - Information Technology -E-World -Information Systems–Hardware and Software: Input, Processing, Storage, Output and Communication Hardware– Software: System Software and Application Software – Operating System: WINDOWS, UNIX and LINUX – Versions. Free Software Movement – Futuristic IT – Artificial Intelligence – Virtual Reality.

(16 Hours)

Unit II

Social Informatics - IT and Society –IT Applications in Commerce, Business and Industry – IT Applications in Education, Teaching and Learning – Computer and Health Issues – Proper Usage of Computers and Internet – Cyber Ethics - Cyber Addiction –Cyber Crime -E-waste and Green Computing.

(12 Hours)

Unit III

Network and Communications - Computer Networks – Types of Networks: WAN, MAN, LAN, PAN, CAN- Benefits of Networks, Network Topology –Work Group Computing & Groupware - Telecommuting & Virtual Offices - Network Security –Firewalls. Communication Medium: Wired and Wireless – Generations in Communication.

(15 Hours)

Unit IV

HTML and Webpage - Introduction to HTML – Essentials- Static & Dynamic Web Pages - Structure of a Web Page - Designing Web Pages- HTML Tags -Text Formats- Working with Text- Presenting and Arranging Text-Paragraphs- Animated Effects: Marquee – using White Space - Tables in HTML- Working with Links, E-mail Links, Lists, Images, Thumbnails, Rollover Images, Audio & Video-Forms & Frames - Website Management.

(34 Hours)

Unit V

Internet -Working Concepts -Devices, History, Benefits and Drawbacks - Internet Structure, Internet Protocols: TCP/IP, FTP, HTTP, etc., IP Address, Domain Name System (DNS), URL, Web Browsers, WWW Consortium, Search Engines – Types, Academic Search Techniques - Business Applications of Internet, Internet Access Methods - Intranet and Extranet.

(13

Hours)

Practical Training:

1. Designing a web page for your Department
2. Designing a web page for a Retail Marketing Firm.
3. Design a web page for a Hotel

Suggested Readings

1. Alexis Leon & Mathews Leon, Fundamentals of Information Technology, *Vikas Publishing House, New Delhi.*
2. Williams & Sawyer, Using Information Technology (6th Edition), *Tata McGraw Hill Company.*
3. Avi Silberschatz Peter Galvin & Greg Gagne, Operating System Concepts (Windows XP update) .*Willey India.*
4. *Uyless Black*, Computer Networks, Protocols, Standards and Interface, *Prentice Hall India Pvt. Ltd.*
5. Nagpal, D.P., Web Design Technology Theory and Techniques on the Cutting Edge, *S.Chand & Company Ltd*

SEMESTER IV

Optional Core II: INFORMATION TECHNOLOGY FOR OFFICE

Instructional Hours: 90 (54 theory and 36 practical)

Credit: 4

Module-I

Word Processing Package: MS-Word 2013- Introduction-Features- Word User Interface Elements- Creating New Documents- Basic Editing- Saving a Document- Printing a Document- Print Preview-Page Orientation- Viewing Documents- Setting Tabs-Page Margins- Indents- Ruler- Formatting Techniques- Font Formatting- Paragraph Formatting- Page Setup- Headers &Footers-Bullets and Numbered List- Borders and Shading- Find and Replace-Page Break Page Numbers-Mail Merging-Spelling and Grammar Checking- Thesaurus- Macros- Tables- Side-By-Side and Nested Tables- Formatting Tables- Drawing- Word art- Paint Brush Document Templates – Email Editor. **(18 Hours)**

Module-II

Desktop Publishing- PageMaker 7.0 - Introduction to Desktop Publishing as a Process- PageMaker Tools and Palettes- Working With Objects -Type Styling Options - Working With Text - Formatting Options- Leading, Margins and Indents - Scaling Text-Paragraph Formatting Options -Working With Grids - Creating Frames - Layers. **(18 Hours)**

Module-III

Spreadsheet Package: MS -Excel 2013-Introduction-Excel User Interface- Working With Cell and Cell Addresses- Selecting a Range, Moving, Cutting, Copying With Paste-Inserting and Deleting Cells- Freezing Cells- Adding, Deleting and Copying Worksheet Within a Workbook- Renaming a Worksheet- Cell Formatting Options- Formatting Fonts- Aligning-Wrapping and Rotating Text- Using Borders- Boxes and Colors- Centering a Heading, Changing Row/Column Height / Width-Formatting a Worksheet Automatically- Insert Comments- Clear Contents in a Cell- Using Print Preview- Preparing Worksheet for the Printer- Selecting Print Area-Margin and Orientation- Centering a Worksheet- Using Header and Footer- Inserting Page Breaks- Sorting Data. **(22 Hours)**

Module-IV

Advanced Features of Excel: All Functions in Excel- Using Logical Functions-Statistical Functions- Mathematical Functions - Linking Data between Worksheet- Elements of Excel Charts-Categories- Create a Chart- Choosing Chart Type- Edit Chart Axis - Titles, Labels, Data Series and Legend- Adding a Text Box- Rotate Text in a Chart- Converting a Chart on a Web Page- Saving a Chart- Designing of Templates in Excel. **(20 Hours)**

Module-V

Presentation Package: Ms-Power Point 2013-Advantages of Presentation- Screen Layout- Creating Presentation- Inserting Slides-Adding Sounds and Videos-Formatting Slides -Slide Layout Views in

Presentation - Colour Scheme- Background Action Buttons- Slide Transition- Custom Animation- Creating Master Slides- Managing Slide Shows - Using Pen Setting Slide Intervals.

(12 Hours)

Practical Training:

1. Create a small poster using PageMaker
2. Create a Brochure using PageMaker
3. Prepare Pay rolls in Excel
4. Conditional Cell Formatting
5. Analysis and presentation of data using charts in Excel
6. Usage of Functions in Excel
7. Mail merging feature of Word.

Book of Study:

1. Gini, Courter & Annette Marquis, *Ms-Office 2013, BPB Publications*
2. Patrick Blattner, Louie Utrich. Ken Cook & Timothy Dyck, *Special Edition Ms Excel 2013, Prentice Hall India Pvt. Ltd.*
3. Atman Rebecca & Atman Rich, *Mastering PageMaker, BPB Publications*
4. *Building a Foundation with Microsoft Office 2013*
5. *Welcome to Microsoft Office*

SEMESTER V

Optional Core III: COMPUTERIZED ACCOUNTING

Instructional Hours: 90 (54 theory and 36 practical)

Credit :4

Module I

Introduction to Computerized Accounting- Computerized Accounting Vs. Manual Accounting- Merits of Computerized Accounting –Tally ERP 9-Features of Tally ERP 9– Screen Components-Creation of Company- Selecting a Company – Altering/ Modifying Company Creation Details – Deleting a Company – F 11 Features – F 12 Configuration.

(6 Hours)

Module II

Accounts and Vouchers– Account Groups – Pre-Defined Groups – Creating Single & Multiple Groups – Creation of Primary Account Groups – Creating Ledger Accounts in Single & Multiple – Displaying- Altering and Deleting Account Groups and Ledgers – Accounting Vouchers- Entering Transactions in Accounting Vouchers – Bill Wise Details -Altering and Deleting a Voucher Entry – Creating New Voucher Types – Modifying an Existing Voucher – Duplicating a Voucher – Optional Vouchers – Post-Dated Vouchers – Reverse Journal – Bank Reconciliation Statement - Creating Budget - Generating Reports - Configuring Reports Balance Sheet – Profit and Loss Account – Trial Balance – Day Books – Account Books –Statement of Accounts – Ratio Analysis - Cash Flow - Fund Flow – List of Accounts – Exception Reports.

(20 Hours)

Module III

Accounts With Inventory– Enabling F 11 and F 12 - Stock Category – Stock Group Single/Multiple Creation of Stock Category and Stock Group – Creation of Units of Measurement – Creating Single/Multiple Stock Items – Creating Godowns - Displaying, Altering and Deleting Stock Groups, Units, Items and Godowns – Cost Categories- Cost Centres – Creating Cost Categories and Cost Centres - Displaying, Altering and Deleting Cost Categories and Cost Centres – Purchase / Sales Orders - Inventory Vouchers - Using Inventory Vouchers – Using Accounting Vouchers With Inventory Details (Invoice Mode) - Tally Security - Tally Vault –Tally Audit – Advanced Security Control – Back-Up and Restore – Inventory Reports – Stock Summary - Inventory Books – Statement Of Inventory.

(22 Hours)

Module IV

Accounting With Tax– F 11 &F 12 Settings For Taxation – TDS – Ledgers Related to TDS – Creating TDS Voucher Types - TDS Reports – TCS – Service Tax - VAT –VAT Terminologies – Computing VAT – Ledgers and Vouchers Pertaining to VAT – VAT Reports – VAT Forms – Interstate Trade and CST.

(20 Hours)

Module V

Payroll: Enabling Payroll – Creating Pay Heads – Single/Multiple Creation of Employee Groups - Single/Multiple Creation of Employee Head – Salary Details – Configuration of Salary Details - Creating Units of Work – Managing and Creating Attendance / Production Types – F 12 Payroll Configuration – Payroll Vouchers – Creating Payroll Voucher Types -Displaying, Altering and Deleting Payroll Documents – Payroll Reports (Full) – Configuring All Payroll Reports – Statutory Deductions – PF – Employers Contribution to PF – PF Ledger Heads– PF Related Heads in Pay Structure –Gratuity Calculation, Creation and Accounting - Generating a Sample Pay Slip – Employee Loan & Salary Advance Management.

(22 Hours)

Practical Training

- Prepare final accounts of a Company in Tally ERP 9 with Inventory
- Prepare final accounts of a company in Tally ERP 9 incorporating VAT and TDS
- Preparation of payroll

Book of Study:

1. Roopa, Tally for Every one - *ATC Publishing Chennai*.
2. Nadhani, A.K. Implementing Tally ERP 9
3. A Comprehensive Guide to Tally ERP 9, Tally Manual

SEMESTER VI

Optional Core IV: SOFTWARE FOR BUSINESS AND RESEARCH

Instructional Hours 90 (54 theory and 36 practical)

Credit 4

Module I

Data Analysis: Data – Meaning and Definition – Sources of Data – Data Life Cycle – Processing – Methods and Types- EDP – Information – Value of Information in Decision Making - Information and Analysis of Business Research – Data Processing Software.(6 Hours)

Module II

Introduction to SPSS: Menus, tool bar – SPSS layout- Variable View – Data View – Output View – Terminology - Basic Steps for Performing any Statistical Procedure – Creating a Data file- Defining Variables- Variable Characteristics- Default Values - Entering the Data – Inserting Variable and Cases – Selecting Cases - Listing Cases – Identifying Duplicate Cases and Unusual Cases- Sorting Cases.

(24 Hours)

Module – III

Data Transformation: Computing New Variables – Recoding Variables – Automatic Recode – Visual Binning – Rank cases – Types of Measurement Scales – Summary Measures - Frequency, Explore and Cross Tabs – Describing Data Graphically - Descriptive Data Analysis- Number of cases, Minimum, Maximum, Sum, Mean, Standard Deviation, Variance, Kurtosis, Skewness - Bivariate Correlation.

(20 Hours)

Module – IV

Libre Office Writer: Free Software – Libre Office - Writer – User Interface – Creating new Document – Page setup - Saving Documents – Basic Editing – Find and Replace - Formatting Text – Copying and Moving Text – Indenting and Spacing – Headers and Footers – Bulleted and Numbered lists – Tables - Previewing and Printing.

(20 Hours)

Module – V

Libre Office Calc: Spread Sheet – Features – User Interface – Cells – Selecting – Moving and Copying – Text Alignment – Formatting Text – Inserting and Deleting Columns and Rows – Adding and Renaming Worksheets – Borders, Boxes and Colors – Formatting Worksheet – Entering Formulae – Functions – Charts – Previewing and Printing.

(20 Hours)

Practical Training

- List out frequency table, cross tab and graphs related with the marks and details of students in a class.
- Prepare a report on descriptive analysis of any relevant Socio demographic details related with social issue.
- Prepare a letter using Writer
- Prepare a mark sheet using Calc

Suggested Readings

1. Tutorial of IBM SPSS Statistics.
2. Kiran Panya, Smruti Bulsari & Sanjay Sinha., *SPSS in Simple Steps*, First edition, Durga Enterprises, Delhi.
3. Field A., *Discovering Statistics Using SPSS*, Fourth Edition, SAGE Publishers, 2013
4. Libre Office Handbook
5. Keith Gordon, *Principles of Data Management*, BCS Publications, UK

II. BSc Mathematics Model II Computer Application

SEMESTER – I

CA1VOT01 :: Computer Fundamentals

Theory: 4 hrs. per week Credits: 4

Total Marks - 80 marks

Module I (15hours)

Fundamentals of Computers:

Definition of computer and Characteristics, Generations of computers, Types of Computer- Desktop, Laptop, Mainframe, Super Computer, work stations.

Module II (15hours)

Number systems:

Binary, Octal and Hexadecimal, Converting from one number system to another, decimal to a new base, converting to decimal from another bases, converting from base other than ten to base other than ten, short cut method for converting from binary to octal, octal to binary, binary to hexadecimal and hexadecimal to binary, Computer Codes (BCD, EBCDIC, ASCII)

Module III (15hours)

Hardware Components:

Logical Organization of a Digital Computer, Bit/Byte/Word, input unit ,Output unit ,Storage unit ,Arithmetic logic unit,Control unit ,CPU. Input devices – keyboard,point and draw devices, data scanning devices ,output devices-monitors ,printers,plotters.

Module IV (15hours)

Software Components:

Definition of software ,Types of software-system software -Application software,Logical system architecture,Software development steps. Machine language ,Assemblylanguage,Highlevellanguage.DefineProgram,purpose of program,algorithms,flowcharts,flowchartsymbols,flowchartingrules,advantagesang limitations of flowcharts.

Module V (12hours)

Introduction to Computer Networks:

Uses – Physical Communication Media – Network Types – Network Topologies – Communication Protocols. Basic internet services- email, FTP, TELNET, WWW

Book of Study :

1. P.K Sinha and Priti Sinha , Computer Fundamentals, Sixth Edition, BPB Publications.

Reference

1. Rohit Khorana, Introduction to Computer Science, 2nd Edition, Pearson Publishers.
2. V. Rajaraman and T. Radhakrishnan , An introduction to Digital Computer design, Fifth Edition, Prentice Hall India Learning Private Limited.
3. B. Ram , Computer fundamentals: Architecture and Organization, Fifth Edition, New Age International.
4. Sanjay Saxena , A First Course in Computers, Second Edition, VIKAS Publishers.

CA01VOP01 : Software Lab –I- Introduction to WEB Technologies

Practical: 4 hrs. per week Credits: 3

Total Marks - 80 marks

Getting Started With HTML:-

1. Basics of HTML- Document Body Text, Hyperlink, Adding more formatting, LISTS, Tables,, Frames, forms- MARQUEE. Cascading style sheets, Attributes specified to the style tag, CLASS, tag, <DIV> tag, LAYERS.

Create HTML document with following formatting – Bold, Italics, Underline, Colors, Headings, Title, Font and Font Width, Background, Paragraph, Line Brakes, Horizontal Line, Blinking Text as well as marquee Text.

2. Create HTML document with Ordered and Unordered lists, Inserting Images, Internal and External linking
3. Create HTML document with Table: Some image here
4. Create Form with Input Type, Select and Text Area in HTML.
5. Create an HTML containing Roll No., student's name and Grades in a tabular form.
6. Create an HTML document (having two frames) which will appear as follows:
About
Department 1
Department 2
Department 3
This frame would show the contents according to the link clicked by the user on the left frame.
7. Create an HTML document containing horizontal frames as follows:
Department Names (could be along with Logos)
Contents according to the Link clicked
8. Create a website of 6 – 7 pages with different effects as mentioned in above problems.
9. Create HTML documents (having multiple frames) in the following three formats:
Frame 1
Frame 2
Frame 1
Frame 2 Frame 3
10. Create a form using HTML which has the following types of controls:
I. Text Box
II. Option/radio buttons
III. Check boxes
IV. Reset and Submit buttons

How PHP scripts work:-

The building blocks of PHP: variables, data types, arrays-basic array, associative array, multidimensional array; array functions, program control, type casting, regular expression. User-defined functions, built-in functions, Using files. Forms in PHP: Creating a simple input form, combining HTML & PHP code on a single page.

References:

1. Luke welling & Laura Thomson, "PHP and MySQL web Development", fourth edition, Pearson.
2. Chris Bates, Web Programming, 3 rd Edition; Pub: John Wiley & Sons
3. HTML Black Book, Steven Holzner, Dreamtech Publishers
4. PHP and MySQL for Dynamic Web Sites, Fourth Edition: Visual QuickPro Guide Kindle Edition by Larry Ullman.
5. PHP & MySQL in easy steps, Kindle Edition by Mike McGrath.

Minimum 25 Experiments using HTML and PHP .

Scheme of Evaluation for Software Lab Iexternal is as follows:

Division of Marks (Practical - 3 hours External)

First program based on HTML	- 30 marks
Second program based on PHP	-30 marks
Viva Voce	- 05 marks
Lab Record (minimum of 12 Programs from each section)	- 15 marks
Total Marks	- 80 marks

BSc Mathematics Model II Computer Application- SEMESTER – II

CA2VOT02 : Object Oriented Programming with C++

Theory: 4 hrs. per week Credits: 4

Total Marks - 80 marks

Module I (10 hours)

The object oriented technology, Key concept of object oriented programming, Advantages of OOP, structure of C++ program, Tokens, variables, data types, operators in C++, memory management operators, comments ,simple C++ programme, header files and libraries, unformatted console I/O operations, setw() manipulator.

Module II (18 hours)

Decision statements, control loop structure, arrays

Functions : introduction, parts of a function, passing arguments, return by reference, returning more values, default arguments, const arguments, inline functions, function overloading, recursion

Module III (18 hours)

Classes and Objects

Constructors and Destructors , Constructors- parameterized constructors-multiple constructors- constructors with default argument- copy constructor-dynamic constructorDestructors- calling Constructors and Destructors, Constructors and Destructors with static members.

Module IV (14 hours)

Operator overloading:

introduction, the keyword operator, overloading unary operator, operator return type, overloading binary operator, overloading with friend function, overloading assignment operator

Module V (12 hours)

Inheritance, Pointers-Virtual Functions a and Polymorphism

Files and Exception handling

Book of Study:

1. E. Balagurusamy, Object Oriented Programming with C++ , Sixth Edition, McGraw Hill Education.

Reference :

1. D Ravichandran, Programming with C++, Second edition, Tata McGraw- Hill.

2. Mahesh Bhave and Sunil Pateker , Object Oriented Programming with C++, Second edition, Pearson

3. Ashok N Kamthane and Amit Ashok Kamthane, Programming in C++, Second Edition, Pearson.

CA2VOP02 :Software Lab-II using C++

Practical : 4 hrs. per week Credits: 3

Total Marks - 80 marks

1. Programs based on class, objects and manipulation of objects using member functions
2. Programs based on friend functions, passing objects as arguments to function.
3. Programs based on array of objects.
4. Programs based on function overloading, Default arguments.
5. Programs based on operator overloading (binary, unary) using member functions and friend functions.
6. Programs based on constructors, different types of constructors.
7. Programs based on Inheritance, different types of inheritance.

Scheme of Evaluation for Software Lab II external is as follows:

Division of Marks (Practical - 3 hours External)

First program based 1 to 5	- 30 marks
Second program based 6 & 7	-30 marks
Viva Voce	- 05 marks
Lab Record (minimum of 25 Program)	- 15 marks
Total Marks	- 80 marks

BSc Mathematics Model II Computer Application - SEMESTER – III

CA3VOT03 : Database Management Systems

Theory: 6 hrs. per week Credits: 4

Total Marks - 80 marks

Module I (15 hours)

Basic concepts :

Database, need for DBMS, users, architecture of DBMS, data models, views of data, data Independence, , attributes, relationship attributes, relationship set, generalization, aggregation, structure of relations

Module II (15 hours)

Data model :

conventional data models & systems, ER model, structure of relational Database and different types of keys;Data base languages.

Module III(20 hours)

The relational algebra modification of database – Views. SQL – Basic structures , Data definition in SQL, Views and Queries in SQL, – Programming using SQL

Module IV (25 hours)

Object – Oriented data base, Object – Oriented data model, Object – oriented languages.

File structures – File organization – Organization of records in files – Data dictionary.

Module V (15 hours)

Query processing – Overview – Section of operation – Sorting, Database architecture – Different type of systems – Network types.

Book of study:

- 1.Abraham Silberschatz, Henry K. Korth, S, Sudarshan , Data Base System Concepts , Sixth Edition, McGraw Hill.

Reference:

1. R. Elmarsi, S. B. Navathe , Fundamentals of Database System , Fourth Edition, Addison Wesley
2. Jeffrey D Ullman, Principles of Database Systems, Second Edition, Computer Science Press.

CA3VPOP03 : Software Lab -III using SQL

Practical : 6 hrs. per week Credits: 3

Total Marks - 80 marks

1. Data definition commands - CREATE, ALTER, DROP, Adding Constraints Primary key, foreign key, unique key, check, not null.
2. Basic SQL queries INSERT, SELECT, DELETE, UPDATE, Using multiple tables, ordering of rows using ORDER BY option, Set operations using UNION, EXCEPT, INTERSECT, Substring Comparison using LIKE operator, BETWEEN operator.
3. Complex Queries Nested Queries, EXISTS and UNIQUE/DISTINCT functions, NULL values, Renaming of attributes and Joining of tables, Aggregate functions and grouping.

Scheme of Evaluation for Software Lab III external is as follows:

Division of Marks (Practical - 3 hours External)

First program based on 1&2	- 30 marks
Second program based on 3	-30 marks
Viva Voce	- 05 marks
Lab Record (minimum of 30 Programs)	- 15 marks
Total Marks	- 80 marks

BSc Mathematics Model II Computer Application -SEMESTER – IV

CA4VOT04 : Operating System

Theory: 6 hrs. per week Credits: 4

Total Marks - 80 marks

Module I: (15 hrs.)

INTRODUCTION TO OPERATING SYSTEM:

Operating System: Objectives and functions; Different views of an operating system; Types of operating systems-batch os, mainframe os, server os, multiprocessor os, personal computer os, handheld computer os, embedded os, sensor node os, real-time os, smart card os; Operating system services .

Module II (25 hours)

PROCESSES MANAGEMENT & CPU SCHEDULING:

Process Management: Process concept- The process, Process states, Process Control Block; Process Scheduling- Scheduling Queues, Schedulers;

CPU scheduling: Scheduling concepts- Process behaviour, When to schedule, Dispatcher; Scheduling Criteria; Scheduling algorithms-FCFS, SJFS, Priority scheduling, Round-robin scheduling, Multilevel Queue Scheduling, Multilevel feedback queue scheduling.

Dealing with deadlocks: introduction; deadlock characterization-deadlock conditions, resource allocation graph; deadlock prevention.

Module III (15 hours)

MEMORY MANAGEMENT BASICS:

Introduction- Address binding, Logical and physical address space, Program relocation; Storage allocation and management techniques-Contiguous storage allocation-fixed partition, variable partition; Non-contiguous storage allocation-paging, segmentation.

Module IV(15 hours)

FILE SYSTEMS:

Files: Basic concept- file attributes, file operations, file types, file structures, file access; directories- single-level directory system, two-level directory system, hierarchical directory system, directory operations.

Module V (20 hours)

PROTECTION AND SECURITY:

Why protection; goals of protection; security and its goals; authentication- passwords, artifact-based authentication, biometrics techniques; encryption; virus, worms and Trojans- dealing with viruses, dealing with worms; threat monitoring.

Book of study:

1. RohitKhurana, Operating System, Second Edition, Vikas Publishing house Pvt Ltd.
2. EktaWalia, Operating Systems Concepts, Second Edition, Khanna Book Publishing.

References:

1. Silberschatz, Galvin, Gagne, Operating System Concepts, 6th edition, Wiley Publishers.
2. Gary Nutt, NabenduChaki, SarmishthaNeogy, Operating Systems, Third edition, Pearson

CA4VOP04 : Software Lab – IV Project Practical

6 hrs. per week Credits: 3

Total Marks - 80 marks

Scheme of Evaluation for Software Lab – IV Project Practical external is as follows:

Division of Marks (external)

Project demonstration and Presentation	- 40 marks
Viva related to project	-20 marks
Project report with proper content and binding	- 20 marks

Total Marks - 80marks

III. B.Sc Physics Model II Computer Application

VOCATIONAL COURSES - MODEL II - COMPUTER APPLICATIONS

Vocational Paper I: CA1VOT01 - COMPUTER FUNDAMENTALS

Credits – 2

No. of contact Hours. –36

Scope: This course provides the basic knowledge about computers.

Prerequisites: Basic Mathematics, Fundamentals of Electronics.

Module I – (10 Hours.)

Fundamentals of Computers:

Evolution of Computers: Abacus, Napier's Logs and Bones, Mechanical Calculators, Babbage's Engines, Hollerith's Machine, Generation of Computers, Purpose of using computers. Data & Information, Characteristics of a Computer, Capabilities & Limitations of Computers. Type of Computers: Analog-Digital-Hybrid. Classification based on memory size: Micro, Mini and Mainframes, Supercomputers.

Module II – (6 Hours.)

Basic Computer Organization and Number System

Basic Organization & Working of a Computer: Arithmetic Logic unit-Control unit-Central Processing unit.

Number system arithmetic – octal addition, octal Subtraction, hexadecimal addition, hexadecimal subtraction

Computer Codes (BCD, EBCDIC, ASCII), BCD Addition

Module III - (10 Hours.)

Components of a Computer

Input unit: Different types of Keyboards, Mouse and its working, Joystick, Trackball,

Scanner: Flat bed, Sheet-fed and Hand-held scanners, Graphic Tablets, Light Pen Output unit: Working of monochromatic and color CRT, LCD Panel, Plotters, Audio output devices, Printers – Working of Dot Matrix, Laser, Inkjet, Color Thermal printer Motherboard, Expansion Buses, BIOS

Storage unit: Primary Memory-RAM, ROM, PROM, EPROM and EEPROM, Cache Memory Secondary Memory-Magnetic storage devices, Optical storage devices, Semiconductor memory.

Module IV – (10 Hours.)

Software Components and Computer Languages:

What is software, Relation between Hardware and Software?

Types of Software: System software: Operating System, Language Translators- Assembler, Compiler & Interpreter

Application software: General Purpose Application Software, Customized Application software.

Utility Software: Antivirus, Disk Defragmenter, Backup Software, Compression Software

Classification of software based on license: Proprietary, Shareware, Freeware, Open source, Free Software

Computer Languages-Machine Language, Assembly Language, High-Level Language, Define program, purpose of program, flowcharts, flowchart symbols, flowcharting rules, advantages and limitations of flowcharts

Book of Study

1. *Computer Fundamentals sixth edition by P.K Sinha, BPB Publications*
2. *Fundamentals of Computers, V Rajaraman, Prentice-Hall of India, New Delhi.*

Reference Books

1. *Introduction to Computer Science 2nd Edition, Rohit Khorana, Pearson Publishers*

2. *An introduction to Digital Computer design* by V. Rajaraman and T. Radhakrishnan

3. *Computer fundamentals* by B. Ram

4. *A First Course in Computers 2003*, Saxena, VIKAS

Vocational Paper II: CA1VOT02 - COMPUTER NETWORKS & INTERNET TECHNOLOGIES

Credits – 2

No. of contact Hours. –36

Scope: This course is expected to provide knowledge of various networking technologies and its applications.

Prerequisites: Basic mathematics, Fundamentals of Computers.

Module I: (8 Hours.)

Computer Networks: Introduction to computer network, data communication, Components of data communication, data transmission mode, Network topologies, LAN, MAN, WAN, Client Server Model- Peer-to-Peer, Uses of networks

Module II: (10 Hours.)

Transmission Media: Introduction, Guided Media: Twisted pair, Coaxial cable, Optical

fiber. Unguided media: Microwave, Radio frequency propagation. LAN Topologies: Ring, bus, star, mesh and tree topologies. Network Devices: NIC, repeaters, hub, bridge, switch, gateway and router, Multiplexing – FDM, TDM, WDM

Module III: (11 Hours.)

Network Models: The OSI Model- Layers -Physical Layer, Data Link Layer, Network Layer, Transport Layer, Session Layer, Presentation Layer, Application Layer. TCP/IP Protocol suite-Physical and Data Link Layer, Network Layer, Transport Layer, Application Layer.

Module IV: (7 Hours.)

INTERNET- Basics of internet, features of internet, E-mail, Email Architecture, SMTP, POP,IMAP, WWW Architecture, URL, File transfer, The TELNET, Gopher, Web server, Web Browser.

Book of study

1. *Andrew S. Tanenbaum, David J. Wetherall Computer Networks (5th Edition),PHI, 2010*
2. *Forouzan, Data Communication and Networking, TMH,2003.*

Reference Books:

1. *Computer Networking: A Top-Down Approach 5th Edition, by James F Kurose*
2. *Computer Networks- A system approach, by Peterson*

Semester II

Vocational Paper III: CA2VOT03 - WORD AND DATA PROCESSING PACKAGES

Credits – 2

No. of contact Hours. –36

Scope: This course provides the detailed knowledge of Word and data processing software's

Prerequisites: Basic Computer Knowledge.

Module I

MS Word: (12 Hours.)

Word Processing Package: MS-Word: Introduction; Features- Word User Interface Elements; Creating new Documents; Basic editing, Saving a Document; Printing a Document; Print Preview, Page orientation – Viewing Documents; Setting tabs- Page Margins; Indents; Ruler, Formatting Techniques; Font Formatting, Paragraph Formatting; Page Setup; Headers & Footers; Bullets & Numbered List; Borders & shadings; Find & Replace; Page Break & Page Numbers; Mail Merging ; Spelling & Grammar Checking; Thesaurus; Automating Documents; Macros; Tables- Side by Side & Nested Tables; Formatting Tables; Word Art, E-mail editor

Module II

PageMaker (12 Hours.)

Desktop Publishing: PageMaker: Introduction to Desktop Publishing as a Process-Advantages of PageMaker- PageMaker User Interface Elements; Creating new Documents - PageMaker Tools &

Palettes-Master Pages- Page Setup, Page Orientation, Inserting Pages, Removing Pages; Headers & Footers, Page Number - Working with objects- Type Styling Options- Working with text-Formatting Options: Leading, Margins & indents- Scaling Text- Changing Line Specifications, Changing Fill Specifications, Fill & Stroke-Paragraph Formatting Options- Working with Grids-Creating Frames- Adding Graphics to a Frame- Layers- Creating a new layer, moving an object to another layer, hiding layers, locking layers, deleting layers

Module III

MS Excel: (12 Hours.)

Spreadsheet package: MS-Excel Introduction, Excel User interface, working with cell and cell addresses, Selecting a range, Moving, Cutting, Copying & Paste, inserting &

deleting cells, freezing cells, adding deleting & copying worksheet within a workbook, Renaming a worksheet. Cell formatting options-Formatting Fonts, Aligning, Wrapping and Rotating Text, Using Borders, Boxes and Colors, Centering a heading, Changing row/column and height/width, Formatting a work sheet automatically, Insert Comments, Clear contents in a cell, using Print preview, Preparing worksheet for the printer, Selecting Print area, Margin and Orientation, Centering a worksheet, Using header & Footer, inserting page breaks, creating list, sorting data, Logical & Mathematical functions in excel, Linking data between work sheets, pie chart, converting a pie chart on a webpage, Use of Pivot Tables

References

1. *An Introduction to Business Data Processing, Sardino, Prentice Hall. Microsoft Office 97, Ned Snell, PustakMahal, New Delhi.*

2. *Windows and MS Office 2000 with Database Concepts, N Krishnan, Scitech Publications Pvt. Ltd, Chennai.*
3. *Adobe PageMaker 7.0 (Illustrated Series: Complete) by Kevin Proot.*
4. *Discovering Computers and Microsoft Office 2010: A Fundamental Combined Approach (Shelly Cashman Series) by Gary B Shelly and Misty Vermaat*
5. *PageMaker(r) 7: The Complete Reference(Paperback) Carolyn Connally*
6. *PageMaker for Macintosh and windows David D Busch BPB Publications.*

Vocational Paper IV: CA2VOT04 - PROGRAMMING IN ANSI C

Credits – 2

No. of contact Hours. –36

Scope: To gain the skills of Programming and to learn the programming concepts in C Language.

Prerequisites: Basic mathematics, basic computer knowledge.

Module-I: (8 Hours.)

Basic concepts of programming. Language classification. Steps in developing a program, Algorithm and flowchart. C language basics: C character set, tokens, Identifiers and keywords, Data types, constants, variables, declarations, qualifiers-long, short and unsigned declarations, expressions, symbolic constants, Input and output operators/functions , compound statements, arithmetic operators, unary operators, relational and logical operators, assignment operators, increment and decrement operators, conditional operators.

Module -II: (10 Hours.)

Decision making and Branching: If statement, if else statement, nested if...else statement, Else if ladder, switch statements, looping - for loop, while loop, do..while statements, nested loop structure, break, continue and go to statements, scope of variables.

Module -III: (8 Hours.)

Arrays one dimensional and two dimensional arrays, initializing, reading, writing, strings, string functions, Library functions: Math.h, Conio.h and Stdio.h.

Module -IV: (10 Hours.)

User defined functions - Elements of functions, different arguments, Return values and their types, Function declaration, Function calls, different types /category of functions. Recursive functions, Call by value and reference methods.

Book of study:

1. *Programming in ANSI C – E Balaguruswamy - Mc GrawHill Education*

References:

1. *Mastering C – K R Venugopal & S R Prasad – Mc GrawHill Education*
2. *Programming in C – Ashutosh Pandey – Cyber Tech Publications*
3. *Let Us C – Yashavant Kanetkar – BPB Publications*

Semester III

Vocational Paper V: CA3VOT05 - CONCEPTS OF OBJECT ORIENTED PROGRAMMING

Credits – 4

No. of contact Hours. – 54

Scope: This course is expected to provide sound knowledge in object oriented programming.

Module I: (9 Hours.)

Basic concepts of Object Oriented Language

Basic concept of object oriented programming- benefits of OOPs- A simple C++ programme, structure of C++ program. Basic data types and declarations, symbolic constants- Reference by variables, operators in C++, Special Assignment Expressions, operator precedence and associativity, control structures- function in C++ - the main function, function prototyping- call by reference- return by reference- inline function Default argument,- function overloading – friend and virtual function.

Module II: (12 Hours.)

Classes and Objects

Specifying a class- Defining member functions- nesting of member functions – private member functions – arrays within a class – Memory allocation for object- static data members – static member functions – arrays of objects – friendly functions.

Module III: (10 Hours.)

Constructors and Destructors

Constructors- parameterized constructors-multiple constructors- copy constructor-dynamic constructor, Destructors.

Module IV:

Inheritance and operator overloading (12 Hours.)

Operator overloading- Defining operator overloading-Overloading unary and binary operators-Inheritance- Defining derived classes- single, multiple, multilevel, hierarchical and hybrid inheritance - virtual base classes.

Pointers, Virtual Functions and Polymorphism (11 Hours.)

Pointers- Declaring and initializing pointers, Manipulation of pointers, Arrays of pointers, Dynamic memory allocation, Pointers and strings, Pointers to functions, Virtual functions, pure virtual function

Book of Study:

1. *E. Balagurusamy , Object Oriented Programming with C++, Fifth edition, McGraw Hill publications*
2. *Object-Oriented Programming in Turbo C++, Robert Lafore, Galgotia.*

Reference:

1. *Mahesh Bhave and Sunil Pateker Object Oriented Programming with C++, Second edition, Pearson*
2. *Ashok N Kamthane and Amit Ashok Kamthane, Programming in C++, Second Edition, Pearson.*

Vocational Paper VI: CA3VOT06 - OPERATING SYSTEM

Credits – 3

No. of contact hours – 54

Scope: This course provides a basic knowledge about the role of Operating System in the functioning of computers

Prerequisites: Basic knowledge of computer fundamentals and computer networks

Module I (10 Hours.)

Introduction to operating system:

Operating System: Objectives and functions; Different views of an operating system; Types of operating systems-batch OS, mainframe OS, time sharing OS, multiprocessor OS, personal computer OS, handheld computer OS, embedded OS, real-time OS, Operating system services

Module II (8 Hours.)

Processes management:

Process concept- The process, Process states, Process Control Block; Process Scheduling- Scheduling Queues, Schedulers;

Module III (18Hours.)

CPU Scheduling:

Scheduling concepts- Process behavior, When to schedule, Dispatcher; Scheduling Criteria; Scheduling algorithms-

CPU Scheduling Problems

First Come First Serve (FCFS)-Shortest Job First (SJF) - Priority Non Preemptive (P-NP)-Shortest Remaining Time First (SRTF)-Priority Preemptive - Round Robin (RR)

Module IV (18 Hours.)

Memory Management Basics:

Basic ideas-Memory Management requirements, Address binding, Dynamic address space binding, Fixed partition memory strategies, Variable partition memory strategies, Dynamic Storage allocation problems: First Fit, Best Fit, Worst Fit, Next Fit, Fragmentation, Swapping, Virtual memory, Page Replacement problems- FIFO, LRU and Optimal replacement

Deadlock:

Introduction, deadlock characterization-deadlock conditions, resource allocation graph; deadlock prevention.

File systems: Files- Basic concept- file attributes, file operations, file types, file structures, file access

Book of Study:

1. RohitKhurana, *Operating System, 2nd edition, Vikas Publishing house pvt ltd.*
2. EktaWalia, *Operating Systems Concepts, Khanna Book Publishing.*

References:

1. Silberschatz, galvin, gagne, *Operating System Concepts, 6th edition.*
2. Gary Nutt, NabenduChaki, SarmishthaNeogy, *Operating Systems, 3rd edition, Pearson.*

Semester IV**Vocational Paper VII: CA4VOT07 - VISUAL BASIC PROGRAMMING**

Credits – 4

No. of contact hours – 54

Scope: This course is designed to provide basic ideas of VB programming

Prerequisites: Basic knowledge of computer fundamentals and computer programming.

Module I

Introduction (12 hours)

VB Introduction-VB Developing Environment – VB Menu Bar –Toolbars –Project Explorer- Tool Box-Form Designer-Form Layout.

Visual Basic Program Elements: Variables, Data Types, Scope and Lifetime of Variables, Declaring and using Constants; Operators – Arithmetic Operators, Relational or Comparison Operators, Logical operators; User Defined Data Type, Arrays, Multi-dimensional Arrays, Dynamic Arrays, Comments in VB.

Control Flow Statements- ifthen, if...then...else, select case; Loop Statements- do loop, for next, for each next; Input Box and Message Box functions

Using intrinsic controls (10 hours)

Pointer – Label – Frame – Check box – Combo box – Scroll Bar – Timer – Dir list box – Shapes – Image – OLE – Picture box – Text box – Command button – Option button – List box – Drive List Box-Directory List Box-File List Box-Shape Control & Line Control-Horizontal Scroll bar – Vertical Scroll Bar-Adding check box controls – Adding combo box– Standard MDI form features – Building the MDI form.

Module II

Methods, Properties, and Events (14 hours)

Learn about properties and how to manage them – Discover how to call methods –Learn how Visual Basic enables program to respond to events, System Events and User Events.

Debugging Window- Immediate Window, Locals Window, Watch Window, Quick Watch Window, Call Stack Window, creating a toolbar in VB

Module III

Functions and File Handling (8 hours)

Control Arrays, Procedures, Event Procedure, General Procedures-Sub Procedures, Functions; Arguments to functions or sub procedures, Passing arguments by reference and value, Optional arguments , Using named Arguments, Exiting Procedures, Event-Driven Programming, String Functions

Module IV (10 Hours.)

File Handling

File Handling-File, Field, Records, Sequential Access Files, Opening and closing of Sequential Access Files, Editing (Reading & Writing) Files opened for Sequential Access, Random Access Files, Opening and closing of Random Access Files, Editing (Reading & Writing) Files opened for Random Access, Deleting records in Random Access- Binary Access Files, Opening and closing of Binary Access Files, Editing (Reading & Writing) Files opened for Binary Access, Deleting records in Binary Access

Reference Books:

1. *Visual Basic 6 - Clayton Walnum, Prentice- Hall of India, New Delhi.*
2. *Microsoft Visual Basic 6.0 Professional: Step by Step by Halvorson*
3. *Visual Basic 6.0, N Krishnan and N Saravanan, Scitech Publications, Pvt Ltd, Chennai.*
4. *Programming With Visual Basic 6.0 by M. Azam*

Vocational Paper VIII: CA4VOT08 - WEB DEVELOPMENT AND PHP

PROGRAMMING

Credits – 3

No. of contact hours – 54

Scope: This course is designed to provide basic ideas of HTML, JavaScript and MYSQL

Prerequisites: Basic knowledge of computer fundamentals and computer programming.

Module I

HTML & CSS (18 hours)

Basics of HTML:- Html tags, HTML Editors, HTML Documents, Heading Tags, Paragraph Tags, Centering Contents, HTML Elements, frames element, marquee text,

HTML Attributes:- lang, href, size, align, valign, bgcolor, background, width, height, title

HTML styles, HTML symbols, HTML layout, HTML Text formatting elements, HTML comments, HTML Links, Anchor, HTML elements, HTML Tables, HTML List, HTML Block elements, HTML head, HTML forms, GET & POST Methods, Form Attributes,

Organization of HTML Document, Creating a webpage using html, HTML editors (Microsoft Front page, dream weaver), Introduction to HTML Web server (IIS - Internet Information Server, PWS - Personal Web Server).

CSS:- Basics, Syntax, CSS Comments, CSS Selectors, External style sheet, Internal style sheet, Inline style, CSS Text

Module II

JavaScript (12 hours)

Basics, Static webpage, Dynamic webpage, Advantages & Limitations of JavaScript, JavaScript Development Tools, External JavaScript, JavaScript Output, JavaScript Data Types, Variables and its scope, JavaScript Reserved Words. JavaScript Operators, Conditional Statements-if statement, if...else statement, if...else if ... statement, Switch statement, JavaScript Loops:- while loop, for loop, do-while loop, for-in loop, break & continue statements, various mouse and keyboard events

Module III

PHP& MYSQL (15 hours)

The Structure of PHP- Using Comments, Basic Syntax, Variables, Operators, Variable Assignment, Multiple-Line Commands, Constants, Predefined Constants, The Difference Between the echo and print Commands, Functions, Variable Scope. Conditional Statements-if statement, if...else statement, if...else if...else statement, Switch statement, PHP Loops:- while loop, for loop, do-while loop, for each loop, break statement, functions, arrays, super globals, PHP sessions and cookies, PHP file handling.

Module IV

Implementing MYSQL using PHP (9 Hours.)

Introduction, Database, opening a connection, closing a connection, Create Database, drop database, select database, MYSQL Data types, tables, Drop tables, insert, select tables, Where clause, update, delete records, Like clause, Order By, Joins, alter, dropping adding or repositioning a column,

References

1. *Learning Web Design 2nd Edition by Jennifer Niederst*

2. *DHTML and JavaScript by Gilorien*
3. *PHP and MySQL for Dynamic Web Sites: Visual QuickPro Guide by Larry Ullman*
4. *HTML & CSS: The Complete Reference, Fifth Edition by Thomas Powell*
5. *HTML and CSS: Design and Build Websites by Jon Duckett*
6. *PHP: The Complete Reference by Steven Holzner*
7. *Learning PHP, MySQL & JavaScript with j Query, CSS & HTML by Robin Nixon*

VOCATIONAL SUBJECT COMPUTER APPLICATIONS PRACTICAL SYLLABUS

SEMESTER I& II

Vocational Practical 1

CA2VOP01: INTRODUCTION TO COMPUTERS & ANSI C PROGRAMMING

1. Introduction to various hardware components of a computer.
2. Preparation and printing of a simple document using DOS TEXT Editor.
3. Development of a batch file to copy the contents of a text file into another text file.
4. Development of a batch file to create a directory named “Computer” and any two subdirectories inside “Computer
5. Development of a batch file to copy all files from a source drive to a target drive.
6. Development of a batch file to copy all the files, directories and all hidden files (if any) from one disk to another identical disk.

7. Development of a batch files to rename any existing directory by giving a new name with all possible error messages.
8. Composing and sending an E-Mail message.
9. Program to find the sum and average of n numbers.
10. Obtain roots of a quadratic equation in all possible cases.
11. Program that read a four digit number from keyboard and then prints it in reverse case.
12. Program to compute x to the power n using for loop.
13. Program to calculate the standard deviation of an array of values. The array elements are read from terminal. Use function to calculate standard deviation and mean.
14. Program to read the elements of the given two matrices of order n x n and to perform the matrix multiplication.
15. Program to print the first n Fibonacci numbers using function.
16. Program to find the sum of the following series using a function declaration. $\text{Sum} = x - x^3/3! + x^5/5! - x^7/7! + \dots + x^n/n!$. Where n and x are entered from the keyboard.
17. Program that uses a function to sort an array of integers.
18. Program to reverse a string without using string function
19. Program to find the length of the given string without using string function
20. Program to print prime numbers within a range.
21. Program to print the following pattern by using any loop. Range of star (*) must be entered from keyboard.

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References

1. *Operating systems Gary Nutt 3rd Edn. Pearson.*
2. *Microsoft MS-DOS User's Guide & Reference.*
3. *Programming in ANSI C – E Balaguruswamy - Mc GrawHill Education*
4. *Visual Basic 6 - Clayton Walnum, Prentice- Hall of India, New Delhi.*

SEMESTER III & IV

Vocational Practical II

CA4VOT01 - DATA PROCESSING PACKAGES, OPERATING SYSTEM & VISUAL BASIC PROGRAMMING

(Minimum 14 experiments)

1. Implement the concept of First Come First Serve (FCFS) using C or C++
2. Implement the concept of Shortest Job First (SJF) using C or C++
3. Implement the concept of First Fit algorithm.
4. Create a worksheet which contain Employee no, Emp. name, Salary, department, Designation. Calculate the gross salary. $\text{Gross Salary} = (\text{Salary} + \text{HRA} + \text{DA}) - \text{PF}$. HRA = 50% of salary, DA = 30% of salary, PF = 10% of salary. Extract all employees who are managers. Extract all the employees whose salary is between 20000 and 40000. List the total salary and gross salary in each department.
5. Create the following work sheet. Marks of 4 subjects of 15 students and calculate the total mark, Average mark, Result and Grade. Sort the total marks in the descending order. All the numeric fields in the left alignment. Centralize the name of the Institute that you are studying.
6. Create a work sheet for preparing merit list for BSc admission in your college.

7. Create two documents using MS WORD exactly the way they are seen.
8. Create a document and type 30 lines in it. Spell-check the document and create five AutoCorrect entries on your own. Then create five Auto text entries. Print only the current page of the document.
9. Create a file, inviting your friends to a dinner. Use the Mail Merge facility so that you do not have to re-type the letter with their names and addresses.
10. Create two documents using PageMaker exactly the way they are seen.
11. Create two documents using PageMaker. Change its character width, indents, space around paragraphs; add special characters, figures, tables etc.
12. Design a text book cover page with title and pictures using page maker.
13. Create a VB project that will display pictures in a PictureBox and ImageBox controls, when the user click display button
14. Using a text box and a command button in the form, enter a number in the text box and on clicking on command button display whether the number a single, two or three-digit number in a message box.
15. Create a project to change the shape of a shape control at the interval of one second using Timer control.
16. Create an event procedure to convert a text from lowercase to uppercase.
17. Create a function procedure to calculate the sum of “n” Fibonacci numbers
18. Create a function procedure to find simple interest.
19. Create a program to accept a number and print it in the reverse order.
20. Create a program to accept a set of numbers and find the largest and smallest number.
21. Create a program to count the number of vowels in a string and replace with ‘*’ symbol.
22. Create a program to check whether a given string is palindrome or not.
23. Create a function procedure to find prime numbers within a range
24. Implement traffic system demonstration

References

1. *E. Balagurusamy , Object Oriented Programming with C++, Fifth edition, McGraw Hill publications.*
2. *Visual Basic 6 - Clayton Walnum, Prentice- Hall of India, New Delhi.*
3. *Operating systems Gary Nutt 3rd Edn. Pearson.*
4. *Discovering Computers and Microsoft Office 2010: A Fundamental Combined Approach (Shelly Cashman Series) by Gary B Shelly and Misty Vermaat*

Vocational Practical III

CA4VOP03: C++ PROGRAMMING & WEB DEVELOPMENT

(Minimum 14 experiments)

1. Write a function called `reversit()` that reverses a string (an array of `char`). Use a for loop that swaps the first and last characters, then the second and next –to-last characters, and so on .The string should be passed to `reversit()` as an argument. Write a program to exercise `reversit()`.The program should get a string from the user, call `reversit()`, and print out the result.
2. A program to perform simple arithmetic operations of two complex numbers using operator overloading.
3. Create a class called `employee` that contains a name and an employee no: Create another class called `scientist` that inherits the properties of `employee` and it contains the function for entering the name of the award he gets and display it. Create objects for class `scientist` that contain their name, no and the award they get. Implement single inheritance.
4. Imagine a publishing company that markets both book and audio-cassette versions of its works. Create a class “`publication`” that stores a title (a string) and price (type float) of a publication. From this class derive two classes; “`book`”, which adds a page count (type int); and “`tape`”, which adds a playing time in minutes (type float). Each of these three classes should have a `getdata()` function to get its data from the user at the keyboard, and a `putdata()` function to display its data. Write a `main()` program to test the “`book`” and “`tape`” classes by creating instances of them, asking the user to fill in their data with `getdata()`, and then displaying the data with `putdata()`.

5. Declare a class to represent bank account of 10 customers and the following data members: Name of the depositor, Account Number, Type of Account (S for saving and C for current Account), Balance Amount. The class also contains the following member functions. a). To initialize data members, b) To deposit money. c) For withdrawal of money after checking the minimum balance (minimum balance is Rs1000) d) To display the data members.
6. A program to concatenate using two strings into one string using a pointer method.
7. Write a program that read a group of numbers from the user and places them in an array of type float. Once the numbers are stored in the array, the program should average them and print the result. Use pointer notation wherever possible
8. Program to find Armstrong numbers within a range.
9. Write any program to implement the concept of friend function.
10. Write an HTML code for a webpage for your college with the following details and features
 - A heading followed by a paragraph of 5 sentences about your college using text formatting tags and attributes.
 - Provide yellow color to the background of the page.
 - Include an image of the college.
 - Include a marquee that “Admission for the new academic year commences on 1st June”
11. Write an HTML code to display an online application form for BSc admission. The application form must contains columns for name, address, parent’s name, age, sex, caste, marks, photo etc.
12. Write an HTML code to create a list of 3 bikes of your choice in a frame. Link each one to display the description with a picture in another frame.
13. Create an HTML document with following formatting – Bold, Italics, Underline, Color, Headings, Title, Font and Font Width, Background, Paragraph, Line Brakes, Horizontal Line, Blinking Text as well as marquee Text.

14. Develop a website to display an email login page. The page must contain one text box for entering the username and one password box for entering the password. The username must contain at least 4 characters and the password must contain at least 6 characters. The first two characters in the password must be numbers. On clicking show login button, if the valid data are given in the boxes, a message
“Correct Data” should be displayed. Otherwise “Wrong Data” message should be displayed.
15. Develop a webpage to implement a simple calculator. The page should have two textboxes to enter two numbers. It should also have 4 buttons to add, subtract, multiply and divide the two numbers. The answer should be displayed in a third text box on clicking the button.
16. Design an HTML page that contains five text boxes, three textboxes for marks of three subjects, and remaining for total marks and average marks. Provide validations for this textbox in a separate JavaScript file and link it with the HTML file. The validations are (i) Textboxes should not be empty (ii) It should be a number (iii) It should be between 0 and 99.
17. A webpage contains a button. Write HTML code for the button which executes a function Message() on the occurrence of the following events. (a) When user clicks the mouse on the button. (b) When user moves the mouse over the button.
18. Write HTML codes to create two web pages to show some information about the science and the commerce department of your college. Create another webpage to divide the browser window horizontally into two. In the first frame, a brief introduction of the college and two links are to be provided- one for science and other for commerce. On clicking these links the respective webpage is to be opened in the second frame.
19. Create a form using HTML which has the following types of controls:

I. Text Box

II. Option/radio buttons III. Check
boxes

IV. Reset and Submit buttons

References

1. *E. Balagurusamy , Object Oriented Programming with C++, Fifth edition, McGraw Hill publications*
2. *Object-Oriented Programming in Turbo C++, Robert Lafore, Galgotia.*
3. *Learning Web Design 2nd Edition by Jennifer Niederst*
4. *HTML & CSS: The Complete Reference, Fifth Edition by Thomas Powell*

**IV. SYLLABUS OF MODEL- I COMPLEMENTARY PAPER FOR B.SC.STATISTICS,
BSc.MATHEMATICS**

Semester I

CA1CMT01 : Computer Fundamentals

Theory: 2 hrs. per week

Credits: 2

Module I – (10 Hrs)

Fundamentals of Computers: Define computer, introduction to bit, byte, data, information, program, hardware and software. Generations of computers, Types of Computers, Logical Organization of a Digital Computer - Input unit, Output unit, Storage unit, Arithmetic logic unit, Control unit, CPU. Input devices – keyboard, point and draw devices, data scanning devices. Output devices-monitors, printers, plotters. Primary and Secondary storage devices.

Module II -(6 Hrs)

Number systems- Binary, Octal and Hexadecimal, Converting from one number system to another- decimal to a new base, converting to decimal from another bases, converting from base other than ten to base other than ten, short cut method for converting from binary to octal, octal to binary, binary to hexadecimal and hexadecimal to binary, Computer Codes (BCD, EBCDIC, ASCII)

Module III – (8 Hrs)

Boolean Algebra and Logic circuits- Fundamental concepts of Boolean Algebra, Postulates of Boolean algebra, Theorems of boolean algebra, Logic Gates- AND, OR, NOT, NAND, NOR, XOR and XNOR, logic circuits, converting expression to logic circuit.

Module IV - (6Hrs)

Computer Software and Languages : Define software, Relationship between hardware and software, Types of software-System software and Application software, Machine language, Assembly language, High-level language, Language Translators - Assembler, Compiler, Interpreter

Module V – (6 Hrs)

Operating system: Definition, functions of an operating system, types of Operating system: (batch, multiprogramming, time sharing etc.), features of UNIX, LINUX, MS DOS, WINDOWS operating systems.

Book of Study:

1. P.K Sinha and Priti Sinha, Computer Fundamentals, Sixth Edition, BPB Publications.
2. Rohit Khorana, Introduction to Computer Science, 2nd Edition, Pearson Publishers.

Reference:

1. V. Rajaraman and T. Radhakrishnan , An introduction to Digital Computer design, Fifth Edition, Prentice Hall India Learning Private Limited.
2. B. Ram , Computer fundamentals: Architecture and Organization, Fifth Edition, New Age International.
3. Sanjay Saxena , A First Course in Computers, Second Edition, VIKAS Publishers.

Practical LAB –I

Practical : 2 hrs. per week

MS WORD

1. Page formatting
2. Paragraph formatting, header and footer, page number etc.
3. Table creation, chart, shapes, hyperlinks, cross-reference etc.
4. Mail merge

MS EXCEL

1. Working with excel formula , different type of cell references and linking data between worksheet
Logical functions – IF, AND, OR and Nested IF function.
2. Math functions – ROUND, RAND, CELING, FLOOR, INT, LCM, MOD, EVEN, SUNIF, SQRT and
Trigonometric functions
3. Statistical functions- AVERAGE, AVERAGEA, AVERAGEIF, COUNT, COUNTA, COUNTBLANK,
COUNTIF, SUM , SUMA, MIN, MINA, MAX and MAXA
4. Formatting cells
5. Create a chart, choosing chart type, edit chart axis-titles, labels, data series and legend

MS POWERPOINT

1. Creating presentation
2. Animations & Transition
3. Different type of design, Sound
4. Inserting picture, table, shapes, charts etc.

MODEL- I B.SC.STATISTICS, BSc.MATHEMATICS - SEMESTER II

CA2CMT02 : Programming in C language

Theory: 2 hrs. per week Credits: 3

Module-1:

Basic concepts of programming. Language classification. Steps in developing a program, Algorithm and flowchart.

C language basics: C character set, tokens, Identifiers and keywords, Data types, constants, variables, declarations, qualifiers- long, short and unsigned declarations, expressions, symbolic constants, Input and output operators/functions, compound statements, arithmetic operators, unary operators, relational and logical operators, assignment operators, increment and decrement operators, conditional operators.

(Theory 6 hrs)

Module -2:

Decision making and Branching : If statement, if else statement, nested if...else statement, Else if ladder, switch statements, looping - for loop, while loop, do..while statements, nested loop structure, break, continue and go to statements, scope of variables.

(Theory 10 hrs)

Module -3:

Arrays one dimensional and two dimensional arrays, initializing, reading, writing. Strings, standard library string functions Library functions: Math.h, Conio.h and Stdio.h.

(Theory 8 hrs)

Module -4:

User defined functions - Elements of functions, different arguments, Return values and their types, Function declaration, Function calls, different types /category of functions. Recursive functions, Call by value and reference methods. Storage classes: automatic, external(global), static and registers.

(Theory 8 hrs)

Module -5:

Structure: definition, Declaring structure variables, Accessing structure members Concept of Union. Pointers: Fundamentals - Understanding pointers, Address operators, Pointer declaration.

(Theory 4 hrs)

Book of study:

1.E Balaguruswamy, Programming in ANSI C, Sixth Edition, Mc GrawHill Education.

References:

1. K R Venugopal & S R Prasad , Mastering C , First Edition, Mc GrawHill Education
2. Ashutosh Pandey , Programming in C, First Edition, Cyber Tech Publications
3. Yashavant Kanetkar , Let Us C , Fourteenth Edition, BpB Publications

Practical LAB –II -- Practical : 2 hrs. per week

SYLLABUS

1. Fundamental data types, input/output functions scanf(), printf(), Arithmetic expressions, Evaluation of integer, real and mixed mode arithmetic expressions, truncation effect, typecasting.
2. Programs using control structures: If statement, if else statement, nested if...else statement, Else if ladder, switch, for, while, do...while, break and continue. Using nested loops.
3. Programs using one dimensional array: Creation of array, linear array operations, search, sort, Static initialization of arrays etc. Two dimensional array, matrix addition, matrix multiplication, transpose of a matrix.
4. User Defined Functions: Programs using different categories of functions return type functions, void type functions, program using recursive functions (factorial) etc.

Semester II

CA2CMP01 : Software Lab I

Scheme of Evaluation for software lab I external (Practical Lab – I and Practical Lab-II) is as follows: (in Second Semester)

Division of Marks (Practical - 3 hours External)

First program based on Lab I word/excel - **15 marks**

Second program should be based on Lab II c program - **15 marks**

Viva Voce – **03 marks** , Lab Record (minimum of 15 Programs from each section) - **7 marks**

Total Marks - 40 marks

MODEL- I B.SC.STATISTICS, BSc.MATHEMATICS - SEMESTER III

CA3CMT03 : Web Technology and Programming

Theory: 2 hrs. per week Credits: 2

Module I - 6 Hrs.

Computer networks- Advantages of networking, Network topologies (Bus, Ring, Star,Tree, Mesh, Hybrid), types of networks - LAN, MAN, WAN, intranet and Internet ,Communication Media – Guided: Twisted Pair, Coaxial Cable and Optic Fiber, Unguided:infrared, microwave & satellite, Concept of the point to point and Broadcast Network,Networking Tools-MODEM, Repeater, Hub, Switches, Routers, Bridge, Gateway, Firewall

Module II - 6 Hrs.

Concept of ISP (Internet Service Provider), Internet Backbone, Concept of URL Address,Domain Names, Hypertext Concepts and World Wide Web, Protocols- FTP, NNTP, SMTP,HTTP, POP, PPP, Email-Electronic Post Service, ISO OSI Reference Model

Module III - 8 Hrs.

Web server and proxy server, Internet Viruses (Trojan, WORM), Internet security issues(Malware, Spyware, Hacking etc.), types of firewall, Basics of Data compression anddata encryption, Digital Signatures, Digital Certificates

Module IV - 10 Hrs.

The art of creating the website, WWW, website, webpage, and home page, The HTMLprogramming basics, General structure of HTML document, HTML tags and attributes,Formatting Tags, Choice of page color, including banners, Tables, Lists, Example ofHTML page. Tags - <HTML>, <BODY>, <HEAD>, <TITLE>, <H1>, <H2>,<H6>,
,, <I>, <U>, Adding hyperlinks

Module V - 6 Hrs.

Introduction web browsers (like Internet Explorer, Mozilla Firefox, Google Chrome),Basic tools in the browser(back, forward, homepage, stop, refresh), search engine forinternet, meta search engine

Books of study:

1. P.K Sinha and Priti Sinha , Computer Fundamentals, Sixth Edition, BPB Publications.
2. Andrew S. Tanenbaum, David J. Wetherall, Computer Networks , Fifth Edition, Pearson

Reference:

1. Raj Kamal ,Internet & Web Technologies,2002 Edition , Tata McGraw Hill
2. HTML Black Book, Steven Holzner, 2000 edition, Dreamtech Publishers
3. Joel Sklar , Principles of web page design, Sixth Edition, Vikas publications
4. Behrouz A Forouzan , Data Communication & Networking, Fourth Edn. McGraw Hill

Semester III

Practical LAB –III

Practical : 2 hrs. per week

- Internet browsing
 - email- creation of account, reception, compilation, sending etc
 - Web page designing using HTML tags and linking with other pages.
1. Create HTML document with following formatting – Bold, Italics, Underline, Colors,Headings, Title, Font and Font Width, Background, Paragraph, Line Brakes,Horizontal, Line, Blinking Text as well as marquee Text.
 2. Create HTML document with Ordered and Unordered lists, Inserting Images, Internaland External linking
 3. Create HTML document with Table:
Some image here
 4. Create Form with Input Type, Select and Text Area in HTML.
 5. Create an HTML containing Roll No., student’s name and Grades in a tabular form.
 6. Create an HTML document (having two frames) which will appear as follows:
About
Department 1
Department 2

Department 3

This frame would show the contents according to the link clicked by the user on the left frame.

7. Create an HTML document containing horizontal frames as follows:

Department Names (could be along with Logos)

Contents according to the Link clicked

8. Create a website of 6 – 7 pages with different effects as mentioned in above problems.

9. Create HTML documents (having multiple frames) in the following three formats:

Frame 1

Frame 2

Frame 1

Frame 2 Frame 3

10. Create a form using HTML which has the following types of controls:

I. Text Box

II. Option/radio buttons

III. Check boxes

IV. Reset and Submit buttons

11. A. Create a web site for ICC world cup tournament which contain

1. A home page

2. Tournament schedule should be present in a table.

3. Details of previous world cups

4. Details of all teams.

Include form, Image, tables, list, according to their needs

12. Create a web site for your college which contain

a. A home page

b. About your management

- c. About your Staffs
- d. About your course
- e. About your Facilities

All these pages contain appropriate pictures and links between them.

MODEL- I B.SC.STATISTICS, BSc.MATHEMATICS - SEMESTER IV

CA4CMT04 : Visual Programming Techniques

Theory: 2 hrs. per week

Credits: 2

Unit 1: 4 Hrs.

Data Base Management System: basic concepts & structure, Data definition and data manipulation using MS ACCESS

Unit 2 : 10 hrs.

Visual Basic - Basic Concepts: Getting Started with Visual Basic advantages of VB, VB Development Overview, Designing and building the User Interface, creation of forms and adding controls to the form, Setting control properties, Writing Event Driven Code

Visual Basic Projects : Using different types of Projects, Project Explorer Window, VB procedures, subroutines & functions, Comments, Controlling Program Flow IF.. THEN...ELSEIF, SELECT...CASE, Loops-FOR...NEXT, DO, WHILE...WEND. Visual Basic Variables-Data Types Byte, Integer, Long, Single, Double, Currency, Boolean, Date, Object, String & Variant. Variable Declaration-Implicit & Explicit

Unit 3 : 8 Hrs.

Designing the User Interface : VB Form, Adding Forms, Form Properties, Setting Properties with Code, Using Form Drawing Methods, Loading & Unloading Forms, Form Events, Dialog Boxes-Message Box & Input Box, MDI Applications-MDI Parent Form/ChildForms.

Unit 4 : 8 Hrs.

Controls: Tool Box-Label, Text Box, Frame, Command Button, Check Box, Option Button, List Box, Combo Box, Horizontal Scrollbar, Vertical Scrollbar, Timer, Drive List Box, Directory List Box, File List Box, Line, Shape, Image Box, Picture Box, Data Control, OLE Control, Customizing Tool Box, Adding Controls to Forms, Naming Controls, Copying Controls, Control Arrays

Unit 5: 6 Hrs.

Mastering Menus and Toolbars : Menus, Menu Editor, Pop-up Menus, Customising Toolbar, Jet, DAO, Advanced Data Access Methods, ADO, OLEDB Working with other Applications & Database Access: Visual Basic Data Control, Creating Queries in Visual Basic

Books of study:

Peter Norton's Guide to Visual Basic 6 by Peter Norton and Michael Groh, Techmedia publications
Chapters: 1-7, 18, 19, (2007)

References:

1. Visual Basic 6 from the Ground Up by Gary Cornell, TataMcGraw-Hill (2008)
2. Programming in Visual Basic 6.0 by Julia Case Bradley and Anita C Millspaugh, Tata McGraw-Hill (2005)
3. Using Visual Basic 6 by Bob Roselman, Richard Peasley and Wayne Prunchiah, PHI

Practical LAB –IV

Practical : 2 hrs. per week

1. Designing User Interface using- List Box, Combo Box, Image and Picture Box, Directory-File-Drive list boxes, Rich text box, etc
2. Creating Menus- Creating Menus and writing Codes, Linking Menus with MDI forms.
3. Database Connectivity using Controls - Designing user interface with forms and controls and create database connectivity by DAO and ADO Control.
4. Creating Reports - Create reports using Data Report in VB

Semester IV

CA4CMP02 : Software Lab II

Scheme of Evaluation for software lab II external (Practical Lab – III and Practical Lab-IV) is as follows:

Division of Marks (Practical - 3 hours External)

First program based on Lab III HTML - **15 marks**

Second program should be based on Lab IV VB - **15 marks**

Viva Voce – **03 marks**

Lab Record (minimum of 15 Programs from each section) - **7 marks**

Total Marks - 40 marks

V. B.Sc Petrochemicals Complementary papers

Semester I

CA1CMT01 : Computer Fundamentals

Theory: 2 hrs. per week

Credits: 2

Module I – (10 Hrs)

Fundamentals of Computers: Define computer, introduction to bit, byte, data, information, program, hardware and software. Generations of computers, Types of Computers, Logical Organization of a Digital Computer - Input unit, Output unit, Storage unit, Arithmetic logic unit, Control unit, CPU. Input devices – keyboard, point and draw devices, data scanning devices. Output devices - monitors, printers, plotters. Primary and Secondary storage devices.

Module II -(6 Hrs)

Number systems- Binary, Octal and Hexadecimal, Converting from one number system to another - decimal to a new base, converting to decimal from another bases, converting from base other than ten to base other than ten, short cut method for converting from binary to octal, octal to binary, binary to hexadecimal and hexadecimal to binary, Computer Codes (BCD, EBCDIC, ASCII)

Module III – (8 Hrs)

Boolean Algebra and Logic circuits- Fundamental concepts of Boolean Algebra, Postulates of Boolean algebra, Theorems of boolean algebra, Logic Gates - AND, OR, NOT, NAND, NOR, XOR and XNOR, logic circuits, converting expression to logic circuit.

Module IV - (6Hrs)

Computer Software and Languages : Define software, Relationship between hardware and software, Types of software - System software and Application software, Machine language, Assembly language, High-level language, Language Translators - Assembler, Compiler, Interpreter

Module V – (6 Hrs)

Operating system: Definition, functions of an operating system, types of Operating system: (batch, multiprogramming, time sharing etc.), features of UNIX, LINUX, MS DOS, WINDOWS operating systems.

Book of Study:

1. P.K Sinha and Priti Sinha, Computer Fundamentals, Sixth Edition, BPB Publications.
2. Rohit Khorana, Introduction to Computer Science, 2nd Edition, Pearson Publishers.

Reference:

1 V. Rajaraman and T. Radhakrishnan , An introduction to Digital Computer design, Fifth Edition, Prentice Hall India Learning Private Limited.

2. B. Ram , Computer fundamentals: Architecture and Organization, Fifth Edition, New Age International.

3. Sanjay Saxena , A First Course in Computers, Second Edition, VIKAS Publishers.

Practical LAB –I Practical : 2 hrs. per week

MS WORD

1. Page formatting
2. Paragraph formatting, header and footer, page number etc.
3. Table creation, chart, shapes, hyperlinks, cross-reference etc.
4. Mail merge

MS EXCEL

1. Working with excel formula , different type of cell references and linking data between worksheet
Logical functions – IF, AND, OR and Nested IF function.
2. Math functions – ROUND, RAND, CELING, FLOOR, INT, LCM, MOD, EVEN, SUNIF, SQRT and Trigonometric functions
3. Statistical functions- AVERAGE, AVERAGEA, AVERAGEIF, COUNT, COUNTA, COUNTBLANK, COUNTIF, SUM , SUMA, MIN, MINA, MAX and MAXA
4. Formatting cells
5. Create a chart, choosing chart type, edit chart axis-titles, labels, data series and legend

MS POWERPOINT

1. Creating presentation
2. Animations & Transition
3. Different type of design, Sound
4. Inserting picture, table, shapes, charts etc.

BSc Petrochemicals Complementary papers - Semester II

CA2CMT02 : Programming in C language

Theory: 2 hrs. per week Credits: 3

Module-1:

Basic concepts of programming. Language classification. Steps in developing a program, Algorithm and flowchart.

C language basics: C character set, tokens, Identifiers and keywords, Data types, constants, variables, declarations, qualifiers- long, short and unsigned declarations, expressions, symbolic constants, Input and output operators/functions, compound statements, arithmetic operators, unary operators, relational and logical operators, assignment operators, increment and decrement operators, conditional operators.

(Theory 6 hrs)

Module -2:

Decision making and Branching : If statement, if else statement, nested if...else statement, Else if ladder, switch statements, looping - for loop, while loop, do..while statements, nested loop structure, break, continue and go to statements, scope of variables.

(Theory 10 hrs)

Module -3:

Arrays one dimensional and two dimensional arrays, initializing, reading, writing.
Strings, standard library string functions
Library functions: Math.h, Conio.h and Stdio.h.

(Theory 8 hrs)

Module -4:

User defined functions - Elements of functions, different arguments, Return values and their types, Function declaration, Function calls, different types /category of functions. Recursive functions, Call by value and reference methods. Storage classes: automatic, external(global), static and registers.

(Theory 8 hrs)

Module -5:

Structure: definition, Declaring structure variables, Accessing structure members Concept of Union. Pointers: Fundamentals - Understanding pointers, Address operators, Pointer declaration.

(Theory 4 hrs)

Book of study:

1.E Balaguruswamy , Programming in ANSI C , Sixth Edition, Mc GrawHill Education.

References:

1. K R Venugopal & S R Prasad , Mastering C , First Edition, Mc GrawHill Education
2. Ashutosh Pandey , Programming in C, First Edition, Cyber Tech Publications
3. YashavantKanetker , Let Us C , Fourteenth Edition, BpB Publications

Practical LAB -II

Practical : 2 hrs. per week

SYLLABUS

1. Fundamental data types, input/output functions scanf(), printf(), Arithmetic expressions, Evaluation of integer, real and mixed mode arithmetic expressions, truncation effect, typecasting.
2. Programs using control structures: If statement, if else statement, nested if...else statement, Else if ladder, switch, for, while, do...while, break and continue. Using nested loops.
3. Programs using one dimensional array: Creation of array, linear array operations, search, sort, Static initialization of arrays etc. Two dimensional array, matrix addition, matrix multiplication, transpose of a matrix.
4. User Defined Functions: Programs using different categories of functions return type functions, void type functions, program using recursive functions (factorial) etc.

Semester II

CA2CMP01 : Software Lab I

Scheme of Evaluation for software lab I external (Practical Lab – I and Practical Lab-II) is as follows: (in Second Semester)

Division of Marks (Practical - 3 hours External)

First program based on Lab I word/excel - **15 marks**

Second program should be based on Lab II c program - **15 marks**

Viva Voce – **03 marks** , Lab Record (minimum of 15 Programs from each section) - **7 marks**

Total Marks - 40 marks

BSc Petrochemicals Complementary papers - Semester III

CA3CMT03 : Web Technology and Programming

Theory: 2 hrs. per week Credits: 2

Module I - 6 Hrs.

Computer networks- Advantages of networking, Network topologies (Bus, Ring, Star, Tree, Mesh, Hybrid), types of networks - LAN, MAN, WAN, intranet and Internet, Communication Media – Guided: Twisted Pair, Coaxial Cable and Optic Fiber, Unguided: infrared, microwave & satellite, Concept of the point to point and Broadcast Network, Networking Tools- MODEM, Repeater, Hub, Switches, Routers, Bridge, Gateway, Firewall

Module II - 6 Hrs.

Concept of ISP (Internet Service Provider), Internet Backbone, Concept of URL Address, Domain Names, Hypertext Concepts and World Wide Web, Protocols- FTP, NNTP, SMTP, HTTP, POP, PPP, Email- Electronic Post Service, ISO OSI Reference Model

Module III - 8 Hrs.

Web server and proxy server, Internet Viruses (Trojan, WORM), Internet security issues (Malware, Spyware, Hacking etc.), types of firewall, Basics of Data compression and data encryption, Digital Signatures, Digital Certificates

Module IV - 10 Hrs.

The art of creating the website, WWW, website, webpage, and home page, The HTML programming basics, General structure of HTML document, HTML tags and attributes, Formatting Tags, Choice of page color, including banners, Tables, Lists, Example of HTML page. Tags - <HTML>, <BODY>, <HEAD>, <TITLE>, <H1>, <H2>,<H6>,
, , <I>, <U>, Adding hyperlinks

Module V - 6 Hrs.

Introduction web browsers (like Internet Explorer, Mozilla Firefox, Google Chrome), Basic tools in the browser (back, forward, homepage, stop, refresh), search engine for internet, meta search engine

Books of study:

1. Fundamentals of Computers by P. K Sinha
2. Computer Networks by Andrew S. Tanenbaum, David J. Wetherall

Reference:

1. Internet & Web Technologies, Raj Kamal, Tata McGraw Hill

2. HTML Black Book, Steven Holzner, Dreamtech Publishers
3. Principles of web page design by Joel Sklar, Vikas publications
4. Data Communication & Networking by Behrouz A Forouzan Fourth Edn. McGraw Hill

Semester III

Practical LAB –III

Practical : 2 hrs. per week

- Internet browsing
 - email- creation of account, reception, compilation, sending etc
 - Web page designing using HTML tags and linking with other pages.
1. Create HTML document with following formatting – Bold, Italics, Underline, Colors,Headings, Title, Font and Font Width, Background, Paragraph, Line Brakes,Horizontal, Line, Blinking Text as well as marquee Text.
 2. Create HTML document with Ordered and Unordered lists, Inserting Images, Internaland External linking
 3. Create HTML document with Table:

Some image here
 4. Create Form with Input Type, Select and Text Area in HTML.
 5. Create an HTML containing Roll No., student’s name and Grades in a tabular form.
 6. Create an HTML document (having two frames) which will appear as follows:

About

Department 1

Department 2

Department 3

This frame would show thecontents according to the linkclicked by the user on the leftframe.
 7. Create an HTML document containing horizontal frames as follows:

Department Names (could be along with Logos)

Contents according to the Link clicked

8. Create a website of 6 – 7 pages with different effects as mentioned in above problems.

9. Create HTML documents (having multiple frames) in the following three formats:

Frame 1

Frame 2

Frame 1

Frame 2 Frame 3

10. Create a form using HTML which has the following types of controls:

I. Text Box

II. Option/radio buttons

III. Check boxes

IV. Reset and Submit buttons

11. A. Create a web site for ICC world cup tournament which contain

1. A home page

2. Tournament schedule should be present in a table.

3. Details of previous world cups

4. Details of all teams.

Include form, Image, tables, list, according to their needs

12. Create a web site for your college which contain

a. A home page

b. About your management

c. About your Staffs

d. About your course

e. About your Facilities

All these pages contain appropriate pictures and links between them.

B.Sc Petrochemicals Complementary papers - Semester IV

CA4CMT04 : Visual Programming Techniques

Theory: 2 hrs. per week

Credits: 2

Unit 1: 4 Hrs.

Data Base Management System: basic concepts & structure, Data definition and data manipulation using MS ACCESS

Unit 2 : 10 hrs.

Visual Basic - Basic Concepts: Getting Started with Visual Basic advantages of VB, VB Development Overview, Designing and building the User Interface, creation of forms and adding controls to the form, Setting control properties, Writing Event Driven Code

Visual Basic Projects : Using different types of Projects, Project Explorer Window, VB procedures, subroutines & functions, Comments, Controlling Program Flow IF.. THEN...ELSEIF, SELECT...CASE, Loops-FOR...NEXT, DO, WHILE...WEND. Visual Basic Variables-Data Types Byte, Integer, Long, Single, Double, Currency, Boolean, Date, Object, String & Variant. Variable Declaration-Implicit & Explicit

Unit 3 : 8 Hrs.

Designing the User Interface : VB Form, Adding Forms, Form Properties, Setting Properties with Code, Using Form Drawing Methods, Loading & Unloading Forms, Form Events, Dialog Boxes-Message Box & Input Box, MDI Applications-MDI Parent Form/ChildForms.

Unit 4 : 8 Hrs.

Controls: Tool Box-Label, Text Box, Frame, Command Button, Check Box, Option Button, List Box, Combo Box, Horizontal Scrollbar, Vertical Scrollbar, Timer, Drive List Box, Directory List Box, File List Box, Line, Shape, Image Box, Picture Box, Data Control, OLE Control, Customizing Tool Box, Adding Controls to Forms, Naming Controls, Copying Controls, Control Arrays

Unit 5: 6 Hrs.

Mastering Menus and Toolbars : Menus, Menu Editor, Pop-up Menus, Customising Toolbar, Jet, DAO, Advanced Data Access Methods, ADO, OLEDB Working with other Applications & Database Access: Visual Basic Data Control, Creating Queries in Visual Basic

Books of study:

Peter Norton's Guide to Visual Basic 6 by Peter Norton and Michael Groh, Techmedia publications
Chapters: 1-7, 18, 19, (2007)

References:

1. Visual Basic 6 from the Ground Up by Gary Cornell, TataMcGraw-Hill (2008)
2. Programming in Visual Basic 6.0 by Julia Case Bradley and Anita C Millspaugh, Tata McGraw-Hill (2005)
3. Using Visual Basic 6 by Bob Roselman, Richard Peasley and Wayne Prunchiah, PHI

Practical LAB –IV

Practical : 2 hrs. per week

1. Designing User Interface using- List Box, Combo Box, Image and Picture Box, Directory-File-Drive list boxes, Rich text box, etc
2. Creating Menus- Creating Menus and writing Codes, Linking Menus with MDI forms.
3. Database Connectivity using Controls - Designing user interface with forms and controls and create database connectivity by DAO and ADO Control.
4. Creating Reports - Create reports using Data Report in VB

Semester IV

CA4CMP02 : Software Lab II

Scheme of Evaluation for software lab II external (Practical Lab – III and Practical Lab-IV) is as follows:

Division of Marks (Practical - 3 hours External)

First program based on Lab III HTML - **15 marks**

Second program should be based on Lab IV VB - **15 marks**

Viva Voce – **03 marks**

Lab Record (minimum of 15 Programs from each section) - **7 marks**

Total Marks - 40 marks

VI. Bachelor of Business Administration

INFORMATION TECHNOLOGY FOR BUSINESS

UNIT I

Excel window components, Set Up a Workbook- Creating Workbooks, Modifying Workbooks, Modifying Worksheets, Customizing the Excel 2010 Program Window, Zooming In on a Worksheet, Arranging Multiple Workbook Windows, Adding Buttons to the Quick Access Toolbar, Customizing the Ribbon, Maximizing Usable Space in the Program Window, Work with Data and Excel Tables- Entering and Revising Data, Moving Data within a Workbook, Finding and Replacing Data, Correcting and Expanding Upon Worksheet Data.

UNIT II

Perform Calculations on Data- Naming Groups of Data, Creating Formulas to Calculate Values, Summarizing Data That Meets Specific Conditions, Finding and Correcting Errors in Calculations, Excel Functions-Financial functions(PMT,RATE, NPER, PV, FV), Logical functions(IF,AND,FALSE,TRUE), Mathematical functions(SUM, PRODUCT, POWER, QUOTIENT, SQRT, SUBTOTAL,ABS, ROUND, GCD, LCM), Statistical functions(AVERAGE, AVERAGEIF, MEDIAN, MODE, STEDV, MIN, MAX, LARGE, SMALL), Excel Charts(Column Chart, Line Chart, Pie Chart, Doughnut Chart, Bar Chart, Area Chart, XY (Scatter) Chart, Bubble Chart.), Chart layout.

UNIT III

Change Workbook Appearance - Formatting Cells, Defining Styles, Applying Workbook Themes and Excel Table Styles, Making Numbers Easier to Read, Changing the Appearance of Data Based on Its Value, Adding Images to Worksheets. Focus on Specific Data by Using Filters- Limiting Data That Appears on Your Screen, Manipulating Worksheet Data, Selecting List Rows at Random, Summarizing Worksheets with Hidden and Filtered Rows, Finding Unique Values Within a Data Set, Defining Valid Sets of Values for Ranges of Cells

UNIT IV

Introduction to Electronic Commerce: Defining Electronic Commerce.-Brief History of Electronic Commerce-Forces Fueling Electronic Commerce.-Electronic Commerce Industry Framework.Types of Electronic Commerce.-Inter-organizational Electronic Commerce.Intra-organizational Electronic Commerce-Consumer-to-Business Electronic Commerce.-Intermediaries and Electronic Commerce.

UNIT V

Firewalls and Transaction Security: Firewalls and Network Security-Transaction Security-Encryption and Transaction World Wide Web and Security. **Electronic Payment Systems:** Overview of the Electronic Payment Technology-Electronic or Digital Cash-Electronic Checks-Online Credit Card-Based Systems-Types of Credit Card Payments-Other Emerging Financial Instruments. Consumer, Legal, and Business Issues.

Reference book

1. Step by Step- Microsoft office professional 2010, Joyce Cox, Joan Lambert and Curtis Frye, Microsoft
2. Electronic Commerce-A Manager's guide, Ravi Kalakota, Andrew B. Whinston, Addison-Wesley.

VII. Syllabus- BA Economics Vocational Model II Computer Application

Semester I

CA1CMT01 : Computer Fundamentals

Theory: 5 hrs. per week

Credit: 4

Module I – (12 Hrs)

Fundamentals of Computers: Define computer, introduction to bit, byte, data, information, program, hardware and software, Generations of computers, categories and Types of Computer based on performance - Super Computer, Mainframe, Mini Computer & Micro Computers, Data & Process based – Analog, Digital & Hybrid Computers, Network service based – Server computer, workstation / client computer, Size & usage based - Desktop, Laptop, palmtop, Logical Organization of a Digital Computer, input unit ,Output unit ,Storage unit ,Arithmetic logic unit, Control unit ,CPU. Input devices – keyboard, point and draw devices, data scanning devices, output devices-monitors ,printers, plotters.

Module II -(10 Hrs)

Number systems- Binary, Octal and Hexadecimal, Converting from one number system to another- decimal to a new base, converting to decimal from another bases, converting from base other than ten to base other than ten, short cut method for converting from binary to octal, octal to binary, binary to hexadecimal and hexadecimal to binary, Computer Codes (BCD, EBCDIC, ASCII).

Module III – (12 Hrs)

Boolean Algebra and Logic circuits- fundamental concepts of Boolean Algebra, Postulates of Boolean algebra, Theorems of boolean algebra, Logic Gates- AND, OR, NOT, NAND, NOR, XOR and XNOR, logic circuits, converting expression to logic circuit, The universal NAND gate, universal NOR gate. Exclusive OR and equivalence functions.

Module IV - (10 Hrs)

Computer Software and Languages : define software, relationship between hardware and software, Types of software-system software -Application software, Logical system architecture, Software development steps. Machine language, Assembly language, High-level language. Define Program, purpose of program, algorithms, flowcharts, flowchart symbols, flowcharting rules, advantages and limitations of flowcharts.

Module V – (10 Hrs)

Operating system: Definition, functions of an operating system, types of Operating system: (batch, multiprogramming, time sharing etc.), features of UNIX,LINUX,MS DOS,WINDOWS operating systems.Basic internet services- email, FTP, TELNET, WWW.

Book of Study:

1. Rohit Khorana - Introduction to Computer Science 2nd Edition, Pearson Publishers

2. P.K Sinha, Priti Sinha - Computer Fundamentals , Fourth Edition by, BPB Publications.
3. Comdex Computer Course Kit: Windows 7 with Office 2010

Reference:

1. V. Rajaraman and T. Radhakrishnan An introduction to Digital Computer design
2. B. Ram - Computer fundamentals- Organization and Architecture, First edition
3. A First Course in Computers 2003, Saxena, VIKAS Publications

Semester I

Practical – I Office Automation

Practical: 2 hrs. per week

I. Familiarization of Computer System: Demonstration of various units of Computer system, handling of devices, demo on hardware units, Login process, Booting Process. **MS WORD:** Page formatting, Paragraph formatting , Table creation, Familiarize with Spell check and mail merge facility(10 hrs)

II. MS POWERPOINT: Creating presentation, Animations & Transition, different type of design, Sound , Inserting picture, table, shapes, charts etc.

III. Practicing Operating System Commands: Linux- dir, copy, del, ren, copy con, date, time, chkdsk, mkdir, cd, rmdir, EDIT etc. MS-WINDOWS – using start menu, desk top, task bar, word pad, note pad, file management - creation, copy, delete, moving of files in directories, selecting and executing a program - demonstration of editing. (16 hrs)

BA Economics- Semester II

CA2CMT02 : Computerized Techniques for Office

Theory: 3 hrs. per week

Credit: 3

Module 1: Word processing package- MS Word 2013

Introduction: word user interface elements, creating new documents, basic editing, saving a document, printing a document, print preview, page orientation, viewing documents, setting tabs, page margins, indents, Ruler, Formatting techniques - Font formatting, paragraph formatting, page setup, headers and footers, Bullets and numbered list, borders and shadings, table: placing tables, side-by-side and nested tables, formatting tables, drawings, word art, document templates, find and replace, page break and page numbers, mail merge, spelling and grammar checking, thesaurus, automating documents- macros, E-mail editor. (14 Hrs.)

Module 2: Spreadsheet package- MS Excel 2013

Introduction: Excel user interface, Working with cell & cell addresses, Selecting range, Moving, Cutting, Copying with paste, Inserting & deleting cells, Freezing cells, Adding, Deleting & copying worksheet within a work book, Renaming a worksheet. cell formatting options, Formatting fonts, Aligning, wrapping & rotating text, Using borders, Boxes & colors, changing row/column height/width, formatting a worksheet automatically, Insert comments. Using print preview, preparing worksheet for the printer, selecting print area, margin & orientation, using header & footer ,Inserting page breaks.

Conditional formatting – Applying conditional formatting to cells, using multiple cell rules, using color scale and icon set, creating new rule and managing existing rules. Creating list, using custom list, sorting and filtering of data and advanced filters. (10Hrs.)

Module 3: Formula, functions and charts

Working with excel formula, different type of cell references and linking data between worksheet

Logical functions – IF, AND, OR and Nested IF function.

Math functions – ROUND, RAND, CELING, FLOOR, INT, LCM, MOD, EVEN, SUNIF, SQRT and Trigonometric functions

Date Time functions – DATE, TIME, NOW, DATEVLAUE, WEEKDAY, DAY, MONTH AND YEAR

Statistical functions- AVERAGE, AVERAGEA, AVERAGEIF, COUNT, COUNTA, COUNTBLANK, COUNTIF, SUM , SUMA, MIN, MINA, MAX and MAXA

String functions – LEFT, RIGHT, MID, TRIM, LTRIM, RTRIM, UPPER, LOWER, PROPER, SEARCH, REPLACE and CONCATENATE. Database functions – DSUM, DAVERAGE, DMIN, DMAX, and DPRODUCT

Information functions – CELL, ERROR, ISERROR, ISBLANK, ISNONTTEXT, ISTEXT, ISNUMBER and TYPE

Create a chart, choosing chart type, edit chart axis-titles, labels, data series and legend, adding a text box, rotate text in a chart, saving a chart. use of pivot tables-designing of templates in excel and sharing data with other applications. **(16 Hrs.)**

Module 4: Advanced Excel Features

Introduction to VBA macro, recording macro and understanding code behind the macro What if Analysis - Creating Scenarios, Creating a Scenario Report. Working with Data Tables, Using Goal Seek, Data Forms - Adding Data using the Data Form, Totals and Subtotals. **(8 Hrs.)**

Module 5: Presentation Package -MS PowerPoint 2013

Advantages of presentation packages, screen layout, creating presentations, inserting – deleting - moving slides, adding sound and video, formatting slides, slide layout, presentation views, color, scheme, background, action buttons, slide transition, custom animation, creating master slide, -managing slide shows, rehearsing slide show, setting intervals, using pen. **(6 Hrs.)**

Book of Study:

1. John Walkenbach, Herb Tyson – Office 2013 Bible– Wiley India Pvt Ltd

Semester II

Practical –II Computerised Techniques for Office

Practical: 2 hrs. per week

- 1 Preparing Word Documents with all the formatting and the mail merge feature
- 2 Use of formulae, built in functions and Charts in spreadsheet
- 3 Preparing attractive presentations in PowerPoint

Semester II

CA2CMP01 : Practical-I & II external

Credit: 2

Scheme of Evaluation for Practical-I & II external is as follows: (in Even Semesters)

Division of Marks (Practical - 3 hours External)

First program from practical -I - **15 marks**

Second program from practical – II excel - **15 marks**

Viva Voce -**03 marks**

Lab Record (minimum of 15 Programs from each section) - **07 marks**

Total Marks - 40 marks

BA Economics –Computer Application -Semester III

CA3CMT03 : DATABASE MANAGEMENT SYSTEM

Theory: 2 hrs. per week

Credit: 3

Module 1: Database Concepts

Introduction to DBMS concepts. Advantages of DBMS over file based system, Operation on files, Structure of DBMS, Data Model Classifications, Entity-Relationship Concept. Data independence. Components of DBMS, Database users, User classification and responsibilities, Role of DBA. **(8 Hrs)**

Module 2: Relational Database Management System

RDBMS & Relationships. Concept of Relational data model. Relations and Properties, Components of – RDBMS. Advantages of RDBMS. Concept of table, filed & record. Keys – Primary, candidate, alternate and foreign keys. Relationships, Type of relationships one to one, one to many and many to many, defining relationships, Referential integrity. Normalisation- 1st , 2nd and 3rd normal forms. **(8 Hrs)**

Module 3: Introduction to MS Access 2013

Basic elements of MS-Access 2013: Introduction-objects in Ms Access-create, open, and close Database, creating a database table-different ways of creating tables, data types, setting the primary key, Properties of the fields-saving, closing and modifying tables, creating table Relationships-editing relationships. **(14 Hrs)**

Module 4: Queries and Forms

Queries & forms in Access: types of queries-creating a query-saving queries –Select query, summary queries, cross tab queries, action queries. Forms –The forms wizard editing the data in a form- The form design view-The form design bar-The tool box- Working with controls. **(14 Hrs)**

Module 5: Reports and Other Features

Reports in Access: The report wizard-The Report design view-The report design bar-The tool box-The preview window-grouping and sorting-Printing a report. Saving as ACCDE Format, Importing and Exporting data with MS Excel Worksheet, Setting Database password, Backup Database, Analyse Table Tool. **(10 Hrs)**

Book of study:

1. C J Date- Introduction to Database Management Systems, Pearson Education
2. Michael R Groh- MS Access 2013 Bible, Wiley Publications

Semester III

Practical – III DATABASE CONCEPTS and MS-ACCESS

Practical :2 hrs. per week

1. Creation of database and setting of properties and other attributes such as primary key, foreign key and relationships
2. Creation of all type of queries through design view and wizard
3. Creation of forms and reports

Note:

A record with minimum fifteen exercises covering the main types of queries, forms and reports is essential

BA Economics –Computer Application -Semester IV

Unit 1: 4 Hrs.

Data Base Management System: basic concepts & structure, Data definition and data manipulation using MS ACCESS

Unit 2 : 10 hrs.

Visual Basic - Basic Concepts: Getting Started with Visual Basic advantages of VB, VB Development Overview, Designing and building the User Interface, creation of forms and adding controls to the form, Setting control properties, Writing Event Driven Code

Visual Basic Projects : Using different types of Projects, Project Explorer Window, VB procedures, subroutines & functions, Comments, Controlling Program Flow IF.. THEN...ELSEIF, SELECT...CASE, Loops-FOR...NEXT, DO, WHILE...WEND. Visual Basic Variables-Data Types Byte, Integer, Long, Single, Double, Currency, Boolean, Date, Object, String & Variant. Variable Declaration-Implicit & Explicit

Unit 3 : 8 Hrs.

Designing the User Interface : VB Form, Adding Forms, Form Properties, Setting Properties with Code, Using Form Drawing Methods, Loading & Unloading Forms, Form Events, Dialog Boxes-Message Box & Input Box, MDI Applications-MDI Parent Form/ChildForms.

Unit 4 : 8 Hrs.

Controls: Tool Box-Label, Text Box, Frame, Command Button, Check Box, Option Button, List Box, Combo Box, Horizontal Scrollbar, Vertical Scrollbar, Timer, Drive List Box, Directory List Box, File List Box, Line, Shape, Image Box, Picture Box, Data Control, OLE Control, Customizing Tool Box, Adding Controls to Forms, Naming Controls, Copying Controls, Control Arrays

Unit 5: 6 Hrs.

Mastering Menus and Toolbars : Menus, Menu Editor, Pop-up Menus, Customising Toolbar, Jet, DAO, Advanced Data Access Methods, ADO, OLEDB Working with other Applications & Database Access: Visual Basic Data Control, Creating Queries in Visual Basic

Books of study:

Peter Norton's Guide to Visual Basic 6 by Peter Norton and Michael Groh, Techmedia publications
Chapters: 1-7, 18, 19, (2007)

References:

1. Visual Basic 6 from the Ground Up by Gary Cornell, TataMcGraw-Hill (2008)
2. Programming in Visual Basic 6.0 by Julia Case Bradley and Anita C Millspaugh, Tata McGraw-Hill (2005)
3. Using Visual Basic 6 by Bob Roselman, Richard Peasley and Wayne Prunchiah, PHI

Practical LAB –IV

Practical : 2 hrs. per week

1. Designing User Interface using- List Box, Combo Box, Image and Picture Box, Directory-File-Drive list boxes, Rich text box, etc
2. Creating Menus- Creating Menus and writing Codes, Linking Menus with MDI forms.
3. Database Connectivity using Controls - Designing user interface with forms and controls and create database connectivity by DAO and ADO Control.
4. Creating Reports - Create reports using Data Report in VB

Semester IV

CA4CMP02 : Practical-III & IV external

Credit: 2

Scheme of Evaluation for Practical-III & IV external is as follows: (in Even Semesters)

Division of Marks (Practical - 3 hours External)

First program from practical –III - **15 marks**

Second program from practical – IV - **15 marks**

Viva Voce -**03 marks**

Lab Record (minimum of 15 Programs from each section) - **07 marks**

Total Marks - 40 marks

VIII. Syllabus – B.Sc. BIOINFORMATICS (Complementary paper)

SEMESTER I

CA1CMT01 : Computer Fundamentals

Module I

Fundamentals of Computers: Define computer, introduction to bit, byte, data, information, program, hardware and software, Generations of computers, categories and Types of Computer based on performance - Super Computer, Mainframe, Mini Computer & Micro Computers, Data & Process based – Analog, Digital & Hybrid Computers, Network service based – Server computer, workstation / client computer, Size & usage based - Desktop, Laptop, palmtop, Logical Organization of a Digital Computer, input unit ,Output unit ,Storage unit ,Arithmetic logic unit, Control unit ,CPU. Input devices – keyboard, point and draw devices, data scanning devices, output devices-monitors ,printers, plotters.

Module II -

Number systems- Binary, Octal and Hexadecimal, Converting from one number system to another- decimal to a new base, converting to decimal from another bases, converting from base other than ten to base other than ten, short cut method for converting from binary to octal, octal to binary, binary to hexadecimal and hexadecimal to binary, Computer Codes (BCD, EBCDIC, ASCII)

Module III

Boolean Algebra and Logic circuits- fundamental concepts of Boolean Algebra, Postulates of Boolean algebra, Theorems of boolean algebra, Logic Gates- AND, OR, NOT, NAND, NOR, XOR and XNOR, logic circuits, converting expression to logic circuit, The universal NAND gate, universal NOR gate. Exclusive OR and equivalence functions.

Module IV

Computer Software and Languages : define software, relationship between hardware and software, Types of software-system software -Application software, Logical system architecture, Software development steps. Machine language, Assembly language, High-level language. Define Program, purpose of program, algorithms, flowcharts, flowchart symbols, flowcharting rules, advantages and limitations of flowcharts.

Module V

Operating system: Definition, functions of an operating system, types of Operating system: (batch, multiprogramming, time sharing etc.), features of UNIX,LINUX,MS DOS,WINDOWS operating systems. Basic internet services- email, FTP, TELNET, WWW.

Book of Study:

1. Rohit Khoana-Introduction to Computer Science 2nd Edition, Pearson
2. P.K Sinha, Priti Sinha -Computer Fundamentals, Fourth edition , BPB Publication.

Reference:

1. V. Rajaraman and T. Radhakrishnan An introduction to Digital Computer design
2. Computer fundamentals by B. Ram
3. A First Course in Computers 2003, Saxena, VIKAS

BSc. BIOINFORMATICS - Semester V

CA5CMT02: WEB PROGRAMMING AND PERL

Module I

Introduction to internet, www, servers and browsers. Introduction to web programming languages-HTML, DHTML, XML,JAVASCRIPT etc..

Module II

Introduction to HTML-structures of HTML.Text formatting, Lists-ordered and unordered lists. Adding graphics to HTML documents, Tables, Linking documents, Frames, Forms.

Module III

Introduction to Javascript-Dta types, literals, operators and expressions, Placing text in browser

Module IV

Javascript programming constructs-conditional checking using if,switch,Loops-for, while, do while loops, Dialogue boxes, Functions in javascript.

Module V

PERL-Introduction , perl strings, scalar variables, arrays, hashes. Operators and decision making in PERL-if, while, until, for loop, foreach loop, string handling functions, regular expressions.

Book of Study:

1. HTML,DHTML,JAVASCRIPT<PERL CGI(REVISED EDITION) by IVAN BAYROOS
2. Perl-5 Hermann
3. Perl programming for Bio Informatics and Biologists. D. Curtis Jamison, Wiley India

BSc. BIOINFORMATICS - SEMESTER VI

CA6CMT03 : ALGORITHMS, DATASTRUCTURE AND COMPILER

Module I.

Different types of data structures, complexity of algorithms, big O notations. Arrays-bubble sort, linear search, binary search.

Module II.

Stacks and queues-organization and operation on stacks-conversion between infix, suffix and prefix representation, quick sort, heap sort, merge sort.

Module III:

Queues: Organization and operations on queues, lamination of simple queue – variations in a queue, circular queue double ended queue, Priority queue – Applications of queues.

Module IV:

Design and analysis technique-divide and conquer,dynamic programming,greedy algorithms,tree graph algorithms-breadth first search,depth first search, minimal spanning tree algorithms,shortest path.

Module V.

Concept of compiler and interpreter, different phases of compilation, lexical analyzer concept, finite state automata, regular expressions.

Reference:

- 1.Fundamental of Computer Algorithms By Horowitz Ellis, Sartaj Sahni, Computer Science press.
- 2.Introduction of Algorithms By Cormen,Chaker E Leiserson.
3. Data Structures Through C (A Practical Approach), G.S Baluja, Danapat Rai & Co
4. Fundamentals of Data Structures By Horowitz Ellis And Sartaj Sajni.
- 5.Principles of Compiler Design By Aho & Ulman.
- 6.Computer Algorithms Introduction To Design & Analysis By Saara Baase,Allen Van Gelder.
- 7.Data Structures And Algorithms By Alfred V Aho,John E Hopcroft,Jeffrey D Ullman.

Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

**Bachelor of Tourism and Travel Management
(BTTM)**

Course Co-ordinator: Dr. Robinet Jacob

Academic support by

**School of Tourism Studies
Mahatma Gandhi University
Kottayam, Kerala**

Bachelor of Tourism and Travel Management (BTTM)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Conventional Graduate and Post Graduate Programmes in addition to Diploma and Certificate Programmes which are very relevant to contemporary society. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University.

(a) Programme's mission & objectives:

Tourism today is one of the fastest growing industries in the world. It has made rapid advances in recent years. Tourism has emerged as a developmental activity at all levels – global, national, regional and local. International tourism is one of the most important and fastest growing aspects of global trade and assist with infrastructure development. It is the main stay of economy for many nations today. The aim of the Bachelor of Tourism and Travel Management (BTTM) Programme through Distance Learning Mode is to help students to develop skills for managing different functional divisions of tourism sector effectively. This Programme will provide the student with an understanding of the theory and practice of tourism and travel management.

Specific objectives of the Programme include:

- 1.To get a thorough understanding of the components of tourism industry and to acquire knowledge and information pertaining to tourism industry.
- 2.To help students acquire practical skills in all the major arenas of the industry.
- 3.To orient and equip students with Travel Management skills of the age.
- 4.To develop hospitality culture and behavior and to enhance student competencies.
- 5.To develop entrepreneurial skills among students.

(b) Relevance of the Programme with HEI's Mission and Goals:

A degree Programme in Tourism and Travel Management raises an opportunity for many students to select tourism as their career. This would definitely raise good manpower, entrepreneurs and researchers which are essential for the sustainable development of tourism. The Bachelor of Tourism and Travel Management (hereafter BTTM) Programme of Mahatma Gandhi University has been designed to bridge the gap of availability of trained manpower for the Tourism industry.

(c) Nature of prospective target group of learners:

A pass in Higher secondary (Plus two) or an equivalent examination is required to join the Programme. The broad objective of the Programme is to create professional managers, leaders and researchers in the tourism/hospitality industry. After successful completion of the Programme, the students should be competent to work in tour operation companies, travel agencies, Travel departments of corporate firms, Hospitality sector, Airlines, Cruise ships, Transport operators, Government agencies, Academics, Research, Consultancies, NGOs etc. Above all, the Programme encourages entrepreneurship also.

d) Appropriateness of Programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence:

This Programme places a strong emphasis on the professional development of the students. Such a qualification will enable and facilitate employment opportunities in different sectors of tourism like Tour operation companies, travel agencies, Travel departments of corporate firms, Hospitality sector, Airlines, Cruise ships, Transport operators, Government agencies, Academics, Research, Consultancies, NGO's etc. Above all, the Programme encourages entrepreneurship also. The successful completion of the Programme will help the students to understand the principles and practices of travel and tourism management and to acquire practical skills in all the major arenas of the industry. It will equip students with information technology skills of the age and to develop managerial skills and help in entrepreneurial development.

5. Instructional Design

5.1 Curriculum Design

The University is revising the curriculum and syllabi of its BTTM Programme once in every three years to ensure that the content is updated to reflect current academic knowledge and practice and also to ensure that the University used to provide the best learning experiences possible for students. As a part of curriculum design, the curriculum and syllabus revision workshop considered curriculum analysis of social needs, translating the needs into course, splitting the objectives into specific objectives, grouping the specific objectives into subjects, deriving the subjects from the classification, specifying enabling objectives, unitizing each subject matter, specification of required time and syllabus formulation. The curriculum of BTTM has been prepared by considering the challenges of offering the Programmes through Distance Mode. The Curriculum and syllabus of BTTM Distance Mode is same as the Programme of Regular Course.

5.2 Programme Details

**CONSOLIDATED SCHEME AND SYLLABUS OF BTTM
(BACHELOR OF TOURISM AND TRAVEL MANAGEMENT)**

Pattern: Model III

Total credits: 120

Course Code	Semester And Title of Courses	Course Category	Contact Hrs	Credi	Marks	
					Internal	External
	Semester-I					
DEN1CC01	Common Course English I	Common	12	4	20	80
DTTICRT01	Methodology for tourism	Core	9	3	20	80
DTTICRT02	Cultural Heritage of India	Core	12	4	20	80
DTT1CRT03	Principles of Management	Core	12	4	20	80
DTT1CRT04	Economics and Banking for Tourism	Core	12	4	20	80
	Total		57	19	100	400
	Semester-II					
DEN2CC02	Common Course English II	Common	12	4	20	80
DTT2CRT05	Tourism Principles and Practices	Core	9	3	20	80
DTT2CRT06	Geography for Tourism	Core	12	4	20	80
DTT2CRT07	Accounting and Finance for Tourism	Core	12	4	20	80
DTT2CRT08	Tourism Resources of Kerala	Core	12	4	20	80
	Total		57	19	100	400

Semester-III						
DTT3CRT09	Tourism Products	Core	12	4	20	80
DTT3CRT10	Tourism Policy and Planning	Core	12	4	20	80
DTT3CRT11	Transportation Management	Core	9	3	20	80
DTT3CRT12	Management Information System for Tourism	Core	12	4	20	80
DTT3CRT13	Strategic Tourism Management & Entrepreneurial Development	Core	12	4	20	80
	Total		57	19	100	400
Semester-IV						
DTT4CRT14	Guiding Skills for Tourism	Core	12	4	20	80
DTT4CRT15	Travel Agency & Tour Operations	Core	12	4	20	80
DTT4CRT16	Computerized Office Management for	Core	12	4	20	80
DTT4CRT17	Basics of Business Communication	Core	12	4	20	80
DTT4CRT18	Human Resource Management	Core	12	4	20	80
DTT4OJP01	Industrial training & Report			1	100	
	Total		60	21	200	400

Semester-V						
DTT5CRT19	Indian Constitution & Civic Consciousness	Core	12	4	20	80
DTT5CRT20	E-Tourism	Core	12	4	20	80
DTT5CRT21	Airfares and Ticketing	Core	12	4	20	80
DTT5CRT22	Environmental Studies and Eco-Tourism	Core	12	4	20	80
DTT5OPT01	Public Relations & Tourism Journalism	Open Course	9	3	20	80
DTT5OPT02	Front Office Management					
DTT5OPT03	Introduction to Principles of Tourism					
	Total		57	19	100	400
Semester-VI						
DTT6CRT23	Tourism Marketing	Core	12	4	20	80
DTT6CRT24	Principles of International Business for	Core	12	4	20	80
DTT6CRT25	Hospitality Management	Core	12	4	20	80
DTT6CRT26	Web Designing and Online Business for	Core	12	4	20	80
DTT6CRT27	MICE Tourism	Core	12	4	20	80
DTT6STP02	Report on 15 days Study Tour Packages. To be prepared as per guidelines (National /International)		-	1	100	-
DTT6PRP01	Project/Dissertation	Project	-	2	20	80
	Total		60	23	220	480
	GRAND TOTAL		348	120	820	2080

5.3 Duration of the Programme

The normal duration of the Programme shall be three years consisting of six semesters.

5.4 Faculty and Support Staff Requirement

Course Co-ordinator

Dr. Robinet Jacob

Associate Professor & Head, School of Tourism Studies, Mahatma Gandhi University

Qualification: Master of Tourism Administration (MTA) Ph.D, M.S (Psychotherapy and Counseling),

IATA- UFTAA (Standard & Consultant Courses)

Teaching faculty

The two Common Courses in English have to be taught by teachers with a Master's degree in English along with other qualifications prescribed by the University. The Core Courses DTT1CRT01, DTT1CRT02, DTT2CRT05, DTT2CRT06, DTT3CRT09, DTT3CRT11, DTT4CRT14, DTT4CRT15, DTT5CRT21, DTT5CRT22, DTT6CRT23, DTT6CRT25 and DTT6CRT27 and all practical papers, and open course have to be taught by teachers with MTTM / MTA / MTM / MBA (Tourism) / MMH qualification and other qualifications prescribed by the University. The interdisciplinary core courses like DTT1CRT04, DTT2CRT08, DTT3CRT10, DTT4CRT17, DTT5CRT19 and DTT6CRT24 have to be taught by teachers MTTM/MTA/MTM/MBA(Tourism)/M.A Economics with the above qualifications prescribed by the University. The papers DTT1CRT03, DTT2CRT07, DTT3CRT13 and DTT4CRT18 have to be taught by teachers MTTM/MTA/MTM/MBA(Tourism)/MMH/MBA/MCom along with other qualifications prescribed by the University. The papers DTT3CRT12, DTT4CRT16, DTT5CRT20 and DTT6CRT26 have to be taught by teachers with MCA/Msc. Computer Science/Msc. IT along with other qualifications prescribed by the University.

Instructional Delivery Mechanisms

The duration of the BTTM Programme of study is three academic years with six semesters. There shall be at least 60 instructional hours in a semester. The duration of odd semesters shall be from June to October and that of even semesters from November to March.

Student Support Service Systems at SDE

Learner Support Centres are established for the students at different locations within the jurisdiction of the University to facilitate contact classes and practical sessions. Printed notes will be provided from time to time and online material would be uploaded. Students would also be offered support through online open resources.

In addition to this, the university has centralized resources to enable the student support activities in respect of Information Centre, Library with good collection of books and journals, Wi-Fi connectivity and Reprographic centre.

6. Procedure for Admissions, Curriculum Transaction and Evaluation

Admission

The admission notifications for BTTM Programme will be issued in leading national and regional dailies during June-July. The detailed information regarding admission is being given on the SDE website and on the admission website. Students seeking admission will have to apply online.

Minimum Eligibility for Admission

Eligibility for admission to the Programme is a pass in Higher Secondary Examination of the State or an examination accepted by the University as equivalent thereto.

Fee Structure

Rs.16000/- for full Programme.

Programme Delivery

The Programme is being delivered with the help of SLM and Personal Contact programmes. The SLM is being despatched to the students during each semester by hand or by post. And at the end of each semester assignments are given and the marks are included in the ESA.

Evaluation

The evaluation of the Programme will consist of two parts:

- (a) Continuous Evaluation (CE)
- (b) End Semester Evaluation (ESE)

The external theory examination of all semesters shall be conducted by the University at the end of each semester/year. Internal evaluation is to be done by continuous assessment. For all courses total marks of external examination is 80 and total marks of internal evaluation is 20. Case Study will be assessed out of 100 based on the Report submitted as per the guidelines provided.

Marks distribution for external and internal assessments and the components for internal evaluation with their marks are shown below:

Components of Internal Evaluation of theory Marks

Attendance	5
Assignment	5
Test papers (2)	10
Total	20

Components of External Evaluation of Project Marks

Dissertation (External)	50
Viva-Voce (External)	30
Total	80

Components of internal Evaluation of Project

Punctuality	5
Experimentation/data collection	5
Knowledge	5
Report	5
Total	20

Components of External Evaluation of Case Study/ Itinerary Preparation

Report	50
Viva-Voce (External)	30
Timely Submission	10
Knowledge	10
Total	100

Assignments:-Assignments are to be done from 1st to 4th Semesters. At least one assignment should be done in each semester for all courses.

Viva:- A student shall appear for Viva-voce in the 6th semester for each course.

Internal Assessment Test Papers: - Two test papers are to be conducted in each semester for each course. The evaluations of all components are to be published and are to be acknowledged by the candidates. The responsibility of evaluating the internal assessment is vested on the teacher(s), who teach the course. The results of the CE shall be displayed in SDE website. Complaints regarding the award of marks for CE if any have to be submitted to the Programme Coordinator within 15 working days from the display of marks.

A separate minimum of 40% marks each for internal and external (for both theory and practical) and aggregate minimum of 45% are required for a pass for a course. For a pass in a Programme, a separate minimum of **Grade D** is required for all the individual courses. If a candidate secures **F Grade** for any one of the courses offered in a Semester/Programme, **only F grade** will be awarded for that Semester/Programme until he/she improves this to **D Grade** or above within the permitted period. The CE and ESE ratio Students who complete the Programme with “D” grade in the Mahatma Gandhi University “Regulations for Under Graduate Programmes under Choice Based Credit System 2017” will have one betterment chance within 12 months, immediately after the publication of the result of the whole Programme All papers (theory & practical), grades are given **on a 7-point scale** based on the total percentage of marks (ISA+ESA).

7. Details of Library Resources

The students can also use the library resources available at the University Central Library and Learning Support Centers.

Mahatma Gandhi University Library and Information System consists of University Library, Libraries of the Schools and Libraries of the 4 Study Centres. The University Library was established in 1989. The University Library which is situated on the main campus and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area and consists of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The Library provides service from 8 am to 8 pm in three shift timings for its staff. The Library functions on an average of 345 days in a year. Reading space is provided on all the three floors housing the various sections of the library. The Library provides reading facility to visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016. The libraries of teaching departments are open during working hours of the Schools.

The University Library has a Library Advisory Committee. It is an 18 member committee with the Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, Bi-monthly Bibliography compilation and Literature Search Service are also available

The Library is a member of the INFLIBNET Centre, Ahmedabad as well as & DELNET (Developing Library Network). As a member of these networks, the Library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its online thesis digital library. The various department libraries too have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	School of Tourism Studies	1464

8. Cost Estimate of the Programme and the Provisions

Sl.No	Expenditure	Cost estimate for BTTM Programme (1000 students)
01	Pay and Allowance	23,00,000
02	Contact classes and evaluation	10,00,000
03	Course materials	11,00,000
04	Advertisement charges	30,000
05	Postage and telephone	15,000
06	Books and Periodicals	50,000
07	Miscellaneous	25,500
	Total	45,20,500
	Provisions (10%)	4,52,050
	Total	Rs. 49,72,550
		Cost per student per year=Rs. 4973/-

9. Quality Assurance Mechanism and Expected Programme Outcomes

9.1 Quality Assurance Mechanism

The SDE has devised the following mechanism for monitoring the effectiveness of the BTTM Programme to enhance its standards of curriculum, instructional design etc.

- (a) Established a monitoring Committee at the University level to develop and put in place a comprehensive and dynamic internal quality assurance system to enhance the quality of the Programmes offered through distance mode as per the norms and guidelines of the University Grants Commission (Open and Distance Learning) Regulations, 2017.
- (b) The SDE has an approved panel of experts for preparing SLM. The SLM prepared is being edited by the board of subject expert. The SLMs are developed with the approach of self explanatory, self-contained, self-directed, self-motivating and self-evaluating.
- (c) The SDE of the University has full time faculty members exclusively for coordinating the Programme and also has a panel of qualified guest teachers for counselling students and engaging in personal contact Programmes.

9.2 Expected Programme Outcomes

Towards the end of the Programme, students will be able to:

- Gain an understanding of travel and tourism industry and its operations;
- Will develop an entrepreneur skill in the travel and tourism industry.
- Will be able to pursue further (advanced) course in travel and tourism management;
- Will be able to apprehend and appreciate tourism marketing, tourism development planning, management and measurement,
- Develop a sustainable personality to match the required professional demand of the tourism sector.

MAHATMA GANDHI UNIVERSITY



PROGRAMME DETAILS, SCHEME, AND

SYLLABUS

BACHELOR OF TOURISM AND TRAVEL

MANAGEMENT

(B.T.T.M)

(2017-18 Admission onwards)

PREPARED BY BOARD OF STUDIES AND FACULTY OF SOCIAL SCIENCE

ACKNOWLEDGEMENT

There are many profound personalities whose relentless support and guidance made this syllabus restructuring 2017 a success. I take this opportunity to express my sincere appreciation to all those who were part of this endeavour for restructuring the syllabus UG course in Tourism Studies under MG University Kottayam.

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Dean- Faculty Social Science
MG University Kottayam

SCHEME AND SYLLABUS OF

BACHELOR OF TOURISM AND TRAVEL MANAGEMENT (BTTM)

INTRODUCTION

Tourism today is one of the fastest growing industries in the world. It has made rapid advances in recent years. Tourism has emerged as a developmental activity at all levels – global, national, regional and local. International tourism is one of the most important and fastest growing aspects of global trade and assist with infrastructure development. It is the main stay of economy for many nations today.

A degree programme in Tourism raises an opportunity for many students to select tourism as their career. This would definitely raise good manpower, entrepreneurs and researchers which are essential for the sustainable development of tourism. The Bachelor of Tourism and Travel Management (hereafter BTTM) programme of Mahatma Gandhi University has been designed to bridge the gap of availability of trained manpower for the Tourism industry.

AIMS AND OBJECTIVES OF THE PROGRAMME

The broad objective of the programme is to create professional managers, leaders and researchers in the tourism/hospitality industry. Specific objectives of the programme include:

1. To get a thorough understanding of the components of tourism industry and to acquire knowledge and information pertaining to tourism industry.
2. To help students acquire practical skills in all the major arenas of the industry.
3. To orient and equip students with Information Technology skills of the age.
4. To equip students with managerial skills and help in entrepreneurial development.
5. To develop hospitality culture and behavior and to enhance student competencies.

After successful completion of the programme, the students should be competent to work in tour operation companies, travel agencies, Travel departments of corporate firms, Hospitality sector, Airlines, Cruise ships, Transport operators, Government agencies, Academics, Research, Consultancies, NGOs etc. Above all, the programme encourages entrepreneurship also.

DURATION OF THE PROGRAMME

The programme shall be called BACHELOR OF TOURISM AND TRAVEL MANAGEMENT (BTTM).

The duration of the BTTM programme of study is three academic years with six semesters. There shall be at least 90 working days inclusive of examinations and a minimum of 450 instructional hours in a semester. The duration of odd semesters shall be from June to October and that of even semesters from November to March.

COURSES OF STUDY

Total number of Courses for the BTTM programme is divided in to the following:

- (a) Common Courses
- (b) Core Courses and
- (c) Open Course

Programme Duration	6 Semesters
Total Credits	120
Credits required from Common Course	08
Credits required from Core courses	109
Credits required from Open Course	03
Minimum attendance required	75%

There shall be two common courses on English, one each in the first and second semesters. There shall be an open course in the fifth semester with a choice of one paper from any other programmes or from the Physical Education department

Industrial Training Report and Study Tour Report:

For successfully completing the BTTM programme each student has to submit Industrial Training Report and Study Tour Report at the end of the fourth and sixth semesters respectively.

Industrial Training Report

Students shall be required to undergo two to three weeks of practical training during the Fourth semester in any tourism related organization (Travel agency/ star hotels/ airport etc) duly approved by the head of the Institution / Department. They shall be required to submit a comprehensive training report at the end fourth semester. The report will have an internal evaluation at the end of the semester.

Study Tour Report/ Case Study Report

Students are also necessary to participate in the national tour conducted by the Department or to do a case study of any tourist destination in Kerala with the prior approval of the Head of the Institution during the sixth semester. The tour programme should be for a period of up to a maximum of two weeks covering important destinations. A tour report or case study report must be submitted at the end of the sixth semester. The report will have internal evaluation only.

Project:

All students are to do a project in the area of core course as a group consisting a maximum of five students. The projects are to be identified during the 5th semester of the programme with the help of the supervising teacher. The report of the project in duplicate is to be submitted to the department at the 6th semester and are to be produced before the examiners appointed by the University. External project evaluation and Viva / Presentation are compulsory and will be conducted at the end of the programme during the sixth semester.

**CONSOLIDATED SCHEME OF BTTM (BACHELOR OF TOURISM
AND TRAVEL MANAGEMENT)**

Pattern: Model III

Total credits: 120

SCHEME AND SYLLABUS OF BTTM

Course Code	Semester And Title of Courses	Course Category	Hrs/Week	Credit	Marks	
					Internal	External
	Semester-I					
	Common Course English I	Common	5	4	20	80
TTICRT01	Methodology for tourism	Core	5	3	20	80
TTICRT02	Cultural Heritage of India	Core	5	4	20	80
TT1CRT03	Principles of Management	Core	5	4	20	80
TT1CRT04	Economics and Banking for Tourism	Core	5	4	20	80
	Semester-II					
	Common Course English II	Common	5	4	20	80
TT2CRT05	Tourism Principles and Practices	Core	5	3	20	80
TT2CRT06	Geography for Tourism	Core	5	4	20	80
TT2CRT07	Accounting and Finance for Tourism	Core	5	4	20	80
TT2CRT08	Tourism Resources of Kerala	Core	5	4	20	80
	Semester-III					
TT3CRT09	Tourism Products	Core	5	4	20	80
TT3CRT10	Tourism Policy and Planning	Core	5	4	20	80
TT3CRT11	Transportation Management	Core	5	3	20	80
TT3CRT12	Management Information System for Tourism	Core	5	4	20	80
TT3CRT13	Strategic Tourism Management & Entrepreneurial Development	Core	5	4	20	80
	Semester-IV					
TT4CRT14	Guiding Skills for Tourism	Core	5	4	20	80
TT4CRT15	Travel Agency & Tour Operations	Core	5	4	20	80
TT4CRT16	Computerized Office Management for Tourism	Core	5	4	20	80
TT4CRT17	Basics of Business Communication	Core	5	4	20	80
TT4CRT18	Human Resource Management	Core	5	4	20	80
TT4OJP01	Industrial training & Report	-		1	100	-

Semester-V						
TT5CRT19	Indian Constitution & Civic Consciousness	Core	6	4	20	80
TT5CRT20	E-Tourism	Core	6	4	20	80
TT5CRT21	Airfares and Ticketing	Core	5	4	20	80
TT5CRT22	Environmental Studies and Eco-Tourism	Core	4	4	20	80
TT5OPT01	Public Relations & Tourism Journalism	Open Course				
TT5OPT02	Front Office Management					
TT5OPT03	Introduction to Principles of Tourism		4	3	20	80
Semester-VI						
TT6CRT23	Tourism Marketing	Core	5	4	20	80
TT6CRT24	Principles of International Business for Tourism	Core	6	4	20	80
TT6CRT25	Hospitality Management	Core	5	4	20	80
TT6CRT26	Web Designing and Online Business for Tourism	Core	5	4	20	80
TT6CRT27	MICE Tourism	Core	4	4	20	80
TT6STP02	Study Tour/Case Study & Report	Field Study	-	1	100	-
TT6PRP01	Project/Dissertation	Project		2	20	80

Teaching faculty

The two Common Courses in English have to be taught by teachers with a master's degree in English along with other qualifications prescribed by the University. The core courses TT1CRT01, TT1CRT02, TT2CRT05, TT2CRT06, TT3CRT09, TT3CRT11, TT4CRT14, TT4CRT15, TT5CRT21, TT5CRT22, TT6CRT23, TT6CRT25 and TT6CRT27 and all practical papers, and open course have to be taught by teachers with MTTM / MTA / MTM / MBA (Tourism) / MMH qualification and other qualifications prescribed by the University. The interdisciplinary core courses like TT1CRT04, TT2CRT08, TT3CRT10, TT4CRT17, TT5CRT19, and TT6CRT24 have to be taught by teachers MTTM/MTA/MTM/MBA(Tourism)/M.A Economics with the above qualifications prescribed by the University. The papers TT1CRT03, TT2CRT07, TT3CRT13 and TT4CRT18 have to be taught by teachers MTTM / MTA / MTM / MBA (Tourism) / MMH / MBA / MCom along with other qualifications prescribed by the University. The papers TT3CRT12, TT4CRT16, TT5CRT20 and TT6CRT26 have to be taught by teachers with MCA / Msc. Computer Science / Msc. IT along with other qualifications prescribed by the University.

**DETAILED SYLLABUS OF BTTM PROGRAMME
SEMESTER 1
TT1CRT01 METHODOLOGY FOR TOURISM**

No. of credits – 3

No. of contact hours – 90 hours / 5 hours per week

Objectives:

1. To understand the tourism phenomena and the distribution of the components of tourism.
2. To learn the concept and importance of tourism in different sectors.

Module 1

Meaning and concept of tourism – Tourism – excursion – leisure and recreation – tourist– visitor & traveler – History, evolution and development of tourism, Ancient period – Early pleasure travel- concept of annual holiday- Transportation network-paid holiday and mass tourism- causes of rapid growth of tourism

Module 2

Significance of tourism – Social, environmental, political, economic – Forms and types of tourism, dimensions of international and domestic tourism – Components of tourism – distribution – Inter-relation between various segments – travel industry network – Elements of tourism

Module 3

Measurement of tourism-Need for measuring tourism-Importance of tourist statistics-Types of tourist statistics--Methods of statistical measurement- General problem of measurement

Module 4

Tourism development and state intervention – Leisure development – National economic goals – political legislation, equity and social needs, social investment, regulation and government controls, regional development

Module 5

International & National Tourism Organizations-
UNWTO, ICAO, IATA, PATA, UFTAA, TAAI, IATO

References:

1. Pran Nath Seth (2006) : Successful tourism Management , Sterling, NewDelhi (Vol. 1 & 2)
2. A.K Bhatia (2010) : International Tourism Management , Sterling, NewDelhi
3. A.K Bhatia (1997): Tourism Management & Marketing. Aph Publishing Corporations,
4. Cooper, Fletcher et al, (1993), Tourism Principles and Practices, Pitman.
5. P.N. Seth (2006) : Successful Tourism Development Vol.1 and 2, Sterling Publishers, New Delhi
6. Page, Stephen (2011) : Tourism Management, Routledge, London

SEMESTER 1
TT1CRT02 CULTURAL HERITAGE OF INDIA

No. of credits – 4

No. of contact hours – 90 hours / 5 hours per week

Objectives:

1. To familiarize the culture set up in India and its contribution to Tourism.

Module 1

Culture, civilization and heritage: meaning, definition and feature of Indian culture, Unity in diversity, assimilation and toleration.

Module 2

Indian culture through ages – a brief explanation about Indus valley civilization, Aryans. Rulers – Alexander, The Mauryas and Ashoka, Sungas , Guptas, Vardhanas,Rajputs and Marathas; Tamil Sangam – Chola, Chera, Chalukyas, Pandyas – art, architecture and temples

Module 3

Muslim Invasions – Delhi Sulthanate- Slave,Khilji,Tuglaque,Sayid and Lodhi Dynasties-Mughals in India

Module 4

Art and architecture under Mughals – painting and music – Persian and Hindi Literature – Fairs and Festivals- cultural synthesis

References:

1. Manoj Dixit & Charu Sheela (2010) :Tourism Products , NewRoyalBooks, Lucknow
2. Jacob, Robinet (2009): Indian Tourism Products; Abhijeet Publications, New Delhi
3. Jacob, Robinet; Mahadevan P; Sindhu Joseph (2012) ; Tourism Products of India – a National Perspective; Abhijeet Publications, Ne w Delhi
4. I C Gupta – Tourism Products of India
5. A L Basham (2007) : The Wonder that was India , Surjeet Publication , New Delhi
6. S A A Rizvi (1987) : Wonder that was India – Vol 2, Sidgwick & Jackson, London

SEMESTER 1
TT1CRT03 PRINCIPLES OF MANAGEMENT

No. of credits – 4

No. of contact hours – 90 hours / 5 hours per week

Objectives:

1. To understand the various functional areas of management in tourism industry
2. To enable the student to analysis the management process in tourism organization

Module 1

Management – concept, nature – Development of management – Taylor’s scientific management – Management functions – Roles and responsibilities of manager

Module 2

Planning – Nature, Process, types, and steps – steps in planning – mission – Objective – MBO – Procedure – Rule

Module 3

Organizing – Concept – Steps in organizing – span of management – authority & responsibilities – Delegation and decentralization – forms of organization structure – Line and staff structure – Staffing – recruitment – Selection – training

Module 4

Directing – Nature – Significance of motivation – Maslow’s need hierarchy theory – Herzberg’s motivation Hygiene theory – Communication Process – net work, grape wine , barriers of communication

Module 5

Controlling – Nature –Steps – Management by Exception

References:

1. L.M. Prasad (2007) : Principles and Practices of Management - Sultan Chand & Sons , New Delhi
2. S.K. Chakravarthy : Business Ethics-, IIM, Calcutta
3. Koontz O’Donnel : Management and Principles
4. Harold Koontz & Heinsz Weirich (2010) : Essential of Management , Tata MacGraw Hill , New Delhi
5. Beunet, Roger: Improving Training Effectiveness
6. Peter F. Drucker (2007) : Practice of Management , Elsevier, New york
7. Robbins, Stephens P (2010) : Organisational Behaviour, Pearson India, New Delhi

SEMESTER 1
TT1CRT04 ECONOMICS AND BANKING FOR TOURISM

No. of credits – 4

No. of contact hours – 90 hours / 5 hours per week

Objective:

To obtain basic idea relating to economics and banking

Module 1

Definition and Scope of Managerial Economics – Role in Decision Making Process
– Economic Systems

Module 2

Demand – Types of Demand – Elasticity of Demand – Price and Income elasticity –
Determinants

Module 3

Cost analysis – Cost Concept – Break Even Analysis – Cost Control and Reduction

Module 4

Functions of Commercial Banks- RBI- Credit Creation - Weapons of credit control –
modern services of Banks – Teller system – credit cards etc – Different types of
accounts

Module 5

Modern Technology in banking – Electronic Fund Transfer system – Cheque processing
– MICR Cheques

References:

1. P.L. Mehta(2005); Managerial Economics: Analysis, Problems and Cases, Sultan Chand, New Delhi
2. Varshney and Maheshwari (1994); Managerial Economics , Sultan Chand, New Delhi
3. D. Salvatore (2014); Managerial Economics , Oxford University Press, New Delhi
4. Pearson and Lewis; Managerial Economics
5. G.S. Gupta (2011); Managerial Economics, Tata McGraw-Hill Education, New Delhi
6. Krishnan Kamra (2006); Economics of Tourism , Kanishka Publishers, New Delhi
7. Ashif Iqbal Fazil, S. Husain Ashraf; Tourism in India (planning & development)
8. Mario D'Soula; Tourism development and Management
9. Kuml Chattopadyay (1995); Economic Impact of Tourism Development , Kanishka Publishers, New Delhi

SEMESTER 2
TT2CRT05 TOURISM PRINCIPLES AND PRACTICES

No. of credits – 3

No. of contact hours – 90 hours / 5 hours per week

Objectives:

1. To realize the potential of tourism industry in India
2. To understand various elements of tourism management
3. To evaluate the role of various organization of tourism

Module 1

Growth and development of tourism in India – Travel and Travelers in ancient India, Travel during Medieval age, the period of European trade, tourism in Independent India

Module 2

Tourist motivation – Factors – types – push and pull factors – Determinants of tourism – psychological, cultural, economic, personal and social; Barriers to travel

Module 3

Impact of tourism – Meaning, positive and negative impacts of tourism – Social, cultural, economic and environmental impacts

Module 4

International conventions – Warsaw convention 1924, Chicago convention 1944, UN declaration, and Manila declaration (general details only)

Module 5

Profile of Indian Tourism- Nature, Characteristics and Components of Indian Tourism- Role of Department of Tourism-NTO and ITDC in Promoting Indian Tourism

References:

1. Pran Nath Seth (2006) : Successful tourism Management , Sterling, NewDelhi (Vol. 1 & 2)
2. Mill and Morrison, (1992), The Tourism System: An Introductory Text, Prentice Hall. London
3. Cooper, Fletcher et al, (1993), Tourism Principles and Practices, Pitman.
4. Bhatia, A.K. (2010) : International Tourism Management, Sterling, New Delhi
5. Burkart and Medlik, (1981), Tourism: Past, Present and Future, Heinemann, ELBS.
6. Christopher.J. Hollway; Longman (2012) ; The Business of Tourism, Pearson , New York
7. Babu et al., Tourism Development: Sage publishers , New Delhi

SEMESTER 2
TT2CRT06 GEOGRAPHY FOR TOURISM

No. of credits – 4

No. of contact hours – 90 hours / 5 hours per week

Objectives:

1. To understand different geographical features of tourism.
2. To understand the process and linkage responsible for generation of tourism flows.

Module 1

Introduction to Geography – Definition, scope and contents of geography of tourism – Major land forms – Mountains, Plains, Plateaus and valleys

Module 2

Geographical determinants – diversities and disparities – typology and areas of linkages flow and orientation – Impact of weather and climate on tourism, seasonal rhythm; Geographical components and tourism development

Module 3

Geography of India: - Physical features, topography and drainage, forest wealth, seasonality and destinations – seasons and climate seasonality in tourism.

Module 4

Maps: Types of maps – map reading skills –Use of GIS, GPS and Remote Sensing.

References:

1. Christopher P Cooper (1993); Geography of Travel and Tourism, Butterworth-Heinemann, London
2. B Boniflce and C Cooper (2005); World Wide Destinations, Elsevier
3. Williams S (1998); Tourism Geography, Routledge, London
4. L E Hudman & R H Jackson (2003) : Geography of Travel & Tourism , Thomson/Delmar Learning, New Delhi
5. Philip G Davidoff (1995); Geography of Tourism ,Prentice Hall, New York
6. Jacob, Robinet (2009): Indian Tourism Products; Abhijeet Publications, New Delhi
7. Jacob, Robinet; Mahadevan P; Sindhu Joseph (2012) ; Tourism Products of India – a National Perspective; Abhijeet Publications, Ne w Delhi

SEMESTER 2
TT2CRT07 ACCOUNTING AND FINANCE FOR TOURISM

No. of credits – 4

No. of contact hours – 90 hours / 5 hours per week

Objectives:

1. To know the basic concept of accountancy and its relation to tourism.
2. To be able to understand the key facts of financial management.
3. To integrate and use the concept of accounting and financial management in tourism.

Module 1

Finance – Introduction, meaning, nature, scope and functions of finance – Application of financial management in tourism industry

Module 2

Accounting – Meaning – definition – nature – scope – types of accounting functions – Classification of accounting – importance of accounting in tourism industry

Module 3

Principles of accounting – Accounting concepts – double entry system of accounting – journal – ledger – trial balance

Module 4

Preparation of final accounts without adjustment – Trading account – Profit and loss account – balance sheet of a sole trading concern

References:

1. Grewal, T.S (2000) ; Double Entry Book Keeping , Sultan Chand & Sons, New Delhi
2. R.LGupta (1983); Advanced Accounting ,Sultan Chand & Sons, New Delhi
3. Jain & Narang (2001); Advanced Accounting ,Kalyani Publishers
4. S.N Maheshwary (1995); Advanced Accounting , Vikas Publishing House Private, Limited, New Delhi
5. S.A. Siddiqui (2011); Comprehensive Accountancy,Laxmi Publications, New Delhi
6. N.D. Kapoor (1996); A Complete Course in Accounting Volume – I,Pitambar Publishing, New Delhi
7. R.C. Chawla and C. Juneja; Double-Entry Book-Keeping
8. T.S. Grewal (1978); Introduction to Accountancy, S Chand, New Delhi

SEMESTER 2
TT2CRT08 TOURISM RESOURCES OF KERALA

No. of credits – 4

No. of contact hours – 90 hours / 5 hours per week

Objectives:

To study in brief important Tourist destinations in Kerala as well as the rich cultural heritage of the state.

Module 1

Mythological origin of Kerala- Christianity in Kerala- Cheraman Perumal Juma Masjid- Jainism and Buddhism in Kerala- Pre historic remains in Kerala

Module 2

Ancient Trade and Cultural Contacts- caste hierarchy- Marumakkathayam- English colonialism- Cultural progress in the Native states of Travancore, Cochin and Malabar- Kerala Renaissance and Anti colonial Movements

Module 3

Kerala geographic Location- Physical features of Kerala- Rivers, Lakes and Back waters- Fairs and Festival of Kerala- Boat Races- Ayurvedic Tradition of Kerala- Climate of Kerala

Module 4

Pilgrim Centers in Kerala- Major Museums and Art galleries- Bellads of Kerala- Wild Life Sanctuaries and Bird Sanctuaries in Kerala- Eco tourist Destinations in Kerala

Module 5

Kerala- Capital- Districts - seaports in Kerala- Airports in Kerala- Tourist attractions of each Districts

References:

1. Rajan Gurukkal, Raghava Warriar - A Cultural History of Kerala- Vol – 1
2. Lonely Planet (2000)- Kerala , Lonely Planet
3. A Sreedhara Menon (2008): Cultural Heritage of Kerala , D C Books, Kottayam
4. Robinet Jacob (2012): Health tourism and Ayurveda , Abhijeet Publications, New Delhi
5. Tourism Products of Kerala; Mahatma Gandhi University, Kottayam
6. Authentic Handbook of Kerala; IPRD Department, Government of Kerala

SEMESTER 3
TT3CRT09 TOURISM PRODUCTS

No. of credits – 4

No. of contact hours – 90 hours / 5 hours per week

Objectives:

1. To familiarize different types of tourism products in India.
2. To understand the cultural tourism resources in India.

Module 1

Concept, types and characteristics of tourism products, elements of tourism products – geographical elements, Peter's inventory of tourist attractions

Module 2

Tourism resources of India – Types, features, and diversities of Indian tourism Products

Module 3

Religious Tourism in India – Hindu, Buddhist, Jain, Sikh, Islam and Christian pilgrim centers

Module 4

Performing arts – dance forms of India, music and musical instruments, Handicrafts of India, fairs and festivals

Module 5

Natural Tourist resources –National parks ,Wild life sanctuaries ,Beaches and Islands, waterfalls; Desert tourism; Desert safaris and festivals

References:

1. Manoj Dixit & Charu Sheela (2010) ; Tourism Products ,NewRoyalBooks Lucknow
2. IC Gupta – Tourism Products of India
3. A L Basham (2007) : The Wonder that was India ,Surjeet Publication, New Delhi
4. S A A Rizvi (1987) : Wonder that was India – Vol 2 ,Sidgwick & Jackson, London
5. Jacob, Robinet, Mahadevan P & Sindhu Joseph (2012); Tourism Products of India – a National Perspective, Abhijeet Publications, New Delhi.
6. Robinet Jacob (2012): Health tourism and Ayurveda , Abhijeet Publications, New Delhi

SEMESTER 3
TT3CRT10 TOURISM POLICY AND PLANNING

No. of credits – 4

No. of contact hours – 90 hours / 5 hours per week

Objectives:

To learn about policy making and planning in tourism

Module 1

Tourism policy – Definition – Need for Tourism policy – Initiatives – National Committee on Tourism (NCT-1988) – First Tourism Policy – Objectives (1982) Recommendations – National Action Plan 1992 – Objectives – Tourism Policy 1997 – Features – National Tourism Policy 2002 – National Tourism Policy 2015 – Kerala Tourism Policy – Tourism Policy – General Features – Kerala Tourism Policy 2012

Module 2

Tourism Planning – Definition, Planning Process – Importance of planning, different phases of planning – Levels and Types of Tourism Planning – International Level, National Level, Regional Level

Module 3

Role of Public and Private Sector in tourism planning– Govt. Sector – Reasons of planning – Economic, Social and Cultural, Environmental Political – Private Sector Investment in Tourism Industry (Travel Agency, Airlines, Hotels)

Module 4

Tourism & Five Year Plans(from 10th plan onwards),Introduction of Neethi ayog in India

References:

1. Rattandeeep Singh (2004) ; Hand Book of Environmental Guide Lines for Indian Tourism; ; Kanishka Publishers, New Delhi
2. Pran Nath Seth (2006) ; Successful Tourism Management; Sterling Publishers, New Delhi
3. J.K. Sharma (2004); Tourism Planning and Development a new perspective; Kanishka Publishers, New Delhi
4. Dr. M.R. Dileep ; Tourism Concepts & Practices; KITTS Publication

SEMESTER 3
TT3CRT11 TRANSPORTATION MANAGEMENT

No. of credits – 3

No. of contact hours – 90hours / 5 hours per week

Objectives:

1. To learn about the various types of transportation networks
2. To understand the relationship between transportation and tourism

Module 1

Introduction to Tourist Transportation: Development of means of transport - Tourist transport system – Leiper’s frame work – Role of transport in tourism – Up market and Low budget travelers

Module 2

Surface Transport: Road transport system in India – types of roads – Public transportation system; Rail Transport: General information about Indian Railways, Brief History –Classes of Journey – Types of trains & tracks – Railway Reservation modes – circle trip – Talkal – i-ticket – e-ticket - luxury trains, hill trains, IRCTC - Eurail Pass, Indrail pass.

Module 3

Airport Layout –Airfield – Terminal Area – Flight support Area. Major Airlines and Airports in India - Airport facilities for passengers; Ground handling; Departure formalities – Arrival Formalities – Customs Channels

Module 4

Water Transport: Categories of water transport (Coastal shipping, Inland Waterways, Foreign going traffic) – National waterways. Cruise liners – Types.

Module 5

Logistics Management: Origin and Definition – Types of Logistics; Importance and the need of Supply Chain

References:

1. Jagmohan Negi (2014); Travel Agency and Tour Operations, Sterling publishers, New Delhi
2. Bhatia, A.K (2010)., International Tourism Management, Sterling, NewDelhi
3. Seth, P.N., (1999) Successful Tourism Management (Vol 1 &2),Sterling, NewDelhi
5. G Raghuram & N Rangaraj (2001), Logistics and Supply Chain Management - Cases and Concepts, Allied Publishers, New Delhi
6. Martin Christopher, Logistics & Supply Chain Management: Creating Value-Adding Networks, FT Press.
7. Janat Shah, Supply Chain Management (2009): Text and Cases, 1st Edition, Pearson. New Delhi

SEMESTER 3
TT3CRT12 MANAGEMENT INFORMATION SYSTEM FOR TOURISM

No. of credits – 4

No. of contact hours – 90 hours / 5 hours per week

Objectives:

1. To enable the students to work with different computation process and analysis.
2. To understand the need of MIS in tourism related industries.

Module 1

Introduction to management information system – Definition characteristics management information system nature and scope of MIS

Module 2

Structure and classification of MIS: Physical components – decision support system – executive information system – transaction processing system – office automation system – Business expert system – financial marketing and human resource information system

Module 3

Information and system concepts – Types of information – kinds of system – Boundary – Interface and black box – Elements of system

Module 4

Data base – Objectives of database – advantage and disadvantages of database – database management system

References:

1. Gordan Davis (2001); Management information system; Tata McGraw-Hill Education, New Delhi
2. James A.O. Brien (2013); Management information system; Tata McGraw-Hill Education, New Delhi
3. Jerome Kantre (1984) ;Management with information; Prentice-Hall, New Delhi
4. D.P. Goyal (2006) ; Management information systems: managerial perspectives; Macmillan, New Delhi

SEMESTER 3
TT3CRT13 STRATEGIC TOURISM MANAGEMENT AND
ENTREPRENEURIAL DEVELOPMENT

No. of credits – 4

No. of contact hours – 90 hours / 5 hours per week

Objective:

To develop the necessary input for inculcating new ideas for creating new ventures

Module 1

Entrepreneurship – Definition – Types of entrepreneur – competencies entrepreneur – Developing competencies

Module 2

Small scale entrepreneur – characteristics and relevance – Role of entrepreneurs in SSE and economic development – problem and support needs of SSE – Institutional set up for development of SSC

Module 3

Financial management issues in SSE – Managing asset and liabilities –Evaluating performance – Managing family enterprise – definition, issues and problems, strategies

Module 4

Strategy – concept – Nature and characteristics of strategic decision – level of strategy – benefits of strategic management

Module 5

Strategic management process – Analysis models – Bccs model – SWOT analysis – Types of strategies – stability – growth – retrenchment – combination

References:

1. Drucker P.F (2004); Innovation and Entrepreneurship; Elsevier, UK
2. Sexton. D.L & Smilor. R.W (2007); The Art and Science of Entrepreneurship;Springer Science & Business Media
3. Drucker; All Books that are Entitled Strategic Management, Business;
4. Glueck & Robinson; Strategic Management;

SEMESTER 4
TT4CRT14 GUIDING SKILLS FOR TOURISM

No. of credits – 4

No. of contact hours – 90 hours / 5 hours per week

Objectives:

To acquire an in-depth knowledge about the profession of tour guiding and escorting

Module 1

Introduction to Guiding and escorting- Meaning; concept and types of tour guide, duties and responsibilities of Guides and Escorts , various role of tour guide, the business of guiding, organizing a guiding business

Module 2

The guiding techniques- leadership and social skills, presentation and speaking skills, The guide's personality, moments of truth, the seven sins of guide, the service cycle, working with different age groups, working under difficult circumstances

Module 3

Guest relationship management- Handling emergency situations- medical, personal, official, VISA/passport, Death, handling guest with special needs/different abilities; Skills required for adventure tours; Knowledge of local security, route chart; Personal hygiene and grooming, tour responsibilities, checklist, leading a group, code of conduct.

Module 4

Conducting tours: Pre tour planning, modes of transportation, conducting various types of tours, understanding clients need, establishing good service security measures, relationship with fellow guides, Coordination with hospitality institutions; points to remember while guiding and escorting

References:

1. Dennis L Foster – Introduction to Travel Agency Management
2. Pat Yale(1995); Business of Tour Operations, Longman Scientific & Technical, New Delhi
3. Pond K L(1993) ; The professional guide: Dynamics of tour guiding,

SEMESTER 4
TT4CRT15 TRAVEL AGENCY AND TOUR OPERATION BUSINESS

No. of credits – 4

No. of contact hours – 90hours / 5 hours per week

Objectives:

1. To understand the inner working mechanism of the travel agency.
2. To understand various skills necessary for tour operation business.

Module 1

Travel trade – History and development of travel agency, functions, travel agent, types, responsibilities – source of income of a travel agent- setting up of travel agency; Role of IATA and approval – approval from the government – Bill settlement Plan (BSP)

Module 2

Travel agency and tour operations – Difference between travel agent and tour operator – linkages and arrangements with hotel – travel agencies and airlines – tour escorts and guides

Module 3

Organization structure of a travel agency – Information, counseling, ticketing, documentation, liaisoning, staffing, directing, planning, organizing, and controlling

Module 4

Tour operation – concept and nature of tour operation – functions – types of tour operations – type of tour operators

Module 5

Itinerary development – Meaning and definition – types of itineraries – reference tool for itinerary preparation – development of effective itinerary

(Note: Practical work of itinerary preparation, tour costing, filling of passport application and visa forms should be done among the students.)

References:

1. Jagmohan Negi (2006); Travel Agency and Tour Operations, Kanishka Publishers, New Delhi
2. Mohinder Chand (2009); Travel Agency and Tour Operations: An Introductory Text ,Anmol Publications Pvt. Limited, New Delhi
3. Dennis L Foster – Introduction to Travel Agency Management
4. Pat Yale(1995); Business of Tour Operations, Longman Scientific & Technical, New Delhi
5. Laurence Stevens(1990); Guiding to Starting and Operating Successful Travel Agency, Delmar Publishers
6. Jane Archer,(2006); Manual of Travel Agency Practice – Butterworth Heinemann Pub, London
7. Betsy Fay ; Essentials of Tour Management –Prentice Hall; Mark Mancini: Conducting tours
8. Mark Mancini (1996); Conducting tours, Delmar Thomas, New York
9. H A Rogers and J A Slinn- Tourism Management of Facilities
10. Lickorish L J and Kershaw A G – The travel trade, practical press

SEMESTER 4**TT4CRT16 COMPUTERIZED OFFICE MANAGEMENT FOR TOURISM****No. of credits – 4****No. of contact hours – 90hours / 5hours per week****Objectives:**

To make the students learn the basics of computers and its use in office management

Module 1

Introduction to Computer – Classification of computer – Historical development of computer – Computer generation – Input Output devices – Memory units – Storage devices

Module 2

Word processing – M S Word – Creating, Modifying, Saving documents – Creating header and footer – Creating form letters for mail merge

Module 3

Spread sheet – MS Excel – Understanding the work book window – Entering tables – Values and formulas in to call – Formatting work sheet – Creating charts.

Module 4

MS PowerPoint – Introduction – Creating presentations – Formatting background, adding sounds – Slide show, Slide sorter – Setting animations – Slide Transition – Setting intervals

References:

1. Introduction to Computers - Leon, 1/e Alexis Leon & Mathews Leon, Vikas Publishing.
2. Introduction to Computers & MS Office by Sanjay Saxena, Vikas Publishing.
3. Computer Fundamentals (Sixth Edition), Pradeep K. Sinha, Priti Sinha, Published by BPB Publications, 2007
4. Ms-Office 2007 by Gini Courter & Annette Marquis BPB Publications
5. Special Edition Ms Excel 2007 by Patrick Blattner, Louie Utrich. Ken Cook & Timothy Dyck Prentice Hall India Pvt. Ltd.

SEMESTER 4
TT4CRT17 BASICS OF BUSINESS COMMUNICATION

No. of credits – 4

No. of contact hours – 90 hours / 5 hours per week

Objectives:

1. To learn the basics of communication needed for tourism industry
2. To understand the basics of business correspondence

Module 1

Introduction to Business Communication, Basic Forms of Communication, Process of Communication, 7 C's of communication; Mal-functions of communication, Business Etiquette, Technology of Business Communication

Module 2

Conduct of Meeting- Agenda, Notice, Notes, Minutes, Office Memorandum, Office Orders, Press Release; Business Letter Writing-Need, functions & Kinds, Layout of letter writing, Types of letter writing; Report writing

Module 3

Non-verbal communication: Facial expressions, gazes, stare; Body language, touching; Micro expressions, cognitive factors. Attribution;

Module 4

Social behavior: features and factors; Personality – traits and characteristics; Group behavior; leadership in a group; interpersonal relations

References:

1. Phillip, Louis (1975) ; Organizational Communication: The Effective Management,Grid, Incorporated
2. Raman, Meenakshi and Sharma, Sangeeta (2012); Technical Communication: Principles and Practice,OUP India, New Delhi
3. Ross, Robert D (1977); The Management of Public Relations ,Wiley, London
4. Stephenson, James (1937); Principles and Practice of Commercial Correspondence

SEMESTER 4
TT4CRT18 HUMAN RESOURCE MANAGEMENT

No. of credits – 4

No. of contact hours – 90 hours / 5 hours per week

Objectives:

1. To learn various managerial skills necessary for the success of tourism industry
2. To learn the students about the procedures and practices applied for the manpower training and placement

Module 1

Human resource management – Scope – functions and objectives – personnel management and HRM evolution – HRM – requirement of HRM in tourism

Module 2

Human resource planning – meaning and definition – information of HRP – process of HRP – requisites for successful HRP – barriers to HRP – job analysis – job design

Module 3

Recruitment – Recruitment process – selection – selection process – methods selection – induction – placement

Module 4

Training and Development – Nature and importance of training and development – HRD in tourism – techniques of training

Module 5

Performance Appraisal – appraisal process – job evaluation – job evaluation process – compensation influencing factors – components of remuneration – Absenteeism and Labour turn over – labour welfare – wage and salary Administration

References:

1. K. Aswathappa (1999); Human Resources and Personnel management – text and cases; Tata McGraw-Hill, New Delhi
2. Aswathappa K (2008), Organisational behaviour, Himalaya Publishing. New Delhi
3. Management of Human Resources - text and cases; Rakesh. K. Chopra
4. Human Resources Management; C.B. Gupta
5. Human Resources Development; Dr. P. C. Tripathi.
6. Railey M (2014), Human Resource Management, Butterworth Heinemann.London
7. M Boella, S Goss-Turner, Human Resource Management in the Hospitality Industry: An introductory guide, Butterworth-Heinem

SEMESTER 5
TT5CRT19 INDIAN CONSTITUTION AND CIVIC CONSCIOUSNESS

No. of credits – 4

No. of contact hours –108/6 hours per week

Objectives:

1. Enable the students to understand the various provision of Indian constitution
2. To impart civic consciousness among students.

Module 1

Indian Constitution – Preamble of the Constitution – Sources and Out Standing Features of the Constitution- Philosophy of Indian Constitution

Module 2

Indian Administration – Legislature, Executives, Judiciary; Indian Parliament-Rajya sabha, Lok Sabha-Functions of Parliament; Indian President – Powers and functions of President-Procedure for the President Election- Jurisdiction of Supreme court

Module 3

Indian Citizenship Act- Method of Acquisition and Loss of Indian Citizenship- Right to Information Act 2005

Module 4

Fundamental Rights – Fundamental Duties- Directive Principles of State Policy

Module 5

Constitutional Amendment and its Procedure; Important Amendments

References:

1. D.D. Basic (2008): An Introduction to the constitution of India, New Delhi, Prentice, Isacc:
2. M.V. Pylee (1998) : An Introduction to the constitution of India, Vikas Publishing House, New Delhi
3. Jojo Mathew & Manish K. Gulam (2009 : Indian Polity & constitution, career classics, New Delhi
4. K.R. Acharya: Indian Govt & Politics
5. Brij Krishore Sharma (2005): Introduction of India, Prentice Hall: New Delhi

SEMESTER 5
TT5CRT20 E – TOURISM

No. of credits – 4

No. of contact hours – 108HRS/6 hours per week

Objectives:

1. To study in detail the use of information technology in tourism organizations.
2. To learn how modern technology has revolutionized the travel and tourism industry.

Module 1

Internet, wireless technology, Digital convergence; Cyber ethics, cyber crime, cyber threats, cyber security, privacy issues, cyber laws, cyber addictions, health issues- guide lines for proper usage of computers, internet and mobile phones

Module 2

Internet as a marketing tool, Online reservations, online airport check in, Credit cards and net banking, Digital security in Tourism – CCTV , Smart Cards - Access control – security chips - biometric security systems, biometric passport/e-passport

Module 3

Search Engine Optimization (SEO), Search Engine Marketing (SEM), Social Media Optimization (SMO); Multiple Platforms: - Desktop, Laptop, Tablets, Mobile, Video, Social Media; Online Reputation Management: - Owned Media, Earned Media and Paid Media

Module 4

History and development of CRS, Introduction to GDS (Galileo / Amadeus) - Online ticketing: Travel portals and examples as case study, trends, Disintermediation, Internet as a tool for tourism promotion

References:

1. Technology in Action, Pearson
2. V. Rajaraman (2013), Introduction to Information Technology, Prentice Hall , New Delhi
3. Alexis Leon & Mathews Leon, Computers Today, Leon Vikas
4. Peter Norton (2004), Introduction to Computers,6e,(Indian Adapted Edition) , McGraw-Hill Education, New Delhi
5. Alexis & Mathews Leon (2009), Fundamentals of Information Technology, Vikas Publishing House Pvt Limited, New Delhi
6. George Beekman, Eugene Rathswohl (2003), Computer Confluence, Prentice Hall, New Delhi
7. Barbara Wilson (1996); Information Technology: The Basics, Thomson Learning
8. Ramesh Bangia, Learning Computer Fundamentals, Khanna Book Publishers

SEMESTER 5
TT5CRT21 AIR FARES AND TICKETING

No. of credits – 4

No. of contact hours – 90 hours / 5hours per week

Objectives:

To study the international airfares, and to equip the students the mechanism of airfare ticketing exercise. *(All the fares and NUC's should be provided in the question paper itself).*

Module 1

Airline Terminology – Airports and offline stations served by airlines – abbreviations used in airlines, its fleet – types of journeys (OW, CT, RT) – Global indicators.

Module 2

Air Geography – IATA areas, sub areas, sub regions. Time calculation: GMT variation, concept of standard time and daylight saving time, calculator of elapsed time, flying time and ground time.

Module 3

Passenger ticket: Different coupons – ticketing instruction and conjunction tickets – Open tickets, E-tickets and its advantages – Miscellaneous charges order (MCO) and Prepaid Ticket Advice (PTA)

Module 4

Familiarization with OAG: Three letter city and airport code, airline designated code, minimum connecting time. Familiarization with Air tariff: currency regulation, NUC conversion factors, general rules. Familiarization with TIM: Passport, Visa, Custom Regulations, Health Regulations and Airport Tax, Passenger needing special attention.

Module 5

Introduction to fare construction: Air fare-types, basic elements of airfare. Fare construction formula and basic steps using mileage principles for One Way (OW), Return Trip (RT) and Circle trip journey (CT) with Extra Mileage Allowance (EMA), Extra Mileage Surcharge (EMS), HIP check, Back Haul Minimum Check (BHC) and CTM Check

References:

1. Jagmohan Negi (2005), 'Air travel Ticketing and Fare construction', Kanishka, New Delhi, 2005
2. OAG, Consultant, IATA, Geneva
3. Study Kit for IATA/UFTAA
Foundation Course: - Module – I – Introduction to tourism - Module – II – Travel Geography - Module – III – Air Transport - Module – IV Air Fares & Ticketing
4. Gupta S.K (2007): International Airfare & Ticketing Methods & Technique, Udh Publishers & Distributors (p) Limited, New Delhi

SEMESTER 5
TT5CRT22 ENVIRONMENTAL STUDIES AND ECO TOURISM

No. of credits – 4

No. of contact hours –72hours / 4hours per week

Module I

Unit 1 : Multidisciplinary nature of environmental studies

Definition, scope and importance

Need for public awareness.

Unit 2 : Natural Resources :

Renewable and non-renewable resources : Natural resources and associated problems.

a) Forest resources : Use and over-exploitation, deforestation, case studies.

Timber extraction, mining, dams and their effects on forest and tribal people.

b) Water resources : Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.

c) Mineral resources : Use and exploitation, environmental effects of extracting and using mineral resources, case studies.

d) Food resources : World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water

logging, salinity, case studies.

e) Energy resources: Growing energy needs, renewable and non renewable energy sources,

use of alternate energy sources, Case studies.

f) Land resources: Land as a resource, land degradation, man induced landslides, soil erosion

and desertification

- Role of individual in conservation of natural resources.
- Equitable use of resources for sustainable lifestyles.

Unit 3: Ecosystems

- Concept of an ecosystem
- Structure and function of an ecosystem
- Producers, consumers and decomposers
- Energy flow in the ecosystem
- Ecological succession
- Food chains, food webs and ecological pyramids.
- Introduction, types, characteristic features, structure and function of the given ecosystem:-
 - a. Forest ecosystem

Module II

Unit 1: Biodiversity and its conservation

- Introduction
- Biogeographical classification of India
- Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values.
- India as a mega-diversity nation
- Hot-spots of biodiversity
- Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts
- Endangered and endemic species of India

Unit 2: Environmental Pollution

Definition

Causes, effects and control measures of: -

- a. Air pollution
 - b. Water pollution
 - c. Soil pollution
 - d. Marine pollution
 - e. Noise pollution
 - f. Thermal pollution
 - g. Nuclear hazards
- Solid waste Management: Causes, effects and control measures of urban and industrial wastes.
 - Role of an individual in prevention of pollution
 - Pollution case studies
 - Disaster management: floods, earthquake, cyclone and landslides.

Unit 3: Social Issues and the Environment

- Urban problems related to energy
- Water conservation, rain water harvesting, watershed management
- Resettlement and rehabilitation of people: its problems and concerns, Case studies
- Environmental ethics: Issues and possible solutions
- Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust, Case studies
- Consumerism and waste products
- Environment Protection Act

- Air (Prevention and Control of Pollution) Act
- Water (Prevention and control of Pollution) Act
- Wildlife Protection Act
- Forest Conservation Act
- Issues involved in enforcement of environmental legislation
- Public awareness

Module - III

Eco- Tourism – concept and definition – the eco- tourist character – eco-tourism products –Eco- Tourism development and its relevance – strategies of eco- tourism development, Tourism and environment linkage

Module IV

Eco- Tourism and India – Eco – tourism and World Tourism Organization – present scenario, national committee on tourism and ecological aspects of tourism.

Module – V

Unit 1- Human Rights– An Introduction to Human Rights, Meaning, concept and development, Three Generations of Human Rights (Civil and Political Rights; Economic, Social and Cultural Rights).

Unit-2 Human Rights and United Nations – contributions, main human rights related organs - UNESCO, UNICEF, WHO, ILO, Declarations for women and children, Universal Declaration of Human Rights.

Human Rights in India – Fundamental rights and Indian Constitution, Rights for children and women, Scheduled Castes, Scheduled Tribes, Other Backward Castes and Minorities

Unit-3 Human Rights and environmental rights - Right to Clean Environment and Public Safety: Issues of Industrial Pollution, Prevention, Rehabilitation and Safety Aspect of New Technologies such as Chemical and Nuclear Technologies, Issues of Waste Disposal, Protection of Environment

Conservation of natural resources and human rights: Reports, Case studies and policy formulation. Conservation issues of western ghats- mention Gadgil committee report, Kasthuriangan report. Over exploitation of ground water resources, marine fisheries, sand mining etc.

Internal: Field study

- Visit to a local area to document environmental grassland/ hill /mountain
- Visit a local polluted site – Urban/Rural/Industrial/Agricultural Study of common plants, insects, birds
- Study of simple ecosystem-pond, river, hill slopes, etc

(Field work Equal to 5 lecture hours)

REFERENCES

1. Agarwal, K.C 2001 Environmental Biology, Nidi Publ. Ltd, Bikaner.
2. Bharucha Erach, Text Book of Environmental Studies for undergraduate Courses. University Press, IInd Edition 2013 (TB)
3. Brunner.R., 1989, Hazardous Waste Incineration, McGraw Hill Inc.480p
4. Clark.R.S., Marine Pollution, Clarendon Press Oxford (TB)
5. Cunningham, W.P.Cooper, T.H.Gorhani, E & Hepworth, M.T.2001. Environmental Encyclopedia, Jaico Publ. House. Mumbai. 1196p
6. De A.K.Environmental Chemistry, Wiley Eastern Ltd.
7. Down to Earth, Centre for Science and Environment (R)
8. Gleick, 11.P.1993 Water in crisis, Pacific Institute for Studies in Dev. Environment & Security. Stockholm Environment Institute Oxford University Press 473p
9. Hawkins R.E, Encyclopedia of Indian Natural History, Bombay Natural History Society, Bombay (R)
10. Heywood, V.H & Watson, R.T. 1995. Global Biodiversity Assessment, Cambridge University Press 1140p
11. Jadhav.H & Bhosale.V.M. 1995. Environmental Protection and Laws. Himalaya Pub. House, Delhi 284p
12. Mckinney, M.L & Schock.R.M. 1996 Environmental Science Systems & Solutions. Web enhanced edition 639p
13. Mhaskar A.K., Matier Hazardous, Techno-Science Publications (TB)
14. Miller T.G. Jr., Environmental Science, Wadsworth Publishing Co. (TB)
15. Odum.E.P 1971. Fundamentals of Ecology. W.B. Saunders Co. USA 574p
16. Rao.M.N & Datta.A.K. 1987 Waste Water treatment Oxford & IBII Publication Co.Pvt.Ltd.345p
17. Sharma B.K., 2001. Environmental Chemistry. Geol Publ. House, Meerut
18. Survey of the Environment, The Hindu (M)
19. Townsend C., Harper J, and Michael Begon, Essentials of Ecology, Blackwell Science (TB) XI
20. Trivedi R.K., Handbook of Environmental Laws, Rules Guidelines, Compliances and Standards, Vol I and II, Enviro Media (R)

21. u) Trivedi R. K. and P.K. Goel, Introduction to air pollution, Techno-Science Publication (TB)
22. Wanger K.D., 1998 Environmental Management. W.B. Saunders Co. Philadelphia, USA 499p
23. (M) Magazine (R) Reference (TB) Textbook
24. Sithamparanathan; Ecosystem Principles and Sustainable Agriculture, SciTech
25. J Tyler & Miller (2014); Living in the environment, Cengage Learning, New Delhi

SEMESTER 5
TT5OPT01 PUBLIC RELATIONS AND TOURISM JOURNALISM

No. of credits – 3

No. of contact hours – 72 hours / 4 hours per week

Objectives:

To study about Public relations and Travel Journalism as a career option

Module 1

Principles of PR – PR Ethics – Mass Communication – Knowledge Organization – Communication skills – Image building – Goodwill, Feedback – Role of PR in Organization

Module 2

Advertising Photographer & institutions – Conference – Conflict – PR in Tourism Industry

Module 3

Meaning and scope of Journalism – Principles of Journalism – Editing – Tourism press in India – Print media – Radio & TV Media

Module 4

Web Journalism – Suppliers of News – Editor – Languages and Styles – Theories of Mass Communication – News Agencies – Journalism as a Career and Profession

Module 5

Qualities required as a reporter – Photo Journalism – Design and Make-up – Picture Editing and Caption – Mass Media policies – Media representation in tourism

References:

1. Public Relation; Jeth Waney
2. Public Relation Hand Book
3. Janet Macdonald (2000), Travel Writing, Robert Hale, London.
4. Brunt.P. (1997), Market Research in Travel and Tourism, Butterworth and Heinemann, UK.
5. Clark, Riley,M., Wood,R.C. (1998), Researching and Writing Dissertations in Hospitality and Tourism, UK.
6. Neilson C. (2001), Tourism and the Media: Tourist Decision Making, Information and Communication, Hospitality Press, Melbourne
7. Arvahan E. & Ketter E. (2008), Media Strategies for Marketing Places in Crisis, Elsevier, UK.

SEMESTER 5
TT5OPT02 FRONT OFFICE MANAGEMENT

No. of credits – 3

No. of contact hours – 72 hours / 4hours per week

Objectives:

To equip the students about the details of front office management as a career opportunity

Module 1

Introduction to Hotel Industry – Types of Hotels – Introduction to Front Office – Front office operations – Front office equipment – study of various systems

Module 2

Reservation – Registration – Technology – Method of Payment – Room Rate – Front Office Communication

Module 3

Check Out and Settlement – Night audit – Telephone Operation

Module 4

Principle and Function of Catering Management – Tools of Management – organization chart

Module 5

General Manager – duties and Responsibilities – Guest satisfaction and Review – Training and development –Laws governing Food service Establishment – Employee facilities and Benefits

References:

1. Sudhir Andrews (2007); Front Office Management & Operations, Tata McGraw-Hill Education, New Delhi
2. Rakesh Puri ; Front Office Operations & Management:
3. Jatashankar R. Tiwari (2009); Hotel Front Office Operations & Management, OUP India, New Delhi
4. Colin Dix, Chris Baird(2006); Front Office Operations, Pearson Education India, New Delhi
5. Gary K.Vallen, Jerome J.Vallen (2013); Check-In Check-Out Managing Hotel operations: Pearson, New Delhi
6. Sue Baker, Jeremy Huyton, Pam Bradley (2001); Principles of Hotel Front-Office Operations: Cengage Learning EMEA, New Delhi
7. Sushil Kumar Bhatnagar; Front Office Management:
8. Sudhir Andrews (2009); Hotel Front Office Training Manual, Tata McGraw-Hill Education, New Delhi

SEMESTER 5**TT5OPT03 AN INTRODUCTION TO PRINCIPLES OF TOURISM****No. of credits – 3****No. of contact hours – 72hours / 4hours per week**

Objectives: To invoke interest in students with basic concepts of tourism

Module 1

Tourism- Meaning and definition, Origin and growth of tourism, Tourism development in India- pre and post war period, Factors affecting growth of modern tourism.

Module 2

Components of tourism – distribution – Inter-relation between various segments – travel industry network – Elements of tourism

Module 3

Basic travel motivators, Significance of tourism – Social, environmental, political, economic, Negative impacts of tourism

Module 4

Forms and types of Tourism, carrying capacity, factors affecting carrying capacity, sustainable tourism development.

Module 5

Tourism Products of India (Major Cultural, Natural and Manmade), UNESCO World heritage sites in India.

Reference:

Pran Nath Seth: Successful Tourism Management (Vol 1&2) Sterling Publishers, New Delhi.

A K Bhatia: Tourism Development; Principles and Practices, Sterling Publishers, New Delhi

Robinet Jacob: Tourism Products of India; A National perspective, Abhijeeth Publications, New Delhi.

A K Bhatia: The Business of Tourism; Concepts and Strategies, Sterling Publishers, New Delhi.

SEMESTER 6
TT6CRT23 TOURISM MARKETING

No. of credits – 4

No. of contact hours – 90 hours / 5 hours per week

Objectives:

To equip the students the basics of marketing with special reference to tourism

Module 1

Tourism Marketing – concept – characteristics – philosophies of marketing management
– customer relationship management

Module 2

Marketing research – need – process of marketing research

Module 3

Market segmentation – types of market segmentation – market planning objectives
marketing mix – Ps of marketing

Module 4

Product – concept – new product development – Product life cycle – Product pricing –
methods and strategies – Distribution strategies

Module 5

Promotion mix – Promotional budget – Promotional strategies – Service marketing
techniques, Marketing of Airline (Case study)

References:

1. Ravi Shankar (2002); Service Marketing, Excel Books India, New Delhi
2. Nimit Chaudhary – Service Marketing
3. Philip Kotler, Bowens and James Makens (2010); Marketing for Tourism and Hospitality ,Pearson, NewDelhi
4. Holloway and Robinson, Marketing for tourism, Longman publisher, London
5. SM Jha (2008): Tourism Marketing , Himalaya Publishing, Mumbai
6. Jagmohan Negi: Marketing and Sales strategies for Hotels and Travel Trade.
7. Keller& Kotler (2009); Marketing Management, Pearson Prentice Hall, New Delhi
8. Naresh Malhotra (2010); Marketing Research , Pearson Prentice Hall, New Delhi
9. Kotler, Philip and Armstrong Philip (1999), Principle of Marketing, Prentice-Hall India, New Delhi

SEMESTER 6**TT6CRT24 PRINCIPLES OF INTERNATIONAL BUSINESS FOR TOURISM****No. of credits – 4****No. of contact hours – 108 hours /6 hours per week****Objectives:**

To learn the basics of today's international business

Module 1

Meaning and definition of foreign exchange – Balance of Trade and Balance of Payment – India's Balance of Payments Problems

Module 2

The rate of exchange – determination of rate of exchange – Purchasing Power – Parity Theory

Module 3

Exchange Control – Multiple Exchange Rates – Fixed, Flexible and Floating – Fluctuations in Rate of Exchange – Causes – Objectives, Methods – Important provisions of FEMA

Module 4

Globalization of markets – production – Investment and Technology – Export Import Procedures

Module 5

International Financial Institutions – IMF – Special Drawing Rights – IBRD – ADB – IDA

References:

1. P. Subba Rao (2001), International Business, Himalaya Publishing House, New Delhi;
2. Prof. J.V. Prabhakara Rao; International Business;
3. Francis Cherunilam (2010); International Business, PHI Learning Pvt. Ltd, New Delhi
4. Sundaram and Black(1995); International Business Environment , Prentice-Hall, New Delhi
5. Bhalla and Raju; International Business Environment
6. P.G. Apte (2010); International Financial Management , Tata McGraw-Hill Education, New Delhi
7. Justin Paul (2011); International Business , PHI Learning Pvt. Ltd, New Delhi

SEMESTER 6
TT6CRT25 HOSPITALITY MANAGEMENT

No. of credits – 4

No. of contact hours –90hours / 5 hours per week

Objectives:

1. To enable the students to understand the essentials hospitality management
2. To understand different public relation techniques used for the promotion of hospitality business

Module1

Introduction to hospitality industry – Accommodation types and forms – Hotel concept and classification

Module 2

Categorization – Categorization of hotels on the basis of facilities provided (star system) and approval

Module 3

Important departments of hotel – Front office, Housekeeping, Food and Beverage, maintenance and engineering – function and co- ordination with other departments

Module 4

Guest cycle – Guest stay process in a hotel – Major processes and stages associated with it – Reservation, Registration, Guest complaints etc.

Module 5

Role and input in multinationals in hotel sector – Leading multinational and public sector hotel chains in India

References:

1. RK Malhotra ; Fundamentals of Hotel Management and Operations, Anmol Pub, New Delhi
2. Mohammed Zulfiker ; Introduction to Tourism and Hotel Industry, UBS Pub, New Delhi
3. Dennis. L. Foster ; VIP and Introduction to Hospitality, Mc Graw Hill
4. M. L. Ksavana and R. M. Brooks ; Front Office procedures , Educational Institute. A.H.M.A
5. Sudhir Andrews ; Hotel front Office Management, Tata Mc.Graw Hill, New Delhi
7. Puspinder. S. Gill ; Dynamics of Tourism –Vol.4 – Tourism and Hotel Management Anmol Pub, New Delhi
8. Jag Mohan Negi ; Hotels for Tourism Development, Metropolitan Pub, New Delhi
9. John R Walker ; Introduction to Hospitality Management , Pearson Education India
10. S Medlik & H Ingram: The business of Hotels , Butterworth Heinemann, New Delhi

SEMESTER 6**TT6CRT26 WEB DESIGNING AND ONLINE BUSINESS FOR TOURISM****No. of credits – 4****No. of contact hours – 90 hours / 5 hours per week****Objectives:**

To learn the basics of web designing and its use in tourism

Module 1

Introduction to windows – Start menu –Folder, Documents, Desktop, Toolbar

Module 2

Internet – History, Basic requirements; Hardware, Software, Web browser, Internet explorer, Netscape Navigator, Feature – Email, Outlook Express, World Wide Web

Module 3

Computer Networks – Introduction, Uses, Types of network, Network Topologies – FTP, Transmission Media – Magnetic media, Twisted pair media, Base band and Broadband, Fibreoptic Cable

Module 4

Introduction to HTML – HTML Tags – Forms, Frames, Tables; List – Links – Display in images; Web page designing

References:

1. Using Microsoft Windows 2000 Professional By Robert Cowart, Brian Knittel, Que Publishing
2. Computer Networks by Andrew S. Tanenbaum, Prentice Hall PTR, 2003
3. Data Communications and Networking by Behrouz A. Forouzan, McGraw-Hill Education, 2006
4. HTML: A Beginner's Guide, Fifth Edition By Wendy Willard, McGraw-Hill Education
5. Computer Fundamentals and Internet Basics By: Rohit Khurana, DK Publishers and Distributors, Delhi

SEMESTER 6
TT6CRT27 MICE TOURISM

No. of credits – 4

No. of contact hours – 72 hours / 4 hours per week

Objectives:

To enable the students to understand the essentials of Event management

Module 1

Introduction to conventions, exhibitions and meetings (MICE) – Definition of conference and the components of the conference market – Introduction to convention venues – characteristics of conferences / conventions

Module 2

The nature of conference markets – Demand for conference facilities – Economic and social significance of conventions – impact of conventions on local and national communities – Demographic trends and Geographical Distribution – introduction to professional meeting planning – management of conference at site

Module 3

Convention / exhibition facilities – Benefits of conventions facilities – Interrelated venues – Project planning development

Module 4

Meeting planner/ convention manager – Organizing and planning events – Major attributes of meeting planners, Types of meeting planners – Convention and visitor bureaus, Bureaus structure and funding

Module 5

Travel Industry Fairs – Participation Advantage – ITB – WTM – SMTV – FITUR – EIBTM- PATA Travel Mart, KTM

References:

1. Avrieh, Barry (1994), Event and Entertainment Marketing, Vikas Publications, New Delhi.
2. Gaur Sanjay Singh (2001), Event Marketing and Management, Vikas Publications, New Delhi.
3. Diwakar Sharma (2009), Event Planning and Management, Deep & Deep Publications. New Delhi
4. Cindy Lemaire Mardi Foster- Walker- Event Planning Business, Jaico Publishing House; Mumbai.

SEMESTER 6**TT6STP02 STUDY TOUR REPORT****No. of credits – 1****Study Tour Report\Case study Report**

Each student has to submit a Study Tour Report or a Case Study Report of any tourist destination in Kerala during the sixth semester for evaluation. The evaluation is for 100 marks and should be internal only. Preparation of study tour report include two parts: pre tour phase and post tour phase. Pre tour phase involves itinerary preparation, costing etc. Post tour phase involves detailed report on the tour.

SEMESTER 6
TT6PRP01 PROJECT/DESSERTATION

No. of credits: 2

All students are to do a project as a group consisting a maximum of five students. The projects are to be identified during the 5th semester of the programme with the help of the supervising teacher. The report of the project in duplicate is to be submitted to the department at the 6th semester and are to be produced before the examiners appointed by the University.

External project evaluation and Viva/ Presentation are compulsory and will be conducted at the end of the programme during the sixth semester. 20 % of marks are awarded through internal assessment.

The project is treated as a separate course. The course will have a credit of 2 and is compulsory for completion of the programme.

Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

Certificate in Ambedkar Studies(CAS)

Course Co-ordinator: Dr. Rajesh Komath

Academic support by
School of Social Sciences
Mahatma Gandhi University
Kottayam.

Certificate in Ambedkar Studies

(Distance Learning Programme--Certificate Programme)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with a vision to provide the opportunity of quality education to all realms of society. Since the beginning, thousands of students availed this opportunity for higher education throughout Kerala to a great extent and also outside the state to some extent. But after the new directions of UGC in 2014, University had stopped all its Off-Campus Centres of the School of Distance Education inside and outside the State.

Now it is the new endeavour to revamp the functioning of the school with different types of Diploma and Certificate programmes very relevant to the contemporary society, in addition to the conventional Graduate and Post Graduate programmes with the academic and infrastructural support of the eminent Schools and interdisciplinary interuniversity Centres of the University. All these Schools/Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Certificate Programme has been designed by the School of Social Sciences and to be conducted by the School of Distance Education with the academic support of the School.

School of Social Sciences, Mahatma Gandhi University (hereafter, the School or SSS) was established in October 1989 with the objective of advancing teaching and research in social sciences by creating an altogether fresh space of scholarly conversation that transcends the existed disciplinary divides. The School currently offers, besides a Ph D Programme in interdisciplinary Social Sciences, three M Phil Programmes (in General Social Sciences, Social Transformation and Empowerment, and Human Ecology and Natural History) and two MA Programmes (in Anthropology and History). The School of Social Sciences is one among few institutions in India that offers M Phil programmes in Social Transformation and Empowerment, and Human Ecology and Natural History. It is one of the two centres in Kerala that offers a Masters programme in Anthropology. The annual in-take of students for MA and M Phil Programmes is fixed at 39. At any given time, however, the total student-strength, including students of senior batches and doctoral scholars, would be approximately 100.

a) Programme's mission and objectives

Dr. B. R. Ambedkar's thought is essential to understand India's political past and it is a breach of peace for political society in contemporary India. It enables us to critically engage with past and present as Dr. Ambedkar's had a point to teach almost all aspects of India's culture, society, and polity. The entire volumes of writings and

speeches of Ambedkar which was compiled and published by Government of Maharashtra has been later taken up by almost all state governments to translate his philosophical thought in all regional languages. This has made students, teachers and ordinary persons to think about Indian nationalism, culture and society in a new perspective from below. It would also invite us to understand the social psyche of Indian society, social groups and politics. He was a philosopher, economist, anthropologist and a renowned scholar of law. His philosophical and epistemological positions about Indian society could be drawn from India's Constitution as he was the Chairman of the drafting committee of our Constitution. Indian Constitution itself is a document that teaches us fundamental values of democracy which is the key aspect of Ambedkar's thought. Knowing Ambedkar is one of the crucial point of critical thinking to locate India's past and its continuities in the contemporary. This course is intended to produce critical knowledge to engage with nationalism, state and minorities, contemporary social concerns, political contradictions and debates thereof.

b) Relevance of the Programme

To enable students of any branch of Science, Social Sciences and Humanities to creatively engage with Ambedkar's textual, contextual, symbolic, discursive and emancipatory theories and methods to explore substantial questions of nation, state, economy, religion, society and governance in contemporary India.

c) Nature of prospective target group of learners

Students from various streams of social science, humanities and sciences can join for the programme. Thus the prospective target group of learners include undergraduates, postgraduates, researchers and the general public who are desirous of studying such a programme.

d) Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence

The course provides an outline of the state of art of social theory and empirical studies and will introduce Ambedkar and his ideas as a lens to understand Indian society, culture and economy.

e) Instructional Design

Certificate in 'Ambedkar Studies'							
Course Duration: Six months							
Course Code	Course Type	Course Name	Contact Sessions (hours)	Credits	Internal Marks	External Marks	Total Marks
CAS 101	Core Course	Life and Political Philosophy of	12	4	20	80	100

		Ambedkar					
CAS I02	Core Course	Indian Society and Ambedkar	12	4	20	80	100
CAS I03	Core Course	Ambedkar and Indian Constitution	12	4	20	80	100
CAS I04	Core Course	Economic Thoughts of Ambedkar	12	4	20	80	100
Total			48	16	80	320	400

f) Procedure for admission, curriculum transaction and evaluation

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. A pass at the Plus Two level is the minimum eligibility criterion for admission. Candidates (undergraduates, graduates, and postgraduates) are eligible for admission irrespective of age. The fee structure will be decided by the University. The study materials will be delivered through online and print formats. The School will prepare an academic calendar/activity planner that will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/ Presentation of case study for each course. Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7

55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

'P' grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Diploma programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

$$\text{GPA} = \frac{\text{Total credit points earned by the student from all the required courses of the programme}}{\text{Total credits of all courses required in the programme}}$$

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

$$\text{Equivalent Percentage} = (\text{GPA obtained}) \times 10$$

g) Requirement of the institutional support and library resources

The Library, Mahatma Gandhi University (Central and all social science departments) and its facilities will be extended to the learners as per the requirement.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of Schools and four study centre libraries. The University library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq me area consisting of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library is providing service from 8 am to 8 pm in 3 shift timings for its staff. The Library functions on an average of 345 days in a year. The libraries of the teaching departments are open during working hours of the schools. Reading space is provided in all three floors housing the various sections of the library. The library provides reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set during 2016.

The University library has a library advisory committee. It is an 18 members committee with Hon. Vice-Cancellor as Chairman and University Librarian as convener. The Library has a collection of 59, 000 books, 232 journals, 2135 PhD thesis and has access to 15, 000 + e-journals under E-shodh sindhu. The activities of the library are comprehensively automated using open source library, management software KOHA. OPAC, journal article index, by-monthly bibliography compilation and literature search service are also available.

The Library is a member of the INFLIBNET centre, Ahmadabad as well as DELNET (Developing Library Network). As a member of the networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online data bases, such as EBSCO, Pro-Quest dissertations and thesis, Oxford Scholarship Online, IEEE all society periodicals package etc. Mahatma Gandhi University had won the state IT award during the year 2009 in the E-learning category for its University online thesis digital library. The various departments libraries have a good collection of subject specific book and journals.

A. Mahatma Gandhi University Library	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
PhD Thesis	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11

Online Archives subscribed	185 titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books	Books added during the last three years
	School of Social Sciences	18000	1500

h) Cost-estimate of the programme and the provisions

Budget estimate (for 100 students)

S.No.	Item	Amount (Rs. In Lakhs)
1.	Manpower	2
2.	Study Material (preparation)	1.5
3.	Internal assessment	.5
4.	Books and periodicals	.5
5.	Examination	1
	Total	5.5

Total Programme fee: Rs.5500/-

i) Quality assurance mechanism and expected programme outcomes

The quality of the programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the programme, the subject experts, Director, School of Distance Education and Head of the School of Social Sciences. The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

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Certificate in Ambedkar Studies (CAS)

Syllabus

CAS I 01

Life and Political Philosophy of Ambedkar

Module I

Life of Ambedkar---Biographical sketches--early influences through visits--intellectuals--company and his bitter experiences.

Module II

Ambedkar's role in British committees, commissions and conferences.

Module III

Ambedkar's reactions to British political reforms--Minto-Morle reforms--Monteague Chemsford reforms government of India Act, 1935.

Module IV

Ambedkar's conception of freedom-- role in freedom struggle--vision of new India.

CAS 102

Indian Society and Ambedkar

Module I

Caste system and untouchability--purity and pollution and untouchability--origin of untouchability.

Module II

Social democracy, economic democracy--state socialism--Budha or Marx, Gandhi and congress--pune pact.

Module III

Women's question--universal civil code--rights and representations.

Module IV

Hind Swaraj or state socialism--nation--nationalism and inclusive citizenship.

CAS 103

Ambedkar and Indian Constitution

Module I

Role as Chairman of the drafting committee--Social Justice--preamble of the Constitution--fundamental rights.

Module II

Abolition of untouchability--Directive Principles of state policy--state and minorities--reservation.

Module III

Views on human rights--right to equality and right to liberty--right against exploitation and right to religion--on culture and educational rights--constitutional remedies.

Module IV

Centre--state relationship--judicial system--central government--legislature--executive--finance--judiciary--constitutional safeguards.

CAS 104

Economic Thoughts of Ambedkar

Module I

Economic development and human development--human resource development and human development--social capital--socio-cultural dimensions of development.

Module II

Ambedkar and labour economics--views on labour--social theory of labour--exploitation--social, cultural and religious dimensions of labour exploitation--economic deprivation of Dalit labourers--solutions to unemployment.

Module III

Ambedkar views on national economy and society--economy and society--economic systems--national and sub-national economics--role of state in economic activities--allocation--distribution and stabilisation--objectives of economy--growth and equity.

Module IV

Ambedkar views on development and planning--agrarian economy and industrialization--poverty and employments--limitations of centralized planning system.

Reading list for all courses

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Government of Maharashtra, 1989.

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Rodrigues, Valerian. *The Essential Writings of B.R Ambedkar*, New Delhi: Oxford University Press, 2002.

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Jodhka, Surinder. *Caste: Oxford India, Short Introductions*, New Delhi: Oxford University Press, 2012.

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Chandra, Bipan 1991 'Colonial India: British versus Indian view of Development', Review XIV: 1.81-167.

Chatterjee, Partha 1995. *The Nation and Its Fragments: Colonial and Postcolonial Histories*, New Delhi: Oxford University Press.

Keer, D. Dr. *Ambedkar: Life and Mission*, Popular Prakashan, 1962.

Ambedkar.B.R. *Dr. Baba Sahib Ambedkar Writings and Speeches* (Vol-10, part I), Education Department Govt of Maharashtra, 1991.

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Rajesh Komath. *Ambedkar Will Teach the Nation from His Statues*, Economic and Political Weekly, Vol. 52, Issue No. 25-26, 24 June, 2017.

Rajesh Komath. *The Subversion of Institutions and Creation of a Cultural Discourse*, Economic and Political Weekly, Vol. 52, Issue No. 16, 22 April, 2017.

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Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

Certificate in Biofertiliser Production Technology(CBPT)

Course Co-ordinator: Dr.Jisha M.S

Academic support by
National Institute of Plant Science Technology (NIPST)
Mahatma Gandhi University
Kottayam, Kerala

Certificate in Biofertiliser Production Technology (CBPT)

(Distance Learning Programme – Certificate Programme)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour to revamp the functioning of the school with different types of Diploma and Certificate programmes very relevant to the contemporary society, in addition to the conventional Graduate and Post Graduate programmes with the academic and infrastructural support of the eminent Schools and interdisciplinary interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Post Graduate Diploma Programme has been designed by the National Institute of Plant Science Technology and to be conducted by the School of Distance Education with the academic support of the School.

National Institute of Plant Science Technology (NIPST), an Inter-School centre of Mahatma Gandhi University. The course established on 20th August 2014. The Institute enrolling students through competitive examinations at the National level in the campus of Mahatma Gandhi University for advanced education in plant science, promoting research in Interdisciplinary areas of ‘Plants and their Environment Relations’ towards developing ‘Plant-based Eco-technologies’.

The Institute will inspire students to apply their creative talents to research potentials of the rich botanical wealth of Kerala in the development of globally significant technologies useful in sustainable agricultural, phyto-medicinal, bio-fuel, bio-based industrial and eco-remediation purposes. Instead of keeping science and technology as watertight compartments in conventional programmes, this institute will enable science students to end up their post graduation to a productive research on plant-based eco-technology and entrepreneurship based on the technology that they develop. Overall, the Institute aims at boosting entrepreneurship in the country through productive research in plant science.

The institute will have advanced instrumental as well as experimental facilities for plant scientists to pursue excellence in all branches of plant science and is expected to contribute to the talent pool of researchers and specialized technicians in plant-based technologies. Technologies to be focused in the programme include those for plant medicines, nutraceuticals, sustainable agriculture, Phytoremediation and all kinds of bio-fuels. In addition to advanced research laboratories for the above mentioned technologies, the institute will have a medicinal garden, field experimental station, regional herbarium and museum of plant resources of the Western Ghats.

a. Programme's mission & Objectives

Biofertilizers are defined as preparations containing living cells or latent cells of efficient strains of microorganisms that help crop plants' uptake of nutrients by their interactions in the rhizosphere when applied through seed or soil. They accelerate certain microbial processes in the soil which augment the extent of availability of nutrients in a form easily assimilated by plants.

Very often microorganisms are not as efficient in natural surroundings as one would expect them to be and therefore artificially multiplied cultures of efficient selected microorganisms play a vital role in accelerating the microbial processes in soil.

Use of biofertilizers is one of the important components of integrated nutrient management, as they are cost effective and renewable source of plant nutrients to supplement the chemical fertilizers for sustainable agriculture. Several microorganisms and their association with crop plants are being exploited in the production of biofertilizers. They can be grouped in different ways based on their nature and function.

Large Population of viable cells of effective strains of specific nitrogen fixing bacteria can be supplied through carrier based powder form of biofertilizer for cultivator use. Biofertilizers production technology includes isolation of bacteria, selection of suitable effective strain, preparation of mother or seed culture, inoculants isolation of bacteria, selection of suitable effective strain, preparation of mother or seed culture, inoculant production, carrier preparation and their mixing, followed by curing, packaging, storage and despatch.

b. Nature of prospective target group of learners:

Students from various streams can join for the programme. Thus the prospective target group of learners include undergraduates, postgraduates, researchers and the general public who are desirous of studying such a programme.

c. Instructional design:

The programme is of six month duration comprising four courses with a total of 16 credits. There are adequate contact classes and the assessment involves both internal as well as external components. Each student has to submit a report based case studies or project.

Course Code	Course Type	Course Name	Contact Sessions (hours)	Credits	*Internal Marks	External Marks	Total Marks
CBPT101	Core course	Soil Fertility and Nutrient Management	12	4	20	80	100
CBPT 102	Core course	Soil microbiology	12	4	20	80	100

CBPT103	Core course	Biofertiliser production technology	12	4	20	80	100
CBPT 104	Core course	Practical and project	60	2+2	20	80	100
Total			96	16	80	320	400

d. Procedure for admission, curriculum transaction and evaluation:

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. A pass at the Plus Two level is the minimum eligibility criterion for admission. Candidates (undergraduates, graduates, and postgraduates) are eligible for admission irrespective of age. The fee structure will be decided by the University. The study materials will be delivered through online and print formats. The School will prepare an academic calendar/activity planner that will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be conducted by the University. The performance of a student in each course will be evaluated in terms of percentage of marks obtained with a provision for its conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/ Presentation of the case study for each course. Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the students of the same.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

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Range of % of Marks	Grade Letter	Performance	Grade Point
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75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4

< 40	F	Fail	0
Absent	Ab	Absent	0

'P' grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Certificate programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

$$\text{GPA} = \frac{\text{Total credit points earned by the student from all the required courses of the programme}}{\text{Total credits of all courses required in the programme}}$$

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

$$\text{Equivalent Percentage} = (\text{GPA obtained}) \times 10$$

e. Requirement of the laboratory support and library resources:

The library and infrastructure support of the Centre and the University will be extended to the learners as per the requirement.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main

campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library is providing service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. The libraries of teaching departments are open during working hours of the Schools. Reading space is provided in all the three floors housing the various sections of the library. The library provides reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016.

The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-ShodhSindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
		National Institute of Plant Science Technology (NIPST)

f. Cost estimate of the programme and the provisions:

Sl.No.	Item	Amount (Rs. in Lakhs)
1.	Manpower	2
2.	Study material	1.5
3.	Laboratory	3
4.	Internal assessment	0.5
	Total	7.00

Total Programme fee: Rs.7000/-

a) Quality assurance mechanism and expected programme outcomes:

The quality of the programme will be ensured through strict monitoring by an executive committee that includes the Co-ordinator of the programme, subject experts, Director, School of Distance Education and Head of the National Institute of Plant Science Technology. The Co-ordinator of the programme shall ensure regular student feedback of courses, teachers and the programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme's efficacy will be held, in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

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SYLLABUS

Certificate in Biofertiliser Production Technology (CBPT)

CBPT101 Soil Fertility and Nutrient Management

(4+ 0: Theory course)

Unit 1

Soil profile, soil physical properties, soil texture, textural classes, particle size analysis, soil structure, classification, soil aggregates, significance, soil consistency, soil crusting, Bulk density and particle density of soils & porosity, their significance and manipulation. Soil organic matter, composition, decomposability, Humus, Fractionation of organic matter, carbon cycle, C:N ratio, Soil biology, Biomass, Soil Organisms & their beneficial & harmful roles.

Unit 2

Soil as a source of plant nutrients, Essential and beneficial elements, criteria of essentiality, forms of nutrients in soil, mechanisms of nutrient transport to plants, factors affecting nutrient availability to plants.

Unit 3

Measures to overcome deficiencies and toxicities, problem soils-acid,salt affected and calcareous soils, characteristics, nutrient availabilities, Reclamation-mechanical, chemical and biological methods, Fertilizer and insecticides and their effect on soil water and air, irrigation water-Quality of irrigation water and its appraisal. Indian standards for water quality. Use of saline water for agriculture.

Unit 4

Soil fertility-Different approaches for soil fertility evaluation. Methods, soil testing-Chemical methods, critical levels of different nutrients in soil. Plant analysis-DRIS methods, critical levels in plants, Rapid tissue tests, Indicator plants, Biological method of soil fertility evaluation.

Unit 5

Soil test based fertilizer recommendation to crops. Factors influencing nutrient use efficiency (NUE) in respect of N,P,K,S, Fe and Zn fertilizer. Source, method and scheduling of nutrients for different soils and crops grown under rainfed and irrigated conditions.

References

- S.L. Tisdale, W.L. Nelson, J.D. Beaton and J.L. Havlin. 1997. Soil Fertility and Fertilizers. Prentice, Hall of India, Pvt. Ltd., New Delhi
- T.R. Reddy and G.H.S. Reddi 1992. Principles of Agronomy, Kalyani Publishers, New Delhi
- G.Singh, J.S. Kolar and H.S. Sekhon, 2002. Recent Advances in Agronomy, Indian Society of Agornomy, IARI, New Delhi
- J.S. Kanwar, 1978. Soil Fertility: Theory and Practices, ICAR Publication, New Delhi
- J.L. Havlin, J.D. Beaton, S.L. Tisdale and WL. Nelson, 2006. Soil Fertility and Fertilizers- An Introduction to Nutrient Management, Prentice Hall of India, Pvt. Ltd., New Delhi
- N.C. Brady and R.R. Weil, 2003. Elements of the Nature and Properties of Soils. Prentice Hall, New Jersey.
- R.S. Yawalkar, J.P. Agarwal and J. Bokde 1992. Manures and Fertilizers. Agri-Horticultural House, Nagpur

CBPT102 Soil microbiology

(4+ 0: Theory course)

Unit 1

Overview of soil microbiology, definitions- Concepts and scope, discovery, distribution and importance of soil microorganisms in soil fertility - factors affecting the activities of soil microorganisms; Rhizosphere microorganisms and importance; Phyllosphere microorganisms

Unit 2

Brief account of microbial interactions –symbiosis-mutualism-commensalism-Amensalism-synergism-parasitism-predation.Plant –microbe interactions- Mycorrhiza– VAM, Ecto, Endo and Ectendomycorrhiza. Actinomycets. - plant-microbe and microbe-microbe interactions in soil.

Unit 3

Beneficial microorganisms in Agriculture; Biofertilizer (Bacterial, Cyanobacterial and fungal), microbial insecticides, Bioremediation of problem soils, plant growth promoting rhizobacteria and their mode of action. Formation and composition of soil organic matter: fulvic acid and humic acid. Biodegradation, biogas production.

Unit 4

Microbial transformation of nutrients in soil Microbial transformation of nutrients in soil - carbon, phosphorous and sulphur cycle; nitrogen cycle, biological nitrogen fixation - symbiotic and non-symbiotic microorganisms, Process of nodulation and nitrogen fixation; Silicate and zinc solubilising bacteria, Types and importance of biofertilizers in agriculture

Unit 5

Natural defense mechanisms of plants. Microbial agents for control of plant diseases, Biopesticides-Bacterial-viral-fungal pesticides.Biological control of plant diseases. Integrated pest management

References

- Martin Alexander 1976. Introduction to soil microbiology Willy Eastern Ltd. New Delhi.
- Robert LTate III. 1995. Soil Microbiology. John Wiley & Sons, New York, pp 398.
- Subbarao, N.S. 1977. Soil microorganisms and plant growth, Oxford & IBH Publishing Co., New Delhi.
- Walker, N. 1975. Soil Microbiology. Butterworths, London

CBPT103 Biofertiliser production technology

(4+ 0: Theory course)

Unit-1

Biofertilizers - Introduction, scope. A general account of Biofertilizers organisms - Cyanobacteria (BGA), Bacteria and Mycorrhizae - Cyanobacteria (BGA) as biofertilizers - Anabaena, Cylandrospermum, Gloeocapsa, Lyngbya, Nostoc, Plectonema and Tolypothrix. Algalization, Azolla - Anabaena as biofertilizers. Isolation of cyanobacteria. Formation of Fogg's medium.

Unit-2

A general account of bacterial biofertilizers organisms. Azospirillum, Azotobacter, Frankia, Phosphobacteria and Rhizobium. Isolation - Azotobacter - Ashby's mannitol agar, Azospirillum - Semisolid medium (Bulow and Dobereiner, 1975). Rhizolium - Yeast Extract Mannitol Agar medium - Culture characteristics. Mechanism of nitrogen fixation (free-living and symbiotic) - Biochemistry and molecular basis of nitrogen fixation - Phosphate solubilization and mobilization.

Unit-3

Mycorrhizal fungi as biofertilizers - Introduction, scope. A general account of Ecto, Endo and Arbuscularmycorrhizae (AM). Methods of collection, wet sieving and decanting method and inoculum production. Culture of mycorrhizae in Modified Melin - Norkrans (MMN) agar medium - Cultural characteristics of Ectomycorrhizal fungi. Techniques of

Ectomycorrhizal inoculum, Endo mycorrhizae of orchids. Isolation and method of inoculation of Arbuscular mycorrhizae (AM), Legume - AM interactions

Unit-4.

Production technology: Strain selection, sterilization, growth and fermentation, mass production of various biofertilizers. Mass production of Azospirillum, Azotobacter and Phosphobacteria. Mass cultivation of Azolla - Cyanobacterial biofertilizers - Field application of Cyanobacterial inoculants.

Unit -5.

Application technology: Standards and quality control, application for field and tree crops, nursery plants and seedlings. Extension, promotion and marketing: Extension strategies, diagnosis for the effectiveness of inoculation, improvement in distribution system. National and Regional Biofertilizers Production and Development Centres.

References

- Dilworth, M.J. and A.R. Glenn, 1991. Biology and Biochemistry of Nitro-gen Fixation. Elsevier, Amsterdam P. 438.
- Motsara, I. M.R., P. Bhattacharyya and Beena Srivastava, 1995. Biofertilizer Technology, Marketing and usage - A source Book -cum- glossary - FDCO, New Delhi.
- Somasegaran, P and H.J. Hoben, 1994. Hand book for Rhizobia; Methods in legume Rhizobium Technology. Springer-Verlag, New York.
- Subba Rao, N.S. 1982. Advances in Agricultural Microbiology, Oxford and IBHPubl. Co., New Delhi. P. 704.
- Subba Rao, N.S. 1993. Biofertilizers in Agriculture and Forestry Oxford and IBHPubl. Co., New Delhi P.242.

CBPT104 Practical and project work

(0+4: Practical and project work)

A. Biofertiliser production technology practicals

1. Enumeration of soil microbes by Plate culture method
2. Isolation of Microorganisms from soil sample – Bacteria, Fungi, Actinomycetes and Azotobacteria.
3. Isolation and cultivation of Azotobacter, Rhizobium, Azospirillum, Cyanobacteria, Actinomycetes, Mycorrhiza.
4. Biofertilizer production using Rhizobium
5. Biofertilizer production using Mycorrhiza
6. Mass production technology for biofertilisers
7. Quality control

B. Project work and Report Submission

Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

Certificate in Business Data Analysis using Tally ERP and MS- Excel
(CBDA)

Course Co-ordinator: Dr.Sajimon Abraham

Academic support by
School of Management and Business Studies (SMBS)
Mahatma Gandhi University
Kottayam, Kerala

**CERTIFICATE IN BUSINESS DATA ANALYSIS USING TALLY ERP AND MS-
EXCEL (CBDA)**
(Distance Learning Programme - Certificate Programme)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Certificate Programme has been designed by the School of Management and Business Studies and is to be conducted by the School of Distance Education with the academic support of the School.

School of Management and Business Studies is a regular statutory Department for Management studies in Mahatma Gandhi University. The School had a humble beginning on 25th March 1999 with a two year full-time MBA program for the management aspirants with the objective of molding enterprising youth into career oriented and competent management professionals. With dedicated and high calibre professional expertise and state-of-art infrastructure, the institution imparts the best of theory and practical knowledge to carve a niche for itself in the challenging two year MBA, MPhil and PhD programmes on Management and Business Studies. Ours is one of the prominent Management Institutes in South India. The MBA program offered by SMBS is aimed at creating business leaders and entrepreneurs by leveraging on its strength in technology, computing and social sciences. The department is currently engaged in a diverse set of activities including teaching,

academic research, management development programs, and public sector projects. The department places heavy emphasis on experiential and process oriented learning, and the pedagogical tools include extensive use of case studies, simulation exercises, industry oriented project works to facilitate the same. Besides honing up the skills of individual decision making, enough emphasis is laid on developing team skills and value focused decision making. Continuous industry interaction, seminars and live projects are a regular part of the curriculum. Organizational environments are simulated to sharpen the skills of decision making, leadership and team building. Teamwork, group assignments, case studies, participation in class discussions and real business issues are strong features of the management program at SMBS.

(a) Programme's mission & objectives :

The job-oriented certificate programme are knowledge enrichment courses which provide students an opportunity to enhance their knowledge in selected areas and acquire additional skills which benefits them in the professional world and industry. The objective of the Certificate Programmes is to provide a wide spectrum of knowledge, skills and technological advances while fostering literacy in the broadest sense. They help to create a learner centric environment by maximizing academic learning for diverse learners with industry orientation. The courses create a flexible path to earn a specialized credential along with the Graduate Programme. These short duration knowledge enrichment courses provide students to build up skills in a specific area that relates to their field of interest. This course provides expert level training in Tally and Microsoft Excel for data analysis in professional business. **A certificate holder in this course can move to the second semester of the programme “Diploma in Computerised Financial Accounting and Taxation” if he/she desires to get a related diploma.**

(b) Relevance of the program with HEI's Mission and Goals :

The course aim to improve the knowledge and expertise in the interested field and prepare a leaner in meeting local and ever changing demand of the market with industry required skills which go in-line with the mission of the Institution - To provide skilled manpower to the professional, industrial and service sectors to meet global demands.

(c) Nature of prospective target group of learners:

The course is designed to for candidates who passed plus two programme in any subject group currently studying in a graduate programme or engaged in some job or un-employed or those who stopped their studies after plus two due to some reason.

(d) Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence :

As the programme is targeting for working people and those engaged in regular studies the only way to deliver the programme is through week end contact classes and through distance learning mode like on-line lectures and sharing of video and audio files. Today's internet and networking availability is strong in our country which is reachable to most of the common man we can effectively utilize this facility as a medium for course delivery, evaluation and for other administrative requirements. On completion of this course the students can work as

- Data Analyser
- Excel Programmer
- Business Analyst
- Tally Consultant

(e) Instructional Design :

- i. Duration of the Programme: Six Months –One Semester
- ii. Eligibility: Plus Two
- iii. Number of Courses : 4

Scheme & Evaluation

Course Code	Course Type	Contact Classes (Hrs)	Course Name	Credits	IA Marks	ESE Marks	Total Marks
DCFA T-101	Common Core course (Theory)	12	Introduction to Business Data & Accounting	4	20	80	100
DCFA T-102	Common Core course (Theory)	12	Accounting using Tally ERP 9	4	20	80	100
DCFA T-103	Common Core course (Theory)	12	Data Analysis Using Microsoft Excel	4	20	80	100
DCFA T-104	Common Core course (Practical)	30	Practical & Business Project	Practical -1 Project	20	80	100

				Work -3			
Total		66		16			400

(f) Procedure for admissions, Curriculum Transaction and Evaluation

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. A pass in the Plus Two level is the minimum eligibility for the admission. Fee structure will be decided by the University. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/ Presentation of case study for each course. Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

'P' grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Certificate programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

GPA =

$$\frac{\text{Total credit points earned by the student from all the required courses of the programme}}{\text{Total credits of all courses required in the programme}}$$

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

$$\text{Equivalent Percentage} = (\text{GPA obtained}) \times 10$$

(g) Details of the laboratory support and Library Resources:

The computational facility available in School of Management and Business Studies shall be used. The computing facility available in the campus as well as the regional centers can also be used for this purpose. Some external computing facilities may be hired based on the number of enrolment.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-

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Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	School of Management and Business Studies	7549

h) Cost estimate of the programme and the provisions:

Budget estimate (for 100 students)

S.No.	Item	Amount (Rs. in Lakhs)
1.	Manpower	2
2.	Study material	1.5
3.	Laboratory/Library	1
4.	Internal assessment	0.5
5.	End semester examination	1
	Total	6.00

Total Programme fee: Rs.6000/-

(i) Quality assurance mechanism and expected programme outcomes

The quality of the programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the programme, the subject experts, Director, School of Distance Education and Head of the School of Management and Business Studies. The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

Syllabus

Certificate In Business Data Analysis Using Tally Erp And Ms-Excel

CPBDA-101. Introduction to Business Data & Accounting

Business Data, Types of Business data, Managing business data for Decision Making, Introduction to Accountancy, Accounting system-need and benefits of Computerized Accounting-transition from Manual Accounting to Computerized Accounting- list of Accounting softwares, Rules of Accountancy, Advance Concept of Accounting, Journal and Ledger, P& L Account and Balance Sheet, Ledger Scrutiny, Bank Reconciliation, Accruals and Provisioning.

CPBDA-102. Accounting Using Tally ERP 9

Introduction Business functions, Accounting terms, Accounting statements, Tally Start Up • Company Creation • Creation of Group and Ledger • Security Control, Back -up & Restore Process • Inventory Master • Accounting entries and Inventory entries (Sales, Purchase, Returns & Stock) • Invoicing • Cost Centre & Cost Categories • Recording of expenses • Interest Calculations, Projects on Accounting and Tally -Accounting Writing • Reconciliation of Debtors & Creditors • Ledger Scrutiny • Developing a complete Company project in Tally, Business data analysis case studies.

CPBDA-103 Data Analysis Using Microsoft Excel

Introduction to Excel, Worksheet basics, data entry cells, entry of number s, text and formulae, moving data in a worksheet, Moving around the worksheet, selecting data range, using the interface (tool bars, Menus), Editing basics, working with workbooks, saving and quitting, cell referencing, formatting and calculations, calculations and worksheet- using auto fill, working with formulae, efficient data display with data formatting (number formatting, date formatting etc.), working with ranges, worksheet printing, working with graphics and charts, adding formatting text data with auto format, creating embedded chart using chart wizard, sizing and moving parts, updating charts, changing chart types, creating separate chart sheet s, adding titles, legends and grid lines, printing charts, introduction to Macro: Business data analysis case studies.

CPBDA-104. Practical & Business Project

A business accounting Problem of typical business organization has to be identified and have to be implemented using Tally and Excel. A project report has to be given.

Books Recommended:

1. Gupta R. L. and Radhaswamy .M. Advanced Accounting , Sultan Chand & Sons , New Delhi.
2. Shukla M. C .Grewal .T. S. and S.C. Gupta. Advanced Accounts S. Chand &Co. Ltd. New Delhi.

3. Cox et.al. , 2007. MS Office step by step, PHI, New Delhi.
 - 4.Tally, Vikas Publishing House, New Delhi.
 5. Tally Academy . Tally Manual.
 6. TALLY 9 Upto release 3.0, Computech Publications Ltd., New Delhi
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Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

**Certificate in Climate Change and Environmental Management
(CCCEM)**

Course Co-ordinator: Dr. A.P. Thomas

Academic support by
**Advanced Centre Of Environmental Studies And Sustainable Development
(ACCESSD)**

Mahatma Gandhi University

Kottayam, Kerala

Certificate in Climate Change and Environmental Management

(Distance Learning Programme - Certificate Programme)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Certificate Programme has been designed by the Advanced Centre of Environmental Studies and Sustainable Development (ACESSD) and is to be conducted by the School of Distance Education with the academic support of the Centre.

The Advanced Centre of Environmental Studies and Sustainable Development (ACESSD) stands for interdisciplinary research which involves the generation and integration of knowledge aiming at evolving sustainable development strategies. The Centre has established advanced facilities for interdisciplinary research in order to address emerging environmental issues. It fosters linkages with National and International institutions for collaborative academic and research activities. The Centre is actively engaged in extension activities that aim at capacity building and knowledge sharing for local bodies, NGOs, academic institutions and the general public incorporating environmental awareness and best practices. It promotes sustainable development strategies linking advanced level knowledge with traditional environmental wisdom and practices.

a) Programme's mission & Objectives :

The Certificate Programme aims to provide basic knowledge on climate change a phenomenon most relevant to our times. Knowledge on the science of climate change, its impact and mitigation would give a better understanding of the problem and the possible management measures to be evolved. All management strategies primarily focus on the conservation of natural resources that are under threat in the changing scenario of climate change. As human induced factors play a prominent role in the production of green house gases and subsequent climate change, there is a growing need for imparting awareness to all sections of the society.

b) Relevance of the programme with HEI's Mission Goals :

The programme in the Open and Distance Learning Mode is an effective way of spreading the information on the challenging problem, the climate change and the management measures. The primary role of higher education institutions is to generate and disseminate the knowledge to the benefit of mankind, hence the programme is of high contemporary relevance.

c) Nature of prospective target group of learners:

Students from various streams can join for the programme. Thus the prospective target group of learners include undergraduates, postgraduates, researchers and the general public who are desirous of studying such a programme.

d) Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence:

Climate change, though studied under science discipline is essentially interdisciplinary as its impacts cross its boundaries to other disciplines. So a general knowledge about the phenomenon will help the learners to develop awareness and the appropriate skills for mitigating the impact of climate change in order to evolve sustainable life patterns and development strategies. There is now an emerging trend in linking climate change to human activities and hence the relevance of the programme.

e) Instructional design:

The programme is of six months duration comprises four courses with a total of 16 credits. There are adequate contact classes and the assessment involves both internal as well as external components. Each student has to submit a report based case study or project.

Duration-6 months							
Course Code	Course Type	Course Name	Contact Class Hours	Credits	Internal Marks	External Marks	Total Marks
DE-AC-5	Core course	Science of Climate change	12	4	20	80	100
DE-AC-6	Core course	Climate change adaptations and environment management for mitigation	12	4	20	80	100
DE-AC-7	Core course	Climate change policy and regulation	12	4	20	80	100
DE-AC-8	Case study/ Project work and Report	Case study/ Project work and Report	12	4		100	100
Total					16		400

f) Procedure for admission, curriculum transaction and evaluation:

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. A pass at the Plus Two level is the minimum eligibility criterion for admission. Candidates (undergraduates, graduates, and postgraduates) are eligible for admission irrespective of age. The fee structure will be decided by the University. The study materials will be delivered through online and print formats. The School will prepare an academic calendar/activity planner that will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be conducted by the University. The performance of a student in each course will be evaluated in terms of percentage of marks obtained with a provision for its conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/ Presentation of the case study for each course.

Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the students of the same.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

‘P’ grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Certificate programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

GPA =

$$\frac{\text{Total credit points earned by the student from all the required courses of the programme}}{\text{Total credits of all courses required in the programme}}$$

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

$$\text{Equivalent Percentage} = (\text{GPA obtained}) \times 10$$

g) Requirement of the laboratory support and library resources:

The library and infrastructure support of the Centre will be extended to learners as per requirement.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and Libraries of the 4 study centres. The University Library was established in 1989. The University Library which is situated on the main campus and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area and consists of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library provides service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. Reading space is provided on all the three floors housing the various sections of the library. The library provides reading facility to visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016. The libraries of teaching departments are open during working hours of the Schools.

The University Library has a Library Advisory Committee. It is an 18 member committee with the Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA.

OPAC, Journal Article Index, Bi-monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as & DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its online thesis digital library. The various department libraries too have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	Advanced Centre for Environmental Studies and Sustainable Development	393

h) Cost estimate of the programme and the provisions:

Budget estimate (for 200 students)

S.No.	Item	Amount (Rs. in Lakh)
1.	Manpower	3
2.	Study material	2.5
3.	Laboratory	1
4.	Internal assessment	0.5
5.	End semester examination	1.5
	Total	8.5

Total Programme fee: Rs.9000/-

i) Quality assurance mechanism and expected programme outcomes:

The quality of the programme will be ensured through strict monitoring by an executive committee that includes the Co-ordinator of the programme, subject experts, Director, School of Distance Education and Head of the Advanced Centre for Environmental Studies and Sustainable Development. The Co-ordinator of the programme shall ensure regular student feedback of courses, teachers and the programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme's efficacy will be held, in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

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Syllabus

Certificate in Climate Change and Environmental Management

Course 1 : Science of Climate change

Unit 1. Introduction to climate change

Basics: Earth's climate system, Climate & weather, green house gases, green house effect, warming potential, carbon cycling, carbon sequestration,

Unit 2. Causes of climate change:

Natural and anthropogenic, radiative forcing, solar irradiance, aerosols, water vapour and clouds, volcanic eruptions, GHG emission from industries and transport, gross and net emissions from agriculture, forestry and other land use.

Unit 3. Impacts of climate change

On physical systems (Glaciers, snow, ice and permafrost, rivers, lakes, floods and drought, coastal erosion, sea level effects, rainfall patterns, wind patterns and effects) biological systems (terrestrial ecosystems, aquatic ecosystems), Human and managed systems (food security and Food production, livelihood, poverty, health and economics)

Course 2 : Climate change adaptations and environment management for mitigation

Unit 1. Climate change adaptations

Social, ecological assets and infrastructure development, technological process optimization, institutional educational and behavioral change or reinforcement, indigenous knowledge and gender issues in adaptations, financial services including risk transfer, information systems to support early warning and proactive planning.

Unit 2. Environmental management and Climate change mitigation

Natural resource management – water, soil, energy, forest, etc. Sustainable agricultural practices – emerging trends, shift in agricultural practices, crop rotation. Other Land use management – soil conservation, waste management. Urban management- housing, built-in structures, reduction in energy consumption- green technology innovations, Afforestation, decarbonising energy production, use of clean energy and enhancing the efficiency in industries, transport and building, carbon capture and storage, clean develop mechanisms, low carbon economy, sustainable lifestyle changes.

Course 3 : Climate change policies and regulations

Unit 1. Climate change institutions and governance – UNFCCC – Conference of Parties (COP), IPCC, Intended nationally determined contributions, Funding Streams – green climate fund, forest carbon partnership facility, global environment facility, adaptation fund, bilateral and multilateral funds, official assistance fund, voluntary compliance markets.

Unit 2. Climate change regulations

International Climate conventions and Agreement, recent negotiations and development, policy approaches for adaptation and mitigation, technology and finance, national communications and efforts, Biennial Update reports, carbon credit, main issues and negotiation streams, politics and policy, towards a post 2020 regime.

Course 4 : case study/ project work and Report

References

1. Climate Change and Food Security in South Asia. Editors: Lal, R., Sivakumar, M.V.K., Faiz, M.A., Mustafizur Rahman, A.H.M., Islam, K.R. (Eds.). Springer. 2011.
2. Climate Change and Managed Ecosystems, Editors: Jagtar Bhatti, Rattan Lal, Michael J. Apps, Mick A. Price. December 20, 2005 by CRC Press
3. Carbon Sequestration for Climate Change Mitigation and Adaptation Editors: David Ussiri and Rattan Lal. 2011. Springer.
4. Soil and Greenhouse Effect: Monitoring and Mitigation by Pathak, H & S Kumar eds. CBS Publishers & Distributors, 2003.
5. Adapting cities to climate change. Understanding and addressing the development challenges. Edited by Jane Bicknell, David Dodman and David satterthwaite. Earthscan 2009.
6. Climate Change Impact, Adaptation and Mitigation in Agriculture: Methodology for Assessment and Application Editors H. Pathak P.K. Aggarwal S.D. Singh. Venus Printers and Publishers, B-62/8, Naraina Indl. Area, Phase-II, New Delhi - 110028
7. Pathak H, Bhatia A and Jain N (2014) Greenhouse Gas Emission from Indian Agriculture: Trends, Mitigation and Policy Needs. Indian Agricultural Research Institute, New Delhi, xvi+39.
8. Pathak H, Adhya T K, Sikka A K and Islam A (2015) Water and climate change. In: State of Indian Agriculture: Water (Pathak H, Bhatt B P and Gupta S K, eds) pp. xx + 103 National Academy of Agricultural Sciences, New Delhi
9. Soil Carbon Sequestration and the Greenhouse Effect Second edition Rattan Lal & Ronald F. Follett, Co-editors, SSSA Special Publication 57, second edition, 2009.

10. Climate change causes, effects and solutions. John T. Hardy. John Wiley publications, 2003.
11. Human and social dimensions of climate change. Edited by Netra Chhetri, Intech publication, 2014.
12. Climate change adaptations in developed nations from theory to practice, James D. Ford and Lea Berrang-Ford (Edt.), Springer publication, 2008.
13. Climate change and sustainable development, ethical perspectives on land use and food production. Edited by Thomas Potthast and Simon Meish. Wageningen academic publishers, 2012.
14. Climate change a holistic view. R.R. Kelkar. BSP publications, 2010.
15. Climate change adaptation in practice from strategy development to implementation. Philipp Schmidt-Thome and Johannes Klein. Wiley Blackwell publication. 2013.
16. Climate change mitigation and agriculture edited by Eva Wollenberg, Alison Nihart, Marja-Liisa Tapio-Bistrom and Maryanne Grieg-gran. Earthscan publications. 2012.
17. IPCC Reports and Guidelines -
18. UNFCCC (2008) Challenges and opportunities for mitigation in the agricultural soils. United nations framework convention on climate change, Document No. FCCC/TP/2008/8

Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

CERTIFICATE IN EVENT MANAGEMENT (CEM)

Course Co-ordinator: Ms. Anita.T.A

Academic support by
School of Tourism Studies
Mahatma Gandhi University
Kottayam, Kerala

Certificate in Event Management (CEM)

(Distance Learning Programme - Certificate Programme)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State had also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all its Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Certificate Programme has been designed by the School of Tourism Studies and is to be conducted by the School of Distance Education with the academic support of the School.

The School of Tourism Studies, which came up in 2010 is envisaged as a centre of higher learning and research in Tourism and Hospitality Studies and is the first University department of its kind in Kerala. The aim of the School is to develop skilled human resources specific to regional and global needs in applied, technical, interpersonal, analytical and communication abilities to master in travel management, hospitality management, foreign languages and allied areas.

Studies on tourism and hospitality education conducted by the Ministry of Tourism, GOI and FHRAI highlighted the need for more professionals. A survey by the Ministry of Tourism indicates that there is a demand for 2.03 lakh trained professionals every year of which 66 percent is at skill level and 34 percent at managerial level (69020). FHRAI's 43rd annual convention reaffirmed the fact about the mismatch between demand and supply, with Indian students still needing more institutions as the existing institutions meet only 15 percent of the industry requirements. A study conducted by the Dept. of Tourism, Govt. of Kerala says that there is a paucity of qualified talent for middle management positions in Kerala and most companies are bringing talent from outside the state to fill positions.

(a) Programme's mission & objectives:

This programme is envisaged to provide integrated knowledge in the upcoming field of Event Management. Events form an integral part of the tourism industry and they are inter-related. Events become one of the major revenue generators for the tourism industry considering its seasonality factors. Events, small and big are used by the tourism industry to bring revenue even to rural areas with not much resources or attractions to speak of. Event Management is a field with lack of skilled knowledge base. Hence the objective of the course is to provide the students with a technical knowhow coupled with providing them a strong knowledge base to excel, market effectively, promote themselves and earn revenue through this trade. The curriculum formed aims to impart full justice to the subject matter with strong knowledge base and skill development in Event Management Process. A certificate in event management offers training in financial and legal safeguards, marketing, and business habits of an effective event manager. Gain the knowledge and skills to organize varied events, including trade shows, conventions, and more.

(b) Relevance of the programme with HEI's Mission and Goals:

The programme imparts technical and theoretical knowledge to unskilled sector thereby empowering them to be financially independent. Unorganised sector especially self-help women's groups could benefit immensely by bringing professionalism to the small-scale business enterprises thus fulfilling the universities mission of being beneficial to the society at large and its development.

(c) Nature of prospective target group of learners:

Students from various streams interested in being small scale entrepreneurs in the field of organizing events or work in a large event organization company or be on-site partner of a business organization can be part of the programme. The prospective target group would include undergraduates, postgraduates, and the general public who have passed 10 +2.

(d) Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence:

This course places a strong emphasis on the professional development of the students. Such a qualification will enable and facilitate self-employment opportunities for the students and small scale event managers as well as women's self-help groups. On successful completion of this module, a student will be able to (i) Understand the principles and practices associated with event management, (ii) Plan, organize, implement and monitor the event management process (iii) Develop necessary professional skills required to work in event management companies (iv) Build awareness of the latest technology available and negotiation skills required to succeed in this field.

(e) Instructional Design:

The programme is of six months duration comprising four courses with a total of 16 credits. There are adequate contact classes and the assessment involves both internal as well as external components. Each student also has to submit a case study or project report.

Course Summary of Certificate in Event Management (CEM)

Course Code	Course Type	Course Name	Contact Classes (Hrs)	Credits	Internal Marks	External Marks	Total Marks
SDE-PS-1	Core Course	An Introduction to Event Management	12	4	20	80	100
SDE-PS-2	Core Course	The Event Process	12	4	20	80	100
SDE-PS-3	Core Course	The Event Business	12	4	20	80	100
SDE-PS-4	Case study / Project work / Report	A case study/Project Work and Report	12	4	20	80	100
Total			48	16			400

(f) Procedure for admissions, curriculum transaction and evaluation:

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. A pass in the Plus Two level is the minimum eligibility for the admission. Fee structure will be decided by the University. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/Presentation of case study for each course. Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

'P' grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Certificate programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

GPA =

$$\frac{\text{Total credit points earned by the student from all the required courses of the programme}}{\text{Total credits of all courses required in the programme}}$$

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

$$\text{Equivalent Percentage} = (\text{GPA obtained}) \times 10$$

(g) Requirement of the laboratory support and Library Resources:

All infrastructural support of the Centre will be extended to the learners as per the requirement. Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

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Ph.D Theses	2135
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Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	School of Tourism Studies	1464

(h) Cost estimate of the programme and the provisions:

The budget details for the course are given in the following Table.

Budget estimate (for 100 students)

S.No.	Item	Amount (Rs. in Lakhs)
1.	Manpower	2
2.	Study material	1.5
3.	Books and Periodicals	0.5
4.	End semester examination	1.
	Total	5.00

Total Programme fee: Rs.5000/-

(i) Quality assurance mechanism and expected programme outcomes:

The quality of the programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the programme, the subject experts, Director, School of Distance Education and Head of the School of Tourism Studies. The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

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DETAILED SYLLABUS OF THE PROGRAMME

Certificate in Event Management (CEM) (6 Months)

The Certificate Programme in Event Management is meant for students pursuing career interests in organizing events and those interested to work in event management companies.

Course Code:

1. Number of credits: 16
2. Type of course: Distance Mode
3. Duration: 6 Months
4. Sanctioned Strength:

Programme Description:

The Certificate Programme in Event Management enables the students to plan, design, implement and monitor different theme based events effectively.

Objectives of the Programme:

After successful completion of the programme, students will be able to -

1. Understand the nature of events and its essential components.
2. Understand the usefulness of event management in various sectors
3. Understand the process to conduct an event effectively
4. Understand different types of theme based events
5. Understand the emerging trends in event management
6. Understand the applications of technology in event management

List of Courses:

COURSE I – An Introduction to Event Management

COURSE II- The Event Process

COURSE III – The Event Business

COURSE IV- Case Study/ Project and Report

Syllabus

COURSE – 1 AN INTRODUCTION TO EVENT MANAGEMENT

Objectives:

To study the concept & significance of event management

To comprehend the linkages of event and tourism industry

UNIT-1

History and evolution of Events, Nature, scope, types, significance and of event management, Inter-relationship between events and tourism, Key stakeholders – their roles and responsibilities

UNIT-2

Meaning and functions of MICE tourism – meeting, incentive, conference and exposition, need for mice growth of incentive travel and incentive program, motivation for incentive travel, profile of business & corporate travelers.

UNIT-3

Trade shows, Conventions and Visitors Bureaus, Meeting planners and types, players in the event industry, Transportation, accommodation, logistics catering, human resources, civic amenities and other supporting services.

UNIT-4

Host facilities – Facilities provided in the host facilities, Responsibilities of Meeting planners, - Spousal tours, Food and Beverages and other services provided at the host facilities.

REFERENCES

1. Page, Stephen, and Joanne Connell, eds. *The Routledge handbook of events*. Routledge, 2014.
2. Events Management, Ed by Peter Robinson, Debra Wale and Geoff Dickson, CABI Headoffice, London, 2010
3. Ferdinand, Nicole, and Paul Kitchin. *Events management: an international approach*. Sage, 2012.
4. Goldblatt, Joe. *Special Events: Creating and Sustaining a New World for Celebration*. Wiley Global Education, 2013.
5. Robertson, Martin. *Events and festivals: current trends and issues*. Routledge, 2013.
6. Fox, Dorothy, et al. *Doing events research: From theory to practice*. Routledge, 2014.

COURSE - II- THE EVENT PROCESS

Objectives:

To enable students to understand the essentials of planning, design and implementing an event

To acquaint students with practical aspects of organizing events of various forms

UNIT – 1

The Process – An introduction, theory behind planning, Planning, Concept, Nature and Practices in Event Management: Organizing and planning events, Customer relationship management, Watching and managing events business, Event coordination

UNIT – 2

Initiation and Planning – setting goals and objectives – Announcing the project, selecting the project team, Defining communication channels and Resource specification, The Planning process, Planning Tools

UNIT – 3

Execution and Implementation – Gantt Charts, Run sheets, Control, communication channels, Organizing Events, Planning Check lists, Monitoring and Evaluation, Managing Human resources Event Management Team, Skills and Qualities required, Co-ordination,

UNIT – 4

Theme based Events, Outdoor and Indoor events, Resources required, Essentials for a successful event - Monitoring, Evaluation and Feedback

REFERENCES:

1. Etzion, Opher, Peter Niblett, and David C. Luckham. *Event processing in action*. Greenwich: Manning, 2011.
2. Allen, Judy. "The business of event planning." *Behind-the-Scenes Secrets of Success* (2002).
3. Daniels, Maggie, and Carrie Loveless. *Wedding planning and management: Consultancy for diverse clients*. Routledge, 2013.
4. Frost, Warwick, and Jennifer Laing. *Commemorative events: Memory, identities, conflict*. Routledge, 2013.
5. Yeoman, Ian, et al., eds. *The Future of Events & Festivals*. Routledge, 2014.
6. Getz, Donald, and Stephen J. Page. *Event studies: Theory, research and policy for planned events*. Routledge, 2016.

COURSE III – THE EVENT BUSINESS

Objectives:

To enable students to understand the marketing and promotion of events

To understand legal and social implications and negotiations and technology involved in the event process.

UNIT – 1

Event Marketing and Promotion – process of event marketing, Marketing Mix, Pricing, Promotion, The economics of conferences and conventions. Promotional strategies used in Marketing of event business

UNIT – 2

Financial Management: Raising Funds, Investment, Fund Flow Management and Working Capital Decisions. Pricing strategies, Promotion and Marketing

UNIT – 3

Legal issues – Negotiation – Steps in Negotiation, Meeting Technology – Latest technology used in the event process

UNIT – 4

Socio-economic significance of event tourism, environmental impact, issues and challenges, inter-relationship between events and tourism.

REFERENCES:

1. Jackson, Nigel. *Promoting and marketing events: Theory and practice*. Routledge, 2013.
2. Baum, Tom, et al., eds. *People and work in events and conventions: A research perspective*. Cabi, 2009.
3. Merkel, Udo, ed. *Power, politics and international events: Socio-cultural analyses of festivals and spectacles*. Routledge, 2013.
4. Mackellar, Jo. *Event audiences and expectations*. Routledge, 2013.
5. Richards, Greg, Lénia Marques, and Karen Mein, eds. *Event Design: Social perspectives and practices*. Routledge, 2014.
6. Rogers, T. (2003). *Conference & Conventions: A Global industry*. Oxford: Butterworth – Heinemann

COURSE IV – Case study/ Project and Report

Case study involves internal assessment of the process as well as external component including report to be submitted as per the prescribed format.

Proposal for
Distance Learning Programme under School of Distance Education

Certificate in Extruder Operator for Polymer Industry Applications
(CEOPIA)

Course co-ordinators: Dr. S. Anas

in association with

School of Chemical Sciences

Mahatma Gandhi University

Kottayam, Kerala

**Certificate in
Extruder Operator for Polymer Industry Applications (CEOPIA)
(Distance Learning Programme - Certificate Programme)**

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Certificate Programme has been designed by the School of Chemical Sciences and to be conducted by the School of Distance Education with the academic support of the School.

The School of Chemical Sciences is one among the initial statutory departments of Mahatma Gandhi University. The academic programmes of the School of Chemical Sciences (SCS) were initiated from the very inception of the university. At present the school offers four different M.Sc. programmes along with M.Phil, M. Tech and Ph.D programmes covering all branches of chemistry and polymer science. The school, since its inception, has been making a steady progress in all spheres of activity and has academic programmes spread in four broad divisions namely Inorganic Chemistry, Organic Chemistry, Physical Chemistry and Polymer Chemistry. In spite of the nationwide diversions of talented students from basic sciences, more than 1000 students appear for our entrance tests to graduate programmes annually. Keeping in view the vision and mission of

the School, the syllabi of the various courses are frequently updated introducing new courses in emerging areas with inter-disciplinary content. The faculty members are actively engaged in research in various branches like synthetic organic chemistry, theoretical and computational chemistry, catalysis, material and solid state chemistry, nanochemistry and technology, photochemistry, polymer composites etc. The school has state-of-the-art instrumentation facility for research activities.

a) **Programme's mission & objectives :**

The aim of the certificate course Extruder Operator through distance learning programme is to prepare students to become experts in extrusion processing. This will develop skills towards professional industrial careers in Plastic industry and students startups. This module will provide the student with an understanding of the various type of plastic extrusion process, equipment, material development for extrusion, troubleshooting in extrusion process and extrusion plant maintenance

b) **Relevance of the program with HEI's Mission and Goals :**

The course focuses on extrusion processing of various type of thermoplastic polymers. This course places a strong emphasis on the professional development of the students. Such a qualification will enable and facilitate career progression for the students. This course will create a confidence to the students start startups.

c) **Nature of prospective target group of learners:**

Students with science/engineering background can join for the programme. Students doing their B.Sc/Diploma/ B.Tech students can join the programme to strengthen their operation skills in extrusion processing.

d) **Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence :**

This course places a strong emphasis on the professional development of the students. Such a qualification will enable and facilitate career progression for the students. On successful completion of this module, a student will be able to (i) Understand the various kind of extrusion process in the polymer industry. (ii) Understanding the plastic compounding (iii) Theoretical education for understanding and troubleshooting in extrusion process (iv) provide practical training of extrusion processes

- e) **Instructional Design :**
The course is of 6 months which includes theory and practicals.

Structure of the Course

Duration : 6 months
Credits : 20
Contact Hours - Theory : 48 hrs
Contact Hours - Practicals : 90 hrs

Course Code	Course Type	Course Name	Credits	Contact classes (hours)	Internal Marks	External Marks	Total Marks
SDE-SCS-	Common Core course (Theory)	Introduction of Thermoplastic Materials	4	12	30	70	100
SDE-SCS-	Common Core course (Theory)	Introduction to Plastic Compounding	4	12	30	70	100
SDE-SCS-	Common Core course (Theory)	Introduction to Extruders	4	12	30	70	100
SDE-SCS-	Common Core course (Theory)	Introduction to Extrusion process	4	12	30	70	100
SDE-SCS-	Common Core course (Practical)	Plastic Compounding, Extrusion profiles and trouble shooting in extrusion processing/ Project	4	90	30	70	100
Total			20	138	150	350	500

*T : Theory; P : Practical

Course Design

For practicals, 20% will be virtual and remaining will be by direct laboratory work. This course will have three types of graded activities that will be included in overall course grade. These include: **Assignments:** Answer monthly quizzes that account for 20% of the course total grade.

Each quiz includes 20 multiple choice questions that examines your understanding of the learning materials. **Open-ended Questions:** Answer two open-ended questions that account for 80% of the course total grade. The questions encourage creative thinking, and their answers are based on the knowledge gained in the course. **Final project:** At the end of the course the candidate will be asked to complete a final project. It will consists of a written report that focuses on the utilization of analytical techniques for various applications. The final project will be graded and will contribute to 25%.

f) **Procedure for admissions, curriculum transaction and evaluation:**

Any student with minimum +2 Science can apply. The student has to pay an amount for the programme which is decided by the University. The course contents will be delivered online. For practical's, 20% will be virtual and remaining will be by direct laboratory work. This course will have three types of graded activities that will be included in overall course grade. These include: **Assignments:** Answer monthly quizzes that account for 20% of the course total grade. Each quiz includes 20 multiple choice questions that examines your understanding of the learning materials. **Open-ended Questions:** Answer two open-ended questions that account for 80% of the course total grade. The questions encourage creative thinking, and their answers are based on the knowledge gained in the course. **Final project:** At the end of the course the candidate will be asked to complete a final project. It will consists of a written report that focuses on the utilization of analytical techniques for various applications. The final project will be graded and will contribute to 25% of the overall course grade.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be conducted by the University. The performance of a student in each course will be evaluated in terms of percentage of marks obtained with a provision for its conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/ Presentation of the case study for each course. Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the students of the same.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6

45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

'P' grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Certificate programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

GPA =

$$\text{GPA} = \frac{\text{Total credit points earned by the student from all the required courses of the programme}}{\text{Total credits of all courses required in the programme}}$$

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

$$\text{Equivalent Percentage} = (\text{GPA obtained}) \times 10$$

g) **Requirement of the laboratory support and Library Resources:**

To handle the practical components in syllabus, technicians and consumables are required. The Laboratory facility of the school shall be provided to the students during holidays and vacation. Certain level of the practical would be conducted and performed by applying virtual reality methods.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library is providing service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. The libraries of teaching departments are open during working hours of the Schools. Reading space is provided in all the three floors housing the various sections of the library. The library provides reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016.

The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4

E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	School of Chemical Sciences	4100

h) **Cost estimate of the programme and the provisions:**

The budget details for the course is given in the following Table.

Budget Estimate

S. No.	Item	Amount (Lakhs)
1	Online study materials	2
2	Staff Salary(Teaching and Laboratory)	5
2	Online virtual lab.	3
3	Online assignments/evaluation	2
4	Laboratory demonstrations	3
5	Books and periodicals	1
6	Contact classes	1
	TOTAL	17 Lakhs

Total Programme fee: Rs.17500/-

i) **Quality assurance mechanism and expected programme outcomes:**

The quality of the programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the programme, the subject experts, Director, School of Distance Education and Head of the School of Chemical Sciences. The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre

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Syllabus

Certificate Programme in Extruder Operator for Polymer Industry Applications

Month 1: Introduction of Thermoplastic Materials

Commodity plastics :-(Monomer preparation, polymer preparation, properties and application)

- Polyethylene: LDPE ,HDPE, LLDPE ,XLDPE ,UHMWPE
- Polypropylene: Isotactic, syndiotactic and atactic polypropylene.
- Polystyrene, Toughened poly styrene HIPS AND ABS –Expanded polystyrene
- Polyvinyl chloride (PVC)
- Acrylic plastics -PMMA, PMA

Engineering plastics: – (Monomer preparation, polymer preparation, properties and application)

- Different types – Nylon 6,6-nylon 6-nylon 6,10,
- Polyesters : PET and PBT
- Polycarbonate

Month 2: Introduction to Plastic Compounding

Compounding ingredients – fillers, Stabilisers, coupling agents, plasticisers, Impact modifiers, antidegradents, UV absorbers, flame retardants and blowing agents, cross linking agents, Processing aids, Lubricants, Extenders and Pigments. Typical plastic product formulations, plastic compounding equipments.

Month 3-4: Introduction to Extruders

Extrusion Definition, Extruder classification- cold feed, hot feed, Ram and screw extruders with sketches, L/D ratio, Single screw extruder, T-head, dual, twin screw, vented extruder. Extruder parts, accessories, ancillary equipment, sizing. Sketches of various type of extruders. Extruder screw design for various types of plastics, extruder temperature control

Month 4-5: Introduction to Extrusion process

Extrusion line, mixing zones, process. Die swell, Melt fracture & shark skin. Factors affecting the output of an extrusion process variables in extrusion, back pressure & its effect on extrusion process Extrusion of tubing and pipe, profile extrusion, wires and cables. Extrusion dies, important aspects of die design, Trouble shooting in extrusion processes

Extrusion Plant & Maintenance: power supply and control system, drive mechanism, hydraulics, pneumatics and electrical circuits. Gear box, clutches, pumps and safety features. Identification of faults, trouble shooting. Preventive maintenance, planning and safety.

Month 5-6: Plastic Compounding, Extrusion profiles and trouble shooting in extrusion processing

Design various a plastic formulation (PVC pipe, PE tube, etc.)

Extrusion of various type of profiles

References

1. Brydson, J.A., 1999. *Plastics materials*. Butterworth-Heinemann.
2. Processing, P. and Jones, D.M., 1995. Chapman & Hall. *New York*.
3. Fisher, E.G., 1976. Extrusion of plastics.
4. Levy, S., 2012. *Plastics product design engineering handbook*. Springer Science & Business Media.
5. Osswald, T.A., 1998. Polymer processing fundamentals.
6. Crawford, R.J., 1998. *Plastics engineering*. Butterworth-Heinemann.

Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

Certificate in ‘Film, Culture and Society’ (CFCS)

Course Co-ordinator: Dr. Aju K Narayanan

Academic support by
School of Letters
Mahatma Gandhi University
Kottayam, Kerala

CERTIFICATE PROGRAMME IN ‘FILM, CULTURE AND SOCIETY’ (Distance Learning Programme - Certificate Programme)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State had also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Certificate Programme has been designed by the School of Letters and is to be conducted by the School of Distance Education with the academic support of the School.

a) Programme’s mission & Objectives :

“Film, Culture and Society” is a certificate course, aimed at exploring the inter relation between film, culture and the public. The primary motive of the course is to create the awareness that cinema, a modern art form is something more than a source of mere entertainment by locating it within the historical, political and cultural contexts of its production.

This course is intended to bring in a fresh attitude towards visual culture among the present generation. It assumes that film, as an important medium of cultural education, plays a significant role in shaping and moulding cultural and intellectual perspectives. As a centre of theatrical and cinematic activities, School of Letters takes it as an intellectual mission to transform viewing culture for the development of a better society.

This certificate programme consists of four courses with four credits each. Three of them are intended to equip the students with developing perspectives for watching, analysing and critiquing cinema. The remaining one demands student’s

critical aptitude in the form of a dissertation/ monograph to be submitted at the end of the course.

As a six months programme, the course is envisaged to be introductory in nature, but at the same time designed in such a way that it will be of immense aid to those who wish to pursue further enquiries in the area.

b) Relevance of the programme:

The course is intended to develop critical aptitude and intellectual enquiry among those who cannot otherwise attend a regular programme. As the most influential medium of ‘edutainment’, studying cinema transforms individuals from passive viewers to active agents of cultural criticism.

c) Nature of prospective target group of learners:

Candidates from various streams can join the programme. The prospective target group of learners include all those who have passed Plus Two.

d) Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence:

This programme in open and distance mode helps aspiring candidates who are unable to join a regular programme. But at the same time, the contact classes designed for the candidates are expected to give them theoretical inputs and space for discussion. In today’s technologically advanced environment, it is possible for candidates to watch films in their own convenient locations.

e) Instructional design:

The programme is of six moth duration comprising four courses with a total of 16 credits. There are adequate contact classes and the assessment involves both internal as well as external components. Each candidate has to submit a monograph/dissertation at the end of the programme.

Duration-6 months							
Course Code	Course Type	Course Name	Contact Sessions (hours)	Credits	*Internal Marks	External Marks	Total Marks
DE-SL-1	Core course	History of Cinema	12	4	20	80	100
DE-SL-2	Core course	Cinema and Literature	12	4	20	80	100
DE-SL-3	Core course	Screenplay: Text and Analysis	12	4	20	80	100
DE-SL-4	Project work	Monograph/	12	4		100	100

		dissertation					
Total			48	16			400

*Through assignments/term papers

f) Procedure for Admission, Curriculum Transaction and Evaluation

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. A pass in the Plus Two level is the minimum eligibility for the admission. Fee structure will be decided by the University. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book review/Debate/Seminar/Presentation of case study for each course. Assignments/book review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
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40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

'P' grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Certificate programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

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This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

Equivalent Percentage = (GPA obtained) X 10

g) Requirement of the laboratory support and library resources:

The library and infrastructure support of the School and the University will be extended to the learners as per requirement.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-

friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

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The library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	School of Letters	18233

h) Cost estimate of the programme and the provisions:

Budget estimate (for 100 students)

S.No.	Item	Amount (Rs. in Lakhs)
1.	Faculty remuneration/ Manpower	3
2.	Study material	2
3.	Film screening	3
4.	Internal assessment	0.5
5.	End semester examination	1
	Total	9.50

Total Programme fee: Rs.9500/-

i) Quality assurance mechanism and expected programme outcome:

The quality of the programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the programme, the subject experts, Director, School of Distance Education and Head of the School of Letters. The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

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Syllabus

Certificate in 'Film, Culture and Society' (CFCS)

DE- SL- 1: History of Cinema

Objective:

This introductory course aims to generate in students a familiarity with the evolution of cinema as an art form, its spread across the world, the evolution of theoretical concepts, and significant films and film makers.

Module 1

Modern science—early experiments in cinema—Lumiere Brothers — silent films— D.W. Griffith—*Birth of a Nation*—Charlie Chaplin—*Modern Times*.

Module 2

Expressionism—mise en scène—montage—Soviet films—*Battleship Potemkin*—Eisenstein—neorealism—*Bicycle Thieves*—new wave cinema.

Module 3

Auteur theory—Alfred Hitchcock—Hollywood Cinema—Asian Cinema: Japanese, Korean, Iranian films—Third World Cinema—Feminist Films—Indian Cinema—Dadasaheb Phalke—Rithwik Ghatak—Satyajit Ray—Apu Trilogy—Popular films: Bollywood and South Indian films—Issues of representation.

Module 4

Malayalam cinema—silent films—J.C.Daniel—*Vigathakumaran, Balan*—Kerala Renaissance and cinema—*Neelakkuyil, Chemmeen*—the New Wave in Malayalam: Adoor Gopalakrishnan, G. Aravindan, John Abraham—Popular films in Malayalam.

References

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2. Chidananda Dasgupta, *Talking about Films*, 1981, Orient.
3. William H. Philips, *Film an Introduction*, 2009, Bedford/St. Martin's.
4. Richard Abel, *Encyclopedia of early Cinema*, 2005, Routledge.
5. Chelangattu Gopalakrishnan, *Loka cinemayude Charithram*, 2013, Current Books, Trichur.

6. Vijaykrishnan, *Malayala Cinemayude Katha*, 2005, Mathrubhumi, Kozhikkodu
7. V.K. Joseph, *Cinamayum Prathyayasasthravum*, 2000, Chintha publishers.
8. C.S.Venkiteswaran, *Malayala cinema patanangal*, 2011, DC Books.
9. Aju K.Narayanan, Cheri Jacob K., *Cinema Muthal Cinema Vare*, 2012, SPCS, Kottayam.
10. Sheeba M Kurian (ed.), *Cinema: Sankethikathayum Samskaravum*, 2017, University of Kerala.

DE- SL-2: Cinema and Literature

Objective: This course aims to enable students to understand and analyze films in the context of the relation between literature and cinema. Issues of adaptation and inter-semiotic translation will also be a focus of discussion.

Module 1

Relation between cinema and literature—Adaptation: concepts and approaches—Joy Gould Boyum, Dudley Andrew, Andre Bazin—adaptation in contemporary times — Adaptation as translation

Module 2

Indian context of film adaptation—Indian mythology and silent films—the New cinema and literature—adaptation and Bollywood: *Devadas* movies.

Module 3

Malayalam cinema and literature—early attempts at adaptation in Malayalam—adaptations in 1960s— ‘Vadakkan pattu’ films—world literature and Malayalam cinema.

Module 4

Detailed analysis of select films:

1. *Patherpanchali*
2. *Vidheyan*

References

1. Robert Stam & Alessandra Raengo, *Literature and Film*, 2008, Blackwell.
2. Joy Gould Boyum, *Double Exposure: Fiction into Film*, 1989, Berkley.
3. Dudley Andrew, *Concepts in Film Theory*, 1984, Oxford University Press.
4. Geoffrey Wagner, *The Novel and Cinema*, 1975, Fairleigh Dickinson University Press.

5. RVM Divakaran, *Kathayum Thirakkathayum*, 2005, Oliv, Kozhikkodu.
6. Jose K Manuel, *Cinemayude Patangal*, 2004, Current books.
7. Madhu Iravankara, *Malayala Cinemayum Sahityavum*, 2009, DC Books.
8. I.Shanmughadas, *Cinemayude vazhiyil*, 1990, Current Books.
9. P.S. Radhakrishnan, *Charithravum, Chalachithravum*, 2010, Bhasha Institute.
10. Aju K Narayanan, Anvar Abdulla, 'Kathayamama Kathayamama(thira)kathakalathisadaram', Deshabhimani onappathippu, 2017.

DE- SL- 3: Screenplay: Text and Analysis

Objective: The course aims to familiarize the students with screenplay as a blueprint of cinema. Screenplay writing and its structural, aesthetic and political dimensions will be subjected to close analysis.

Module 1

Cinema and screenplay—screenplay and literature—basic tenets of screenplay writing
Screenplay: structure, narration and dialogue—the Three Act theory of Syd Field.

Module 2

Important screenplays in Indian cinema—Sathyajith Ray's screenplays—narrative techniques of transforming literature into screenplay—screenplays of popular films.

Module 3

Screenplays in Malayalam—screenplay writers in Malayalam—Ponkunnam Varkey, Uroob, Thoppil Bhasi, S. L. Puram Sadanandan, M.T. Vasudevan Nair, Padmarajan, P. Balachandran and Renjith.

Module 4

Detailed study of select screenplays:

1. *Oru Vadakkan Veeragadha*
2. *Chinthavishtayaya Shymala*

References

1. Syd Field, *Screenplay: The Foundations of Screenwriting*, 2005, RHUS.
2. Aravindan Vallachira, *Thirakkatha: Cinemayude Blueprint*, 2010, SPCS.
3. CS Venkiteswaran, *Cinema talkis*, 2012, DC Books, Kottayam.
4. Jose K Manual, *Thirakkatha rachana: Kalayum siddhanthavum*, 2004, Current Books.
5. RVM Divakaran, *Kathayum Thirakkathayum*, 2005, Oliv, Kozhikkodu.
6. Dominic J Kottoor, *Thirakkatha: Cinemayude Drusyaparakaram*, 2011, Current

Books.

7. Jithesh T, *Cinemayude Vyakaranam*, Olive, kozhikkodu.

8. N.P.Sajeesh, *Thiramalayalathinte avasthanthrangal*, 2007, Kerala Bhasha Institute.

9. Panmana Ramachandran Nair (ed), *Chalachithra Patanangal*, 2008, Current Books.

10. Adoor Gopalakrishnan, *Cinema samskaram*, 2011, Mathrubhumi books.

DE- SL- 4: **Monograph/Dissertation**

Course 4 is a dissertation/monograph typed and bound, submitted by each candidate based on the knowledge acquired in the course. The dissertation shall be of 25 to 30 pages, consisting of minimum 2 chapters in addition to an Introduction and a Conclusion.

The project work may be on any of the following areas:

Screenplay

Adaptation

Remake

Theoretical/political/cultural reading of film(s)

Issues of representation

Narrative structural issues and techniques

Any other topic related to films and film world.

Programme Project Report (PPR)

for

Distance Learning Programme under School of Distance Education

Certificate in Internet Programming and Web Technologies

(CIPWT)

Course Co-ordinator: Pushpalatha. K. P

Academic support by

School of Computer Sciences

Mahatma Gandhi University

Kottayam, Kerala

Certificate in Internet Programming and Web Technologies

(Distance Learning Programme - Certificate Programme)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Certificate Programme has been designed by the School of Computer Sciences and to be conducted by the School of Distance Education with the academic support of the school.

School of Computer Sciences was established in the year 1990 with an objective to impart higher education and research in the field of Computer Science. The School enjoys considerable repute as a centre of learning, a reputation matched by a stimulating physical and intellectual atmosphere. Currently the School offers a second level M Sc programme in Computer Science, an M Tech in Computer Science and Technology with specialization in Communication and Network Technology, an M Phil programme in Computer Science and Ph D. The thrust areas of study and research includes Machine Learning and Pattern Recognition, Image Processing and Computer Graphics, Design and Analysis of Algorithms, Soft Computing, Data Mining, Big Data Analytics, Advanced and Wireless Networking, Internet programming, Cloud Computing and Advanced Computing Paradigms. The up to date curriculum and high standard of teaching matched with the state-of-the-art infrastructure and computational facilities of the School provide an intellectually stimulating atmosphere for the holistic development of students.

(a) Programme's Mission & Objectives:

To produce skilled and creative professionals in the area of Web technologies, enabling them to begin IT startups or to be absorbed by various organizations and to evolve innovative horizons of Internet Programming. The major objective is to improve the knowledge and technical skills in the area of Web Technologies by using education as a lifelong tool to acquire knowledge and training in internet applications.

(b) Relevance of the programme with HEI's Mission and Goals:

The programme is designed in such a way that, the learners coming from various streams, can achieve technical skills in different advanced and latest technologies in the area of web technologies in a professionally competing level. This enables them to engage in the IT-enabled departments or sections of many government and private sector organizations.

(c) Nature of prospective target group of learners:

The certificate programme is designed for a duration of 6 months. The learners of this programme are expected to come out as a professional in web technologies.

(d) Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence:

The programme enables the learners to achieve technical skills in developing web sites and web services. During this era of internet, all government and public sector organisations are run online, the programme can attract a lot of learners. The learners can become self employed by beginning IT start-Ups or be part of any organisation where the business are done online. This programme is completed within 6 months duration. 75 hours of contact classes will be given during holidays. The four courses of this programme instruct the learners to read and comprehend printed materials during non-contact hours and do practical assignments using laboratory of the School during the contact hours. Thus the syllabus shall be properly and systematically completed and examinations shall be completed within the 6 months period.

(e) Instructional Design:

The programme is of duration of 6 months which includes theory, practicals and project work. There are enough contact classes given to direct teaching and training. The assessment involves both internal and external components.

Course Code	Course Type	Course Name	Contact Hours	Credits	Internal Marks	External Marks	Total Marks
SDE SKS CP 1	Core course	Web Programming	10	3	20	80	100
SDE SKS CP 2	Core course	Object Oriented Programming Using Java	10	3	20	80	100
SDE SKS CP3	Core course	PHP and MySQL	10	3	20	80	100
SDE SKS CP4	Core course	Practical	90	3	20	80	100
SDE SKS CP4	Core course	Project	4	4	20	80	100
Total			124	16	100	400	500

(f) Procedure for admissions, curriculum transaction and evaluation:

The Certificate programme with a duration of 6 months, is designed to technically professionalize the learners including youth and old, employed and unemployed. The admission procedure of this programme is based on the following eligibility criteria:

A pass in 10+2 level examination.

All the courses are evaluated based on assignments/internal/external evaluation. For Project work, the learners have to complete a mini project work along with the three theory courses, according to curriculum and submit a project report and the evaluation is done based on project presentation and viva-voce.

(ii) Detailed syllabi: Annexure I

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. Fee structure will be decided by

the University. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/Presentation of case study for each course. Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

‘P’ grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Diploma programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

GPA =

Total credit points earned by the student from all the required courses of the programme
Total credits of all courses required in the programme

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

Equivalent Percentage = (GPA obtained) X 10

(g) Requirement of the laboratory support and Library Resources:

The necessary software and the hardware support for the programme will be provided by the School. Library facilities of the School and University will be provided as per requirements.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library is providing service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. The libraries of teaching departments are open during working hours of the Schools. Reading space is provided in all the three floors housing the various sections of the library. The library provides

reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016.

The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	School of Computer Sciences	4130

(h) Cost estimate of the programme and the provisions:

The budget details for the course is given in the following Table.

S. No.	Item	Amount (Lakhs)
1	Manpower	3
2	Study Materials	2
3	Examinations	1.5
4	Laboratory/ Library	1.5
	TOTAL	8 Lakhs

Total Programme fee: Rs.8000/-

(i) Quality assurance mechanism and expected programme outcomes:

The quality of the programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the programme, the subject experts, Director, School of Distance Education and Head of the School of Computer Sciences. The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

Annexure I

1. SDE SKS CP 1 Web Programming

Unit I

HTML: General Introduction to Internet and WWW; Text tags; Graphics, Video and Sound Tags; Link and Anchor Tags; Table Tags; Frame Tags; Miscellaneous tags (layers, image maps etc.); CSS; DHTML; Example Applications; Simple introduction to XML and VRML.

Unit II

CGI Programming: HTML Forms and Fields; Perl: Basic control structures, Data types and basic features; CGI Programs: GET & POST methods, Simple applications; Cookies; Server side includes; Example applications.

Unit III

Javascript: Basic data types; Control structures; Standard functions; Arrays and objects, Event driven programming in Javascript; Example applications, **Introduction to AJAX, Introduction to JQUERY, Crystal reports.**

Unit IV

Tools for dynamic webpages: Dream viewer, Macromedia flash, Zope, HTML5.

Unit V

Server side scripting; Servletstructure; Servletlife cycle; Request and response objects; Sessions; Invoking servlets, JDBC, .NET Technology; C#, JSP ,ASP,PHP

References

- Joel Sklar, Principles of Web Design, Vikas Publications, 2014.
- V.K. Jain, Advanced Programming in Web Design, Cyber Tech Publications, 2008.
- H M Deitel, P J Deitel&A B Goldberg, Internet and Worldwide web programming: How to Program, 3/e, Pearson Education, 2007.

2. SDE SKS CP 2 Object Oriented Programming Using Java

Unit I

Brief History of Java, Special Features of Java, C++ Vs JAVA, JAVA and Internet and WWW, JAVA support systems, JAVA environment. JAVA program structure, Tokens, Statements, JAVA virtual machine, Constant & variables, Data types, Declaration of Variables, Scope of variables, Symbolic constants, Type casting. Operators : Arithmetic, Relational, Logical assignments, Increment and decrement, Conditional, Bitwise, Special, Expressions & its evaluation. If statement, if...else... statement, Nesting of if...else... statements, else...if Ladder, Switch, ?operators, Loops –While, Do, For, Jumps in loops, Labelled loops.

Unit II

Defining a class, Adding variables and methods, Creating objects, Accessing class members, Constructors, Methods overloading, Static members, Nesting of methods. Inheritance: Extending a Class, Overriding methods, Final variables and methods, Final classes, Finalize methods, Abstract methods and classes, Visibility control.

Unit III

Arrays: One dimensional & two dimensional, Strings, Vectors, Wrapper Classes, Defining interface, Extending interface, Implementing interface, Accessing interface Variable, System packages, Using system package, Adding a class to a package, Hiding classes.

Unit IV

Creating threads, Extending the threads class, Stopping and blocking a thread, Life cycle of a thread, Using thread methods, Thread exceptions, Thread priority, Synchronization, Implementing the runnable interface.

Unit V

Local and remote applets Vs applications, Writing applets, Applets life cycle, Creating an executable Applet, Designing a Web page, Applet tag, Adding applet to HTML file, Running the applet, Passing parameters to applets, Aligning the display, HTML tags & applets, Getting input from the user, JDBC.

References

- E. Balaguruswamy, "Programming with java - a primer", McGraw Hill Education, 2014.
- Herbert Schildt, Java: The Complete Reference, Seventh Edition, 2007.
- Peter Norton, "Peter Norton Guide To Java Programming", Techmedia Publications, 1997.

- Walter Savitch, “Java: An Introduction to Problem Solving and Programming”, Pearson Education, 7th Edition, 2015.
- Bruce Eckel , “Thinking in Java”, Pearson Education, 4th Edition, 2006.

3. SDE SKS CP 3 PHP and MySQL

Unit I

Overview: Introduction to PHP, Handling html form with PHP, Decisions and loop, Function, String, Array, Regular expression, Configuring and installation-Apache and PHP, MySQL.

Unit II

Creating PHP page: Structure and syntax- Constant, Variable, <? PHP tag, Session and cookie-Setting cookies with PHP, Using cookies with sessions, Deleting cookies, Registering session variables, Working with file and directories.

Unit III

Using PHP with MySQL: MySQL structure, Connection with MySql Database, Performing basic database operations (DML) (Insert, Delete, Update, Select), Using table, User input and output, User edit the database.

Unit IV

Manipulation and Creation:Manipulating and creating images with PHP, Validation, handling and avoiding errors.

Unit V:

Advanced Techniques: PHP5, LAMP, WAMP, sample projects- create login pages, creating Entry form, connecting to MySQL.

References

- Larry Ullman , PHP and MySQL for dynamic Web sites, Pearson, 4th tediton, 2012
- Steven M.Schafar, HTML, CSS,javascript, perl, python&PHP, Wiley Publication,2005
- ElizebethNaramrore, JaisonGarner, Beginning PHP5, Apache and MySQL @development, Wiley publication, 2006.

Programme Project Report (PPR)
For
Distance Learning Programme under School of Distance Education

Certificate in Organic Farming

Course Co-ordinator: Ms. Manjusha K. A.

Academic support by

Department of Lifelong Learning and Extension
Mahatma Gandhi University
Kottayam, Kerala

CERTIFICATE IN ORGANIC FARMING

(Distance Learning Programme - Certificate Programme)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State had also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all its Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Certificate Programme has been designed by the Department of Lifelong Learning and Extension and is to be conducted by the School of Distance Education with the academic support of the Department.

The Dept of Lifelong Learning and Extension (DLLE), formerly Dept. Adult Continuing Education, Extension and Field Outreach, was established at Mahatma Gandhi University in 1991 as a Statutory Academic Department.

As suggested by the former name of the department, ie, Dept of Adult Continuing Education, Extension and Field Outreach, the Department co-ordinated various activities pertaining to adult education and extension services and surveys from the very beginning itself. Recently the Department was renamed as Dept of Lifelong Learning and Extension as per the UGC Guidelines.

The Department has paved a way for the extension activities and has joined hands with many organizations and is creating a positive impact among the general public. The recent project sanctioned by the government of Kerala for propagating organic farming among the 100 affiliated colleges is an example for the department's positive intervention among the society. Likewise the department is implementing many programmes and is well appreciated by the general public.

All the academic and extension programmes of the Department are carried out strictly in accordance with the University regulations and the UGC Guidelines for the Departments of Lifelong Learning and Extension.

(a) Programme’s mission & objectives:

Over the years, it has become common place to understand and define organic agriculture as farming without synthetic pesticides and conventional fertilizers. This should not be considered a definition but a characteristic of a socially and environmentally conscious approach to agriculture that is currently experiencing rapid growth in the sector. India is fast becoming a major base for production and supply of organically produced agricultural products to the world market.

The main objective of the programme is to impart knowledge and proficiency in Organic Farming Practices,(both Basic and Social Aspects) marketing of organically raised agricultural produces, promote self-employment and income generation.

(b) Relevance of the programme with HEI’s Mission and Goals:

The programme imparts technical and theoretical knowledge to unskilled sector thereby empowering them to be financially independent. Unorganised sector especially self-help women’s groups could benefit immensely by bringing professionalism to the small-scale business enterprises thus fulfilling the universities mission of being beneficial to the society at large and its development.

(c) Nature of prospective target group of learners:

Students from various streams can join for the programme. Thus the prospective target group of learners include the general public who are desirous of studying such a programme.

(d) Instructional design:

The programme is of six month duration comprising of four courses with a total of 16 credits. There are adequate contact classes and practicals involves both internal as well as external components. Each student has to submit a report based case studies or project.

Course Code	Course Type	Course Title	Credits	Contact Classes Hrs	Internal	External	Total
DLLE-COF 1	Core Course	Introduction to Organic Farming	4	12	20	80	100
DLLE-COF2	Core Course	Organic Farming-Basic Lessons	4	12	20	80	100
DLLE-COF3	Core Course	Organic Farming-Social Aspects	4	12	20	80	100
DLLE-COF4	Core Course	Practical/Field Visits/Project Report/Viva Voce	4	60	20	80	100
			16	48	80	320	400

(e) Procedure for admission, curriculum transaction and evaluation:

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. A pass in the Plus Two level is the minimum eligibility for the admission. Candidates are eligible for admission irrespective of age. Fee structure will be decided by the University. The study materials will be delivered through online and print formats. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/Presentation of case study for each course. Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

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Range of % of Marks	Grade Letter	Performance	Grade Point
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40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

‘P’ grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Diploma programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

$$\text{GPA} = \frac{\text{Total credit points earned by the student from all the required courses of the programme}}{\text{Total credits of all courses required in the programme}}$$

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

$$\text{Equivalent Percentage} = (\text{GPA obtained}) \times 10$$

(f) Requirement of the laboratory support and library resources:

The library and infrastructure support of the Department of Lifelong Learning and Extension and the University will be extended to the learners as per the requirement.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

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the Schools. Reading space is provided in all the three floors housing the various sections of the library. The library provides reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016.

The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-ShodhSindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

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A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

(g) Cost estimate of the programme and the provisions:

Budget estimate

S.No.	Item	Amount (Rs. in Lakhs)
1.	Manpower	2

2.	Study material	1.
3.	Practicals	1.5
4.	Internal Assessment	0.5
5.	Examination	1
	Total	6.00

Total Programme fee: Rs.6000/-

(h) Quality assurance mechanism and expected programme outcomes:

The quality of the programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the programme, the subject experts, Director, School of Distance Education and Head of the Department of Life Long Learning and Extension. The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

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Syllabus

Certificate Course in Organic Farming

Course I-Introduction to Organic Farming

Various Organic Farming Models-Natural Farming, Fukuoka-Japan, Parma Culture, Billmollyson, Australian Organic Farming, Ecological Farming, Palekar Model,

Principles of Organic Farming, -

1.Naturality,2.Deconstructability,3.Productivity,4.Responsibility,5.Diversity,6.The attitude Towards Farming and the Proactive Work

The Basis of Farming-Life and Farming, Ecology and the Fertility of the soil, Food and the soil Organic Cycle, Crop, Pest, Fertilisers,etc

Course II-Organic Farming-Basic Lessons

Introduction to Farming, From Punam Farming to Green Revolution,

The Vision and Principles of Organic Farming,

Agribusiness and Agriculture, Soil and Farming(Soil, The Chemical Composition of Soil, Elements in Soil. The Organic Matter in Soil.

The Rethinking of Farming using the Chemical Fertilizers-History, Practical Aspects, Positive and Negative Aspects of Chemical Fertilizers

Combined Farming-Paddy, Coconut Tree, Fish, Duck etc.

Course III-Organic Farming-Social Circumstances

- 1.Agriculture and Climate Change
- 2.Social Annexation through Agriculture- Social Annexation through Crop, Culture, Food,etc
- 3.Food Safety and Food Policy
- 4.Secure Food
- 5.Differences in Lifestyle
- 6.Limited Use of Resources,
- 7.IndigenousCrops-Selection&Processing, G.M. Seed-Positive and Negative Aspects,
- 8.FoodCrops,CashCrops,Monocrops,Mixed Crops
- 9.Forest and Agriculture-The Organic Farming Concept
- 10.Herbs and Spices
- 11.Food-Physical and Mental Health
- 12.Organic Farming Products-Marketing, Theory and Practical Aspects

Course IV-Practical

Terrace Farming-Practical,
Soil Preparation, Soil Conservation and Water Conservation-Practical
Organic Manure Making-Practical
Field Visit-Report Writing

Programme Project Report (PPR)
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Distance Learning Programme under School of Distance Education

CERTIFICATE IN PARENTING PSYCHOLOGY

Course Co-ordinator: Prof. P. S. Sukumaran

Academic support by
School of Behavioral Sciences
Mahatma Gandhi University
Kottayam, Kerala

CERTIFICATE IN PARENTING PSYCHOLOGY (CPP)
(Distance Learning Programme – Certificate Programme)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Certificate Programme has been designed by the School of Behavioural Sciences and is to be conducted by the School of Distance Education with the academic support of the School.

School of Behavioural Sciences established in 1988 under Mahatma Gandhi University has a variety of unique higher education programmes aimed at developing human resources in the field of disability rehabilitation and mental health for the upliftment of the weaker sections of the society. In India, we have many National Institutes instituted for the care of each of the disabilities. School of Behavioural Sciences is one of the first University departments in India that started academic programmes in this field and addressed the problems and issues in all disabilities under a single roof with a holistic nature in the 1980's itself. Academic programmes offered by the School are interdisciplinary in nature. Research is undertaken by potential scholars in the various aspects of Disability Rehabilitation, Psychology, Special Education, Mental Health, Behavioural Medicine and Rehabilitation Nursing. The School intends to develop rehabilitation professionals and researchers in different areas namely Rehabilitation Psychology, Special Education, Behavioural Medicine, Rehabilitation Nursing, and Guidance Counselling. The School conducts community extension programmes at three levels- School (regular and special schools), college and community. The School has a Vocational Rehabilitation Centre for the adults with intellectual disability.

1. Programme's Mission and Objectives

Mission of the Certificate Programme in Parenting Psychology is to develop an insight and understanding on the theoretical foundations of psychological bases of parenting as well as competencies of effective parenting. Following are the specific objectives of the programme.

On completion of the programme the students will develop:

- Understanding on the nature and importance of parenting in child development.
- Insight into the bio psychological aspects of attention, concentration, memory, intelligence, learning and emotions.
- Understanding on the nature and importance of critical stages of development.
- Insight into the various psychosocial and cognitive developmental milestones.
- Understanding on the impact of parental stress on development of children.
- Awareness on importance of parenting and the brain development with regard to Neuroplasticity.
- Effective Parenting skills.
- Awareness to identify and deal with learning and behavioral disorders.

2. Relevance of the Programme with Mission and Goals of the School of Behavioural Sciences

School of Behavioural Sciences was established with a mission of organizing higher educational programmes, research and extension activities in the field of Mental Health, Disability Rehabilitation and Special Education. It covers a broad area in which parenting psychology, child rearing practices and related issues have much significance.

Parenting is a complex, dynamic process that affects both parent and child. Parenting is the most essential and enduring profession acknowledged by society, but it is one for which most parents are inadequately prepared. Psychologists, educationists, and sociologists all agree that family is the most significant single influence on the development of the child. Disappearance of joint family system, appearance of nuclear families, increasing compulsions of both the parents to work outside the family, increasing dependence on day care centres and other similar systems for child care and rearing, inability of parents to spend quality time with the child; especially during the early childhood period are some of the significant factors that the modern parents are facing everywhere. However, all these factors have very strong adverse influence on the overall development of the child.

In this context a certificate programme is designed with four courses such as General Biological Psychology, Psychology of Development, Neuroplasticity and Impact of Parental Stress on Child Development, and Parenting Skill Enhancement.

3. Nature of Prospective Target Group of Learners

As parenting has become a challenge for almost all class of families, this programme is open to all those who are interested in developing effective parenting abilities. Candidates who have passed 10 + 2 level examination are eligible for admission to the Certificate in Parenting Psychology Programme.

4. Appropriateness of Programme to be conducted in Open and Distance

Learning mode to acquire specific skills and competence

This certificate programme intends to develop appropriate awareness, understanding and skills related to psychological and developmental aspects of parenting among the learners. Further the programme aims to develop theoretical perspectives among the learners on parenting. The programme is expected to enable the learners to identify and effectively deal with developmental problems among children. Hence, it is expected that learners from various age groups starting from early adulthood to middle age, employed and unemployed, any type of academic background, as well as from both genders will be able to take the benefits of the programme if offered in distance mode.

5. Instructional Design

The School with its rich experience of the past 29 years and with its multidisciplinary resources including faculty members and research students developed a curriculum and syllabi of the programme. The proposal was presented by the programme coordinator in the Faculty Council meeting and the Council approved the same and recommended to the University for further actions.

It is a six months programme with 16 credits and 48 hours of contact classes. Each credit is assumed as equivalent to 30 hours of students study comprising of learning activities such as reading, comprehending the print material, using of multimedia/internet contents, attending counselling sessions and writing assignment responses. Thus a 4 credit course involves 120 hours of study. The details are given in the following Table.

Structure and Framework of the Programme

Sl No	Course Code	Title	Contact Classes (Hours)	Credit	Marks		
					Internal	External	Total
1	SBEDDEC1701*	General Biological Psychology	12	4	20	80	100
2	SBEDDEC1702	Psychology of Development	12	4	20	80	100
3	SBEDDEC1703	Neuroplasticity and Impact of Parental Stress on Child Development	12	4	20	80	100
4	SBEDDEC1704	Parenting Skill Enhancement	12	4	20	80	100
Total			48	16	80	320	400

**SBE in the course code stands for the School of Behavioural Sciences, DE stands for Distance Education, C stands for Certificate programme, 17 stands for the year 2017 in which the curriculum is developed, and the last two digits of the code indicates the numerical order of course in the programme.*

6. Procedure for Admission, Curriculum Transaction and Evaluation

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. A pass in the Plus Two level is the minimum eligibility for the admission. Fee structure will be decided by the University. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book review/Debate/Seminar/Presentation of case study for each course. Assignments/book review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

‘P’ grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Certificate programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

GPA =

$$\frac{\text{Total credit points earned by the student from all the required courses of the programme}}{\text{Total credits of all courses required in the programme}}$$

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

Equivalent Percentage = (GPA obtained) x 10
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7. Requirement of the Laboratory Support and Library Resources

The School library as well as the University library has a rich collection of books and reading materials on psychological aspects of growth and development. However more specific text books and literature on Parenting Psychology based on the curriculum will be added as per the requirement. Basics of related psychological testing and assessment experiences will be provided by employing the facilities available in the Psychology Laboratory of the School. Teaching methods such as Demonstration, Case Study and Discussion will be utilized for the same.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library is providing service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. The libraries of teaching departments are open during working hours of the Schools. Reading space is provided in all the three floors housing the various sections of the library. The library provides reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016.

The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, Pro Quest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	School of Behavioural Sciences	3347

8. Cost estimate of the programme and the provisions

Budget estimate (for 100 students)

S.No.	Item	Amount (Rs. in Lakhs)
1.	Manpower	2.0
2.	Study material	1.5
3.	Internal assessment	0.5
4.	Library and Laboratory resources	0.5
4.	End semester examination	0.5
	Total	5.00

Total Programme fee: Rs.5000/-

9. Quality Assurance Mechanism and Expected Programme Outcomes

The quality of the programme will be ensured through strict monitoring by an executive committee that includes the Co-ordinator of the programme, subject experts, Director, School of Distance Education and Head of the Advanced Centre for Environmental Studies and Sustainable Development. The Co-ordinator of the programme shall ensure regular student feedback of courses, teachers and the programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme's efficacy will be held, in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

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CERTIFICATE PROGRAMME IN PARENTING PSYCHOLOGY

SYLLABUS

(With effect from 2018 admission)

SBEDEC1701 General Biological Psychology

Credit: 04, Total Hours: 120, Marks: 100

Objectives: On completion of the course, the students develop an insight into the bio psychological aspects of attention, concentration, memory, intelligence, learning and emotions.

SYLLABUS

1. Attention

- 1.1 Concept of Attention in a Cognitive Approach
- 1.2 Biological psychology of attention
- 1.3 Factors Influencing Attention
- 1.4 Factors Enhancing Attention

2. Concentration

- 2.1 Concept of Concentration in a Cognitive Approach
- 2.2 Biological psychology of Concentration
- 2.3 Factors Influencing Concentration
- 2.4 Factors Enhancing Concentration

3. Memory

- 3.1 Concept of Memory in a Cognitive Approach
- 3.2 Biological psychology of Memory
- 3.3 Factors Influencing Memory
- 3.4 Factors Enhancing Memory

4. Intelligence

4.1 Concept of Intelligence in a Cognitive Approach

4.2 Biological psychology of Intelligence

4.3 Factors Influencing Intelligence

4.4 Factors Enhancing Intelligence

5. Learning

5.1 Concept of Learning in a Cognitive Approach

5.2 Biological psychology of Learning

5.3 Factors Influencing Learning

5.4 Factors Enhancing Learning

6. Emotions

6.1 Concept of Emotions in a Cognitive Approach

6.2 Biological psychology of Emotions

6.3 Factors Influencing Emotions

6.4 Factors Enhancing Emotions

Activities

- Observation of the characteristics of their own children or children from their neighbourhood on attention, concentration, memory, learning and emotions.
- Submission of assignments.

References

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SBEDEC1702 Psychology of Development

Credit: 04, Total Hours: 120, Marks: 100

Objectives: On completion of the course, the students develop a theoretical understanding of:

- The nature and importance of parenting in child development.
- To understand the nature and importance of Critical stages of Development
- To gain insight into the various psychosocial and cognitive developmental milestones.

Syllabus

1. Psychosexual Stages of Development

- 1.1. Oral Stage
- 1.2. Anal Stage
- 1.3. Phallic Stage
- 1.4. Genital Stage

2. Cognitive Stages of Development

- 2.1. Sensorimotor Stage
- 2.2. Preoperational Stage
- 2.3. Concrete Operational Stage
- 2.4. Formal Operational Stage

3. Psychosocial Stages of Development

- 3.1. Trust vs. mistrust
- 3.2. Autonomy vs. shame and doubt

- 3.3. Initiative vs. guilt
- 3.4. Industry vs. inferiority
- 3.5. Identity vs. role confusion

4. Stages of Moral Development

- 4.1. Pre-conventional morality
- 4.2. Conventional morality
- 4.3. Post-conventional morality

5. Bio psychology of Physical Development

- 5.1. Infancy
- 5.2. Childhood
- 5.3. Adolescence
- 5.4. Adulthood

Activities

- Observation of the developmental characteristics of their own children or children from their neighbourhood based on theoretical foundations of development.
- Submission of assignments.

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SBEDEC1703 Neuroplasticity and Impact of Parental Stress on Child Development

Credit: 04, Total Hours: 120, Marks: 100

Objectives: On completion of the course, the students develop comprehension of:

- Importance of parenting and the brain development with regard to Neuroplasticity.
- The effect of parental stress on psychological development of children.

Syllabus

1. Neuroplasticity

1.1. History of Neuroplasticity

1.2. Concepts of Neuroplasticity

1.3. Scope of Neuroplasticity

1.4. Current Status/Studies of Neuroplasticity

2. Growth and Development of Brain

2.1. Birth to 2.5 Years

2.2. 2.5 to 6 Years

2.3. 6 to 14 Years

2.4. 14 to 18 Years

3. Factors Influencing & Contributing to Brain Growth and Development

3.1. Psychological Stimulations

3.2. Physiological Stimulations

3.3. Nutrition/ Diet

3.4. Environment

4. Biological Psychology of Stress and Sources

4.1. Biology of Stress and Personal Stress

4.2. Psychology of Stress and Professional or Assumed Role Stress

4.3. Familial Stress and Hormonal Impact

4.4. Environmental Stress and Psychosomatic Disorders

5. Impact of Stress on Children

5.1. Psychological

5.2. Physical

5.3. Cognitive

5.4. Social

6. Identification and Dealing of Childhood Stress

6.1. Birth to 2.5 Years

6.2. 2.5 to 6 Years

6.3. 6 to 14 Years

6.4. 14 to 18 Years

Activities

- Observation of the Impact of Stress on their own children or children from their neighbourhood.
- Submission of assignments.

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SBEDEC1704 Parenting Skill Enhancement
Credit: 04, Total Hours: 120, Marks: 100

Objectives: On completion of the course, the students enhance:

- Parenting skills.
- The ability to handle the issues related to different types of parenting.
- Ability to identify and deal with learning and behavioral disorders.

Syllabus

1. Early Identification of Learning disorders and Management
 - 1.1. Reading

- 1.2. Writing
 - 1.3. Arithmetic
 - 1.4 Comprehension
 - 1.5 . Motor
2. Early Identification of Behavioral Disorders and Management
 - 2.1. Oppositional defiant disorder
 - 2.2. Conduct disorders
 - 2.3. Attention deficit hyperactivity disorder
 - 2.4. Temper Tantrums
3. Dealing with parental Stress
 - 3.1 Personal Stress
 - 3.2 Professional or Assumed Role Stress
 - 3.3 Familial Stress
 - 3.4. Environmental Stress
4. Parenting skill enhancement
 - 4.1. For Psychological Development of Children
 - 4.2. For Physical Development of Children
 - 4.3. For Cognitive Development of Children
 - 4.4. For Social & Moral Development of Children

Activities

- Observation of Learning Disorders of their own children or children from their neighbourhood .

- Observation of Behavioural Disorders of their own children or children from their neighbourhood .
- Observation of parenting stress.
- Preparation of parenting skill analysis.
- Submission of assignments.

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Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

Certificate in Waste Management (CWM)

Course Co-ordinator: Dr. Usha.K

Academic support by
**Advanced Centre of Environmental Studies and Sustainable Development
(ACESSD)
Mahatma Gandhi University
Kottayam, Kerala**

CERTIFICATE IN WASTE MANAGEMENT (CWM)
(Distance Learning Programme - Certificate Programme)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Certificate Programme has been designed by the Advanced Centre of Environmental Studies and Sustainable Development (ACCESSD) and is to be conducted by the School of Distance Education with the academic support of the Centre.

The Advanced Centre of Environmental Studies and Sustainable Development (ACCESSD) stands for interdisciplinary research which involves generation and integration of knowledge aiming at evolving sustainable development strategies. The Centre has established advanced facilities for interdisciplinary research to address emerging environmental issues. It fosters linkages with National and International institutions for collaborative academic and research activities. The Centre is actively engaged in extension activities aiming at capacity building and knowledge sharing for local bodies. NGOs, academic institutions and public with environmental awareness and best practices. It promotes sustainable development strategies linking advanced level knowledge with traditional environmental wisdom and practices.

a) Programme's mission & Objectives :

This programme is envisaged to provide integrated knowledge and training in waste management and technology. Tackling the problem of waste is a challenge the world over. Managerial measures from the source of waste production to the treatment and disposal levels need updated knowledge and effective practices. Proper management measures of wastes – liquid, solid and hazardous - all are integral to human health as well as on environmental well being. Development of innovative research in specific areas under waste management technology giving due importance to R & D as well as creation of awareness among the public are the thrust areas recognized. The curriculum formed aims to impart full justice to the subject matter with a strong knowledge base and skill development in waste management technology. In order to fully achieve the waste prevention goals there is the need for innovations in the technological design and operation, the so called clean technologies.

b) Relevance of the programme with HEI's Mission Goals :

Effective waste management is a challenge in our country. Knowledge on proper waste management measures is a prerequisite for meeting the problem effectively. The message involved in waste management can be spread to the public at large by this course through the learners.

c) Nature of prospective target group of learners:

Students from various streams can join for the programme. Thus the prospective target group of learners include undergraduates, postgraduates, researchers and the general public who are desirous of studying such a programme.

d) Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence:

Waste generation and management is of paramount importance in the public health and safety point of view. So the required information on the problem and the adequate measures can be extended to large section of learners through the Open and Distance Learning mode.

e) Instructional design:

The programme is of six month duration comprising four courses with a total of 16 credits. There are adequate contact classes and the assessment involves both internal as well as external components. Each student has to submit a report based case studies or project.

Duration-6 months							
Course Code	Course Type	Course Name	Contact Sessions (hours)	Credits	*Internal Marks	External Marks	Total Marks
DE-AC-1	Core course	Liquid waste management	12	4	20	80	100
DE-AC-2	Core course	Solid waste management	12	4	20	80	100
DE-AC-3	Core course	Hazardous waste management	12	4	20	80	100
DE-AC-4	Case study/ Project work and Report	Case study/ Project work and Report	12	4		100	100
Total			48	16			400

*Through assignments

a) Procedure for admission, curriculum transaction and evaluation:

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. A pass at the Plus Two level is the minimum eligibility criterion for admission. Candidates (undergraduates, graduates, and postgraduates) are eligible for admission irrespective of age. The fee structure will be decided by the University. The study materials will be delivered through online and print formats. The School will prepare an academic calendar/activity planner that will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be conducted by the University. The performance of a student in each course will be evaluated in terms of percentage of marks obtained with a provision for its conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/Presentation of the case study for each course. Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the students of the same.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

'P' grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Certificate programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

$$\text{GPA} = \frac{\text{Total credit points earned by the student from all the required courses of the programme}}{\text{Total credits of all courses required in the programme}}$$

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

$$\text{Equivalent Percentage} = (\text{GPA obtained}) \times 10$$

b) Requirement of the laboratory support and library resources:

The library and infrastructure support of the Centre will be extended to learners as per requirement.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and Libraries of the 4 study centres. The University Library was established in 1989. The University Library which is situated on the main campus and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area and consists of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library provides service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. Reading space is provided on all the three floors housing the various sections of the library. The library provides reading facility to visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016. The libraries of teaching departments are open during working hours of the Schools.

The University Library has a Library Advisory Committee. It is an 18 member committee with the Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, Bi-monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as & DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its online thesis digital library. The various department libraries too have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D theses	2135

E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	Advanced Centre for Environmental Studies and Sustainable Development	393

c) Cost estimate of the programme and the provisions:

Budget estimate (for 100 students)

S.No.	Item	Amount (Rs. in Lakh)
1.	Manpower	3
2.	Study material	2.5
3.	Laboratory	1
4.	Internal assessment	0.5
5.	End semester examination	1.5
	Total	8.5

Total Programme fee: Rs.9000/-

d) Quality assurance mechanism and expected programme outcomes:

The quality of the programme will be ensured through strict monitoring by an executive committee that includes the Co-ordinator of the programme, subject experts, Director, School of Distance Education and Head of the Advanced Centre for Environmental Studies and Sustainable Development. The Co-ordinator of the programme shall ensure regular student feedback of courses, teachers and the programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme's efficacy will be held, in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

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Syllabus

Certificate in Waste Management

Course 1. Liquid waste Management

Unit I : Introduction – Waste management : an overview , Liquid wastes : Municipal, Domestic and Industrial wastewater , Solid wastes : Municipal and Industrial Solid wastes , Environmental Engineering and Environmental Systems – an overview: Mass- balance approach to problem solving

Unit II : Wastewater - Water resource and its significance – Water : a remarkable substance of planet earth , Water pollution : Types, sources and impacts – Surface water, ground water pollution, Wastewater : Domestic – black and grey water; industrial and agricultural wastewater

Unit III: Wastewater Treatment - Flow – Sheets: Unit operations and unit processes , Primary treatment, Pre – treatment : Screening – bar racks, Grit removal, Communication, Flow – equalization., Sedimentation : Design concepts, Secondary treatment : Chemical unit processes: Precipitation, Coagulation, Disinfection Process design , Biological unit processes : nature and kinetics of biological growth : Aerobic process – activated sludge system, trickling filters , Anaerobic process – CSTR, Anaerobic Filters, UASB Oxidation ponds Process design. Advanced techniques: Membrane filtration, Gas stripping, Ion exchange, Advanced Oxidation Process (AOP).

Unit IV – Water reuse: Water reclamation and reuse: Water reclamation technologies – process flow diagrams; Public health and environmental issues in water reuse, Agricultural and landscape irrigation; ground water recharge with reclaimed water – ground water recharge guidelines; Risk assessment for water reuse, Industrial water reuse: Cooling tower makeup water.

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3. Peavy, H. S., Rowe, D. R. and Tchobanoglaus, G. (1985). Environmental Engineering, McGraw Hill Book Company, Singapore.
4. Rand, M. C., Greenberg, A. E. and Taras, M. J. (Ed.) (1995). Standard methods for the examination of water and wastewater: 19th edition, American Public Health association (APHA), Washington, D.C.
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6. Tchobanoglous, G. (1988). Wastewater Engineering: Treatment, Disposal, Reuse. Tata McGraw Hill, New Delhi.

Course 2. Solid Waste Management

Unit 1: Types of solid wastes: municipal solid waste, industrial wastes,, hazardous wastes, hospital solid wastes. Evolution of Solid Waste Management - Solid waste: A consequence of life - Waste generation in a technological society - Material flow and waste generation - The development of solid waste management - Integrated solid waste management - Planning for integrated waste management - Operation of solid waste management system.

Unit II: Municipal Solid Waste Characteristics - Solid waste generation – Composition - Determination of composition, Particle size - Heat value - Bulk and material density - Types of materials recovered - Mechanical properties - Biodegradability.

Unit III: Collection of Solid Waste, Refuse collection systems- Commercial wastes - Transfer stations - Collection of recyclable materials - Litter and street cleanliness - Design of collection system.

Unit IV: Solid waste treatments: Landfills - Classification - Types and methods. Biological process – Composting - production of biofertilisers and energy. Thermal process – Incineration, gasification, wet oxidation, pyrolysis, pelletisation and energy production. Waste management through Reduce, Recycle and Reuse. Kitchen waste management. Current Issues in Solid Waste Management - Public and private ownership and operations - Role of the solid waste engineering.

References

- 1) Aarve, V. P., William, A. W. and Debra, R. R. (2002). Solid waste engineering. Cengage reading, USA.
- 2) George, T., Hilary, T. and Samuel, A. V. (1993). Integrated solid Waste Management, Engineering Principles and Management Issues, Mc Graw Hills.
- 3) George, T. and Frank, K. (2002). Handbook of solid waste management: (Second Edition). Mc Graw Hills.
- 4) Tammemagi, H. Y. (2000). The Waste Crisis: Landfills, Incinerators, and the Search for a Sustainable Future. Oxford University press.
- 5) Kanthi, L. S. (2000). Basics of Solids and hazardous waste management Technologies. Prentice Hall.

Course 3. Hazardous Waste Management

Unit I: Introduction - Definition and classification of hazardous waste- Need for hazardous waste management – Sources of hazardous wastes – Effects on community – terminology and classification – Storage and collection of hazardous wastes – Problems in developing countries – Protection of public health and the environment.

Unit II: Nuclear Wastes and e-waste - Characteristics – Types – Nuclear waste – Uranium mining and processing – Power reactors – Refinery and fuel fabrication wastes – spent fuel – Management of nuclear wastes – Decommissioning of Nuclear power reactors – Health and environmental effects.

Unit III: Biomedical and Chemical Wastes - Biomedical wastes – Types – Management and handling – control of biomedical wastes - Chemical wastes – Sources – Domestic and Industrial - Inorganic pollutants – Environmental effects – Need for control – Treatment and disposal techniques – Physical, chemical and biological processes – Health and environmental effects.

Unit IV: Physical and Chemical Treatments - Filtration and separation – Chemical precipitation - Solidification and stabilization technique – Chemical oxidation and Reduction – pervaporation – ozonation – Evaporation.

Remedial actions - Techniques : Containment techniques – In situ Biotreatment options – Site remediation – Phytoremediation – Biofiltration

References

- 1) Glynn, H. J., and Gary, W. H. (2004). Environmental Science and Engineering. Prentice Hall, India.
- 2) Bhide, A. D. and Sundaresan, B. B. (2001). Solid Waste Management – Collection, Processing and disposal. Mudrashilpa Offset Printers, Nagpur.
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- 6) Charles, A. W. (1995). Hazardous waste management, Mc Graw-Hill.

Course 4. Case study / Project and Report

Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

Certificate in Water Harvesting and Management (CWHM)

Course Co-ordinator: Dr. Sylas. V. P

Academic support by

School of Environmental Sciences

Mahatma Gandhi University

Kottayam, Kerala

**CERTIFICATE IN WATER HARVESTING AND MANAGEMENT (CWHM)
(Distance Learning Programme - Certificate Programme)**

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Certificate Programme has been designed by the School of Environmental Sciences and is to be conducted by the School of Distance Education with the academic support of the School.

School of Environmental Sciences was brought into existence in 1995 as a Center of Learning in the frontier areas of Environmental Sciences. It is an effort by the University to give a new direction and dimension to fulfill the long-standing needs of the different sections of the society. The major mandate of the School is to develop appropriate technologies and skilled human resources for conservation of nature, sustainable utilization and management of natural resources for development.

a) Programme’s mission & Objectives :

The Certificate programme in Water Harvesting and Management (CPWHM) is envisaged to provide integrated knowledge and training in water harvesting and management with available technologies. Management of water resources is a ‘hot issue’ in the world particularly the tropical countries. Due to the increasing population, per capita demand and supply of water is increasing and hence wise use and management is very essential. At the same time, most of the water resources are facing serious threats due to anthropogenic pollution and other climate related events. Hence, both awareness and technological intervention is inevitable for the management of water resources. The curriculum formed aims to impart full justice to the subject matter with a strong knowledge base and skill development in water harvesting and management.

b) Relevance of the programme with HEI’s Mission Goals :

Water harvesting and management is a key issue in a highly populated country like India. Sound knowledge and skill is very essential for proper water harvesting and management, both are prerequisite for meeting the problem effectively. The message involved in the proposed course can be spread to the public at large by through the learners.

c) Nature of prospective target group of learners:

Students from various streams can join for the programme. Thus the prospective target group of learners include undergraduates, postgraduates, researchers and the general public who are desirous of studying such a programme.

d) Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence:

Water harvesting and management is of paramount importance in the general public particularly in the era of changing climate. So the required information on the problem and the adequate measures can be extended to large section of learners through the Open and Distance Learning mode.

e) Instructional design:

The programme is of six month duration comprising four courses with a total of 16 credits. There are adequate contact classes and the assessment involves both internal as well as external components. Each student has to submit a report based case studies or individual project.

Duration-6 months						
Course Code	Course Name	Contact Sessions (hours)	Credits	*Internal Marks	External Marks	Total Marks
DE-SES-01	Water – Science & Hydrology	12	4	20	80	100
DE-SES-02	Integrated Water	12	4	20	80	100

	Resource Management					
DE-SES-03	Water Harvesting Techniques & Management	12	4	20	80	100
DE-SES-04	Case study/ Project work and Report	12	4		100	100
Total		48	16		400	

*Through assignments

f) Procedure for admission, curriculum transaction and evaluation:

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. A pass in the Plus Two level is the minimum eligibility for the admission. Fee structure will be decided by the University. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/ Presentation of case study for each course. Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0

Absent	Ab	Absent	0
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'P' grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Certificate programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

$$\text{GPA} = \frac{\text{Total credit points earned by the student from all the required courses of the programme}}{\text{Total credits of all courses required in the programme}}$$

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

$$\text{Equivalent Percentage} = (\text{GPA obtained}) \times 10$$

g) Requirement of the laboratory support and library resources:

The library and infrastructure support of the School and the University will be extended to the learners as per the requirement. To handle the practical components in syllabus, technicians and consumables are required. Certain level of the practical would be conducted and performed by applying virtual reality methods.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety

of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

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The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener. The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books	Books added during the last three

			years
	School of Environmental Sciences	5607	66

h) Cost estimate of the programme and the provisions:

Budget estimate (for 100 students)

Sl.No.	Item	Amount (Rs. in Lakhs)
1.	Manpower	3.00
2.	Study material	2.00
3.	Laboratory & Equipments	2.00
4.	Internal assessment	0.50
5.	Field visits (2Nos.)	0.50
5.	End semester examination	1.00
	Total	9.00

(Rupees Nine Lakh Only)

Total Programme fee: Rs.9000/-

i) Quality assurance mechanism and expected programme outcomes:

The quality of the programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the programme, the subject experts, Director, School of Distance Education and Head of the School of Environmental Sciences. The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

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Syllabus

Certificate in Water Harvesting and Management

DE- SES 01. Water – Introduction

Unit I : Introduction – Water resources and its significance – Water : distribution on earth, Water quality and standards; Water pollution : Types, sources and impacts – Surface water, ground water pollution, Wastewater : Domestic – black and grey water; industrial and agricultural wastewater. Waste water treatment – Methods.

Unit II: Ground water and Hydrology: Hydrological cycle, Precipitation Evaporation and condensation, Groundwater - Classification, Aquifers – types and management. Soil conservation and water recharge. Ground water management and key factors.

Unit III : Water and Disaster: Floods – Droughts- Soil erosion- sedimentation - Salinity intrusion, Soil salinity- Water logging, Sand mining-Impact of population and anthropogenic activities on water resources- Pollution due to domestic and urban sewage, industrial effluents, agro-chemicals-Water borne and related diseases-Impact of water resources projects on human health. Changing climate and water related disasters.

Unit IV – Water Policies and Laws : Water policies: goal and strategies-Water policy of India-Water rights: international and Indian scenario-Power, function and regulatory role of state and central pollution control board.. Environmental guidelines and regulations for water management-Water auditing-Water monitoring and sustainability issues-Understanding UN law on non-navigable uses of international water courses. Water governance.

DE- SES- 02. Integrated Water Resource Management

Unit 1: Sustainable Water Resource Management: Introduction, Concept, Conventional and Tradition water management. Advances in water management.

Unit II: Irrigation Water Management – Introduction, Development of irrigation, Soil – Water –Plant relationships; Role of Climate; Canal and canal network irrigation, Furrow irrigation: design parameters, types of furrows, ideal wetting pattern and planting techniques – Basin irrigation: types of basins, suitable crops, soils and slopes, ideal wetting pattern, shapes and size – Efficiency of surface irrigation methods, Drainage systems, Drip irrigation: components, suitable crops and land types – Sprinkler irrigation: types, components, and suitable crops, slope, soils and climate.

Unit III: Participatory Water Management : Public- Private partnership, Gender and water management, Water pricing – Key issues and policies. Tools and techniques in PRA approach. Community water management. Institutional linkages and approaches in water management. Water and Sanitation.

- Case studies**
1. Traditional water conservation methods of the state/country
 2. Water and sanitation – Issues and solutions

DE – SES -03. Techniques for Water Resource Management

Unit I: Methods for conservation of water resources: Introduction, Mapping – methods, community participation, Application of Remote sensing and GIS in water resource management

Unit II: Rainwater Harvesting - Conservation and Harvesting of rain. Types and design of water harvesting structures; catchments – type and methods. Rainwater harvesting-Catchment and roof top harvesting; yield calculation, Check dams, Artificial recharge, Farm ponds, Percolation tanks, traditional rain water harvesting structures

Unit III: Watershed and Basin Management: Definition, watershed delineation; watershed development: concepts, objectives and need- Integrated and multidisciplinary approach for watershed management- Characteristics of watershed: size, shape, physiography, slope, climate, drainage, land use, vegetation, geology and soils, hydrology and hydrogeology- Socio-economic characteristics.

Basin management – Definition, Factors affecting basin management- Preparation of land drainage schemes-Types and design of surface drainage -Controlling of soil erosion and soil characteristics; Estimation of soil loss due to erosion. Water availability assessment – Surface water and groundwater-Water demand assessment: municipal, industrial, agricultural and environmental-Water allocation - Principles and policies, State and National water conflicts and management.

Unit IV – Wetland Management – Definition, Types, Classification, Significance and threats to wetlands, Conservation of wetlands National and International efforts. Wetlands for water and Climate regulation. Interlinking of rivers – Issues. Sustainable water management.

Case studies-

1. Community based rain water harvesting in the State/country
2. Impacts of anthropogenic activities and climate change on water resources of the state/country.
3. Water and river basin management in India – selected studies

DE- SES- 04. Case study / Project and Report - Individual

References (selected)

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Programme Project Report (PPR)
For
Distance Learning Programme under School of Distance Education

Certificate in Yogic Science

Course Co-ordinator: Dr.M.R.Gopalakrishna Pillai

Academic support by

Department of Lifelong Learning and Extension
Mahatma Gandhi University
Kottayam, Kerala

Certificate in Yogic Science

(Distance Learning Programme - Certificate Programme)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Certificate Programme has been designed by the Department of Lifelong Learning and Extension and is to be conducted by the School of Distance Education with the academic support of the Department .

The Dept of Lifelong Learning and Extension (DLLE), formerly Dept. Adult Continuing Education, Extension and Field Outreach, was established at Mahatma Gandhi University in 1991 as a Statutory Academic Department.

As suggested by the former name of the department, ie, Dept of Adult Continuing Education, Extension and Field Outreach, the Department co-ordinated various activities pertaining to adult education and extension services and surveys from the very beginning itself. Recently the Department was renamed as Dept of Lifelong Learning and Extension vide U O No 403/P&D-1/2010/ Admn dated 13/08/2010, as per the UGC Guidelines.

The Department has paved a way for the extension activities and has joined hands with many organizations and is creating a positive impact among the general public. The recent project sanctioned by the government of Kerala for propagating organic farming among the 100 affiliated colleges is an example for the department's positive intervention among the society. Likewise the department is implementing many programmes and is well appreciated by the general public.

All the academic and extension programmes of the Department are carried out strictly in accordance with the University regulations and the UGC Guidelines for the Departments of Lifelong Learning and Extension.

a) Programme’s mission & objectives:

To make the candidate acquainted with the basic concepts involved in the Yogasutram.

b) Relevance of the programme with HEI’s Mission and Goals:

The programme imparts practical and theoretical knowledge to the candidate thereby empowering them to be healthy thus fulfilling the universities mission of being beneficial to the society at large and its development.

c) Nature of prospective target group of learners:

The prospective target group would include undergraduates, postgraduates, and the general public who have passed 10 +2.

d) Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence:

The course is designed in such a way as to give the students ample theoretical and practical sessions for the better understanding of the Yogasutram.

e) Instructional Design:

The programme is of six months duration comprising four courses with a total of 16 credits. There are adequate contact classes and the assessment involves both internal as well as external components. Each student also has to submit a case study or project report.

Course Summary of Certificate Course in Yogic Science(CYS)

Course Code	Course Type	Course Name	Contact Classes (Hrs)	Credits	Internal Marks	External Marks	Total Marks
DLLE-CYS-1	Core Course	Yoga Theory	12	4	20	80	100
DLLE-CYS-2	Core Course	Anatomy and Physiology	12	4	20	80	100
DLLE-CYS-3	Core Course	Yoga Practical	60	4	20	80	100
DLLE-CYS-4	Case study / Project work / Report	A case study/Project Work and Report	12	4	20	80	100
Total			96	16			400

(f) Procedure for admissions, curriculum transaction and evaluation:

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. A pass in the Plus Two level is the minimum eligibility for the admission. Fee structure will be decided by the University. The Department will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/Presentation of case study for each course. Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

‘P’ grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Certificate programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

GPA =

Total credit points earned by the student from all the required courses of the programme
Total credits of all courses required in the programme

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

Equivalent Percentage = (GPA obtained) X 10

(g) Requirement of the laboratory support and Library Resources:

All infrastructural support of the Centre will be extended to the learners as per the requirement. Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library is providing service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. The libraries of teaching departments are open during working hours of the Schools. Reading space is provided in all the three floors housing the various sections of the library. The library provides reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016.

The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	Department of Lifelong Learning and Extension	2000

(h) Cost estimate of the programme and the provisions:

The budget details for the course are given in the following Table.

Budget estimate (for 100 students)

S.No.	Item	Amount (Rs. in Lakhs)
1.	Manpower	2
2.	Study material	1.5
3.	Books and periodicals	0.5
4.	Internal assessment	0.5
5.	End semester examination	.5
	Total	5

Total Programme fee: Rs.5000/-

(i) Quality assurance mechanism and expected programme outcomes:

The quality of the programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the programme, the subject experts, Director, School of Distance Education and Head of the Department of Lifelong Learning and Extension. The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

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DETAILED SYLLABUS OF THE PROGRAMME

Course I-Yoga Theory

Unit I Introduction to Yoga

- a. Introduction
- b. History & Basic Concepts
- c. Origin & Development
- d. Yoga : In Daily Life

Unit II Philosophy & Principles

- a. Basic Philosophy & Principles
- b. Introduction to Meditation
- c. Mind, Body and Yoga
- d. New Developments in Yoga

Unit III Patanjali Yoga Sutra

- a. Ashtanga Yoga
 - b. Raja Yoga & Hata Yoga
 - c. Loosening Exercises & Surya Namaskara
 - d. Pranayama

Unit IV Yoga Asana

- a. Introduction to Yogasanas
- b. Asana in Standing ,Sitting & Laying Positions
- c. Practical Methods and Benefits
- d. Yoga for Absolute Bliss

Unit V Food & Diet Control

- a. Classification of Food
- b. Food Combinations
- c. Essential Elements
- d. Importance of Diet

2. ANATOMY & PHYSIOLOGY

Unit I: Introduction

- a. Human Body: A complicated Machine
- b. Basic Anatomy
- c. Physiology
- d. Cell, Tissue & Organ

Unit II: Organ System

- a. Skeletal System
- b. Muscular System
- c. Nervous System
- d. Circulatory System
- e. Endocrine System

Unit III: Organ System

- a. Digestive System
- b. Respiratory System
- c. Excretory System
- d. Urinary System
- e. Reproductive System

Unit IV: Sense Organs

- a. Eye
- b. Nose
- c. Ear
- d. Tongue

Course III YOGA PRACTICAL

1. Sughasana
2. Padmasanam
3. Udhithapadmasanam
4. Ardhavajrasanam
5. Vajrasanam
6. Supthavajrasanam
7. Ushtrasanam
8. Shashangaasanam
9. Yoga mudra
10. Ardha malsendriyasanam

- 11.Gurunamaskaram
- 12.Baanasanam
- 13.Jaanusheershasanam
- 14.Akarnadhanurasanam
- 15.Badhakonaasanam
- 16.Gomukhasanam
- 17.Ardhashalabhasanam
- 18.Shalabhasanam
- 19.Bhujangasanam
- 20.Ardha Dhanurasanam
- 21.Dhanurasanam
- 22.Dholasanam
- 23.Ardhamerudandasanam
- 24.Poornamerudandaasanam
- 25.Naukasanam
- 26.Sethubandhasanam
- 27.Kandharasaanam
- 28.Oordhapadahasthasanam
- 29.Halaasnam
- 30.Ardhapavanamukthasanam
- 31.Pavanamukthasanam
- 32.Malsyasanam
- 33.Shavaasanam
- 34.Vipareethakaraneemudra
- 35.Sarvangasanam
- 36.Padma Sarvangasanam
- 37.Paadahasthasanam
- 38.Gajaasanam
- 39.Thrikonaasanam
- 40.Pashchimothasanam

Course IV-Practical Record/Field Visit Report

Programme Project Report (PPR)

for

Distance Learning Programme under School of Distance Education

Diploma in Advanced Counselling and Psychotherapy

Course Co-ordinator: Ms. Hena N N

Academic support by

INTER UNIVERSITY CENTRE FOR DISABILITY STUDIES (IUCDS)

Mahatma Gandhi University

Kottayam, Kerala

DIPLOMA IN ADVANCED COUNSELLING AND PSYCHOTHERAPY

PROGRAMME PROJECT REPORT

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Certificate Programme has been designed by Inter University Centre for Disability Studies and is to be conducted by the School of Distance Education with the academic support of the Centre.

a) Programme's mission & Objectives :

This course is designed to provide the student with advanced exploration and analysis of current counseling theories. The student will be expected to demonstrate the ability to analyze, synthesize, critique, and discuss, in verbal and written form, the key concepts of traditional and contemporary counseling theory practice and psychotherapies. Beyond entry-level requirements, the student will demonstrate understanding of the theories pertaining to the principles and practice of counseling and theories pertaining to the principles and practice of psychotherapies

b) Relevance of the programme with HEI's Mission Goals :

A thoughtful, consistent theoretical orientation is a fundamental component of effective counseling. It is one of the key intervention procedures for persons suffering from various psychological problems. Scientific and professional knowledge on proper skills and therapies is a prerequisite for meeting the problem effectively. This course allows students to explore a variety of established theoretical orientations and examine them for personal congruence and applicability for client populations.

c) Nature of prospective target group of learners:

Students from various streams who has a basic knowledge on counselling and psychotherapy can join for the programme. Thus the prospective target group of learners include

- Psychologists, counsellors
- School teachers
- Community Based Rehabilitation professionals
- Rehabilitation professionals
- Other paraprofessionals in the field (undergraduates, postgraduates, researchers)

d) Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence:

Through understanding of Counseling psychology and psychotherapies will help to improve the qualities of the professionals. So the required information on the counselling and psychotherapies can be extended to significant section of learners especially to professionals and teachers through the Open and Distance Learning mode.

e) Instructional design:

The programme is of twelve months duration comprising 8 courses with a total of 32 credits. There are adequate contact classes and the assessment involves both internal as well as external components. Each student has to submit a report based case studies or project.

(Course Co-ordinator: Ms. Hena N N)							
Duration-12 months							
Course Code	Course Type	Course Name	Contact Sessions (hours)	Credits	*Internal Marks	External Marks	Total Marks
DS-CT-01	Core course	Dynamics of human behaviour, personal growth and well-being	12	4	20	80	100
DS-CT-02	Core course	Psychopathology	12	4	20	80	100
DS-CT-03	Core course	Diagnostic Techniques	12	4	20	80	100
DS-CT-04	Practical	Counselling and Psychotherapies Practicum I	60	4	20	80	100

DS-CT-05	Core course	Foundations of Counselling	12	4	20	80	100
DS-CT-06	Core course	Psychotherapeutic Interventions	12	4	20	80	100
DS-CT-07	Internship	Internship: Dissertation	12	4	20	80	100
DS-CT-08	Viva Voce	Comprehensive Viva-Voce	12	4		100	100
Total			144	32			800

*Through assignments

f) Procedure for admission, curriculum transaction and evaluation:

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. Candidates (undergraduates, graduates, and postgraduates) are eligible for admission irrespective of age. The study materials will be delivered through online and print forms. Fee structure will be decided by the University. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/ Presentation of case study for each course. Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5

40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

'P' grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Certificate programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

GPA =

Total credit points earned by the student from all the required courses of the programme

Total credits of all courses required in the programme

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

Equivalent Percentage = (GPA obtained) X 10

g) Requirement of the laboratory support and library resources:

The library and infrastructure support of the Centre and the University will be extended to the learners as per the requirement.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

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The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles

Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	Inter University Centre for Disability Studies	250

h) Cost estimate of the programme and the provisions:

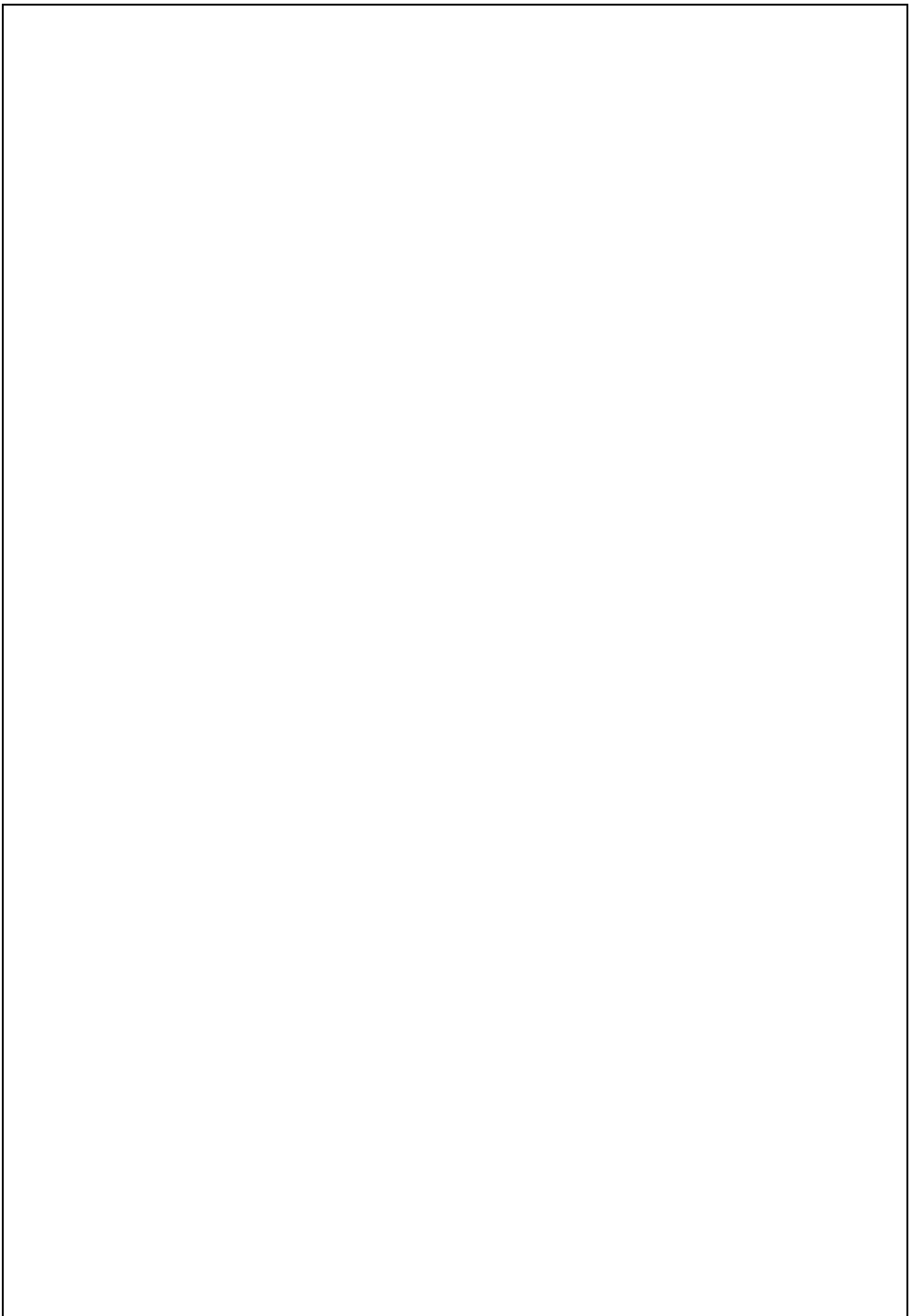
Budget estimate (for 100 students)

S.No.	Item	Amount (Rs. in Lakhs)
1.	Manpower	2.5
2.	Study material	1.5
3.	Laboratory/ Library	1.5
4.	Internal assessment	.5
5.	End semester examination	1.5
	Total	7.5

Total programme fee: Rs.8000/-

i) Quality assurance mechanism and expected programme outcomes:

- j) The quality of the programme will be ensured through strict monitoring by an executive committee that includes the Co-ordinator of the programme, subject experts, Director, School of Distance Education and Head of the IUCDS. The Co-ordinator of the programme shall ensure regular student feedback of courses, teachers and the programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme's efficacy will be held, in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.



SYLLABUS

DIPLOMA IN ADVANCED COUNSELLING AND PSYCHOTHERAPY

SEMESTER I

COURSE 1. DYNAMICS OF HUMAN BEHAVIOUR, PERSONAL GROWTH AND WELL-BEING

Unit I :

Developmental stages, characteristics of each stage, developmental tasks and developmental needs. Concepts of inheritance, inheritance of disabilities and mental disorders

Unit II :

Overview to psychological and cognitive processes : Introduction to sensation, perception, attention, motivation, learning, intelligence, memory. Introduction to thinking, reasoning, problem solving and creativity. Personality development

Unit III:

Perspectives on self and personal growth: Concept of adjustment; Sick and healthy personalities: Characteristics and determinants, Models of illness and health: Biological, psychosocial and bio psychosocial models. Illness and health beliefs; Illness prevention and health promotion; Behavioural risk factors; Life style and health.

Unit IV:

Subjective well-being and quality of life: Characteristics, determinants and theories. Life satisfaction and happiness; assessment of well-being and quality of life.

Unit V

Stress and coping: Concept of stress, frustration and conflict; Sources of stress; Physical and mental health outcomes of stress; Coping: concept, strategies and effectiveness. Stress: Assessment of stress; Cognitive, behavioural and physical interventions; Methods of stress inoculation, yoga, progressive muscular relaxation, abbreviated method of progressive muscular relaxation.

References

1. Dimatteo, M.R. & Martin, L.R. (2007). Health Psychology (India Edition). New Delhi: Pearson Education.
2. Patel, V.(2003). Meeting the mental health needs of developing countries. New Delhi: Sage India
3. Pestonjee, D.M. (1999). Stress and coping. N. Delhi: Sage India.
4. Sanderson, C.A. (2003). Health psychology. Snyapase : John Willey & Sons.
5. Srivastava, A.K. (1998). Management of occupational stress: Theories and Practice. New Delhi: Gyan Publications.

COURSE 2 PSYCHOPATHOLOGY

Unit 1:

Introduction: Approaches to psychopathology; classification systems - DSM IV TR and ICD-10.

Unit II:

Neuropsychological disorders: delirium and dementia; dementia of the Alzheimer type; Epilepsies.

Unit III:

Anxiety disorders: Panic, phobic, obsessive –compulsive disorders; Generalized anxiety disorders; Post traumatic stress disorder; Somatoform disorders; Dissociative disorder.

Unit IV:

Psychotic and mood disorders: Schizophrenia and delusional disorders; Mood disorders

Unit V:

Other behavioural disorders - Psychoactive substance abuse; Sleep and impulse control disorders; Personality disorders.

References

1. Carson, Butcher and Mineka (2004). Abnormal psychology and modern life (11th ed.). Singapore: Pearson Education.
2. Diagnostic & Statistical Manual of Mental Disorders IV-TR (2004) Washington: APA Publication.
3. Kaplan, H.J. & Sadock, B.J. (2004). Synopsis of comprehensive textbook of psychiatry, (Ninth Edition). Baltimore: Williams & Wilkins
4. Emery, R.E., & Oltmanns, T.E. (1999). Essentials of abnormal psychology. Prentice Hall.
5. Oltmanns, T.F. & Emery, R.E. (2006). Abnormal psychology (5th ed.) Prentice Hall

COURSE 3. DIAGNOSTIC TECHNIQUES

Unit I:

Psychodiagnostics: Concept and nature, differential diagnosis; Sources of clinical data: Assessment interview, behavioural assessment, behavioural rating scales and checklists, and psychological tests.

Unit II:

Clinical interview: Nature and types-Intake, diagnostic and crisis interviewing; Diagnostic interviewing skills; Mental status examination.

Unit III:

Assessment of Intelligence: Stanford–Binet (4th Ed); WAIS IV; WISC-IV; Raven’s Progressive Matrices.

Unit IV:

Assessment of Personality: Objective tests- MMPI-2, NEOPI-R; Projective: Rorschach Ink Blot test, TAT.

Unit V:

Neuropsychological assessment: AIIMS Battery; WMS-III; Luria-Nebraska Neuropsychological Test Battery; Bender-Gestalt Test.

References

1. Greene, Roger. L.(1991). MMPI-2/MMPI: An interpretive manual. Massachusettes :Allyn& Bacon.
2. Hersen, M. (2004) Comprehensive handbook of psychological assessment. Volumes I to IV.
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4. Hutt, M.C. (1985). Hutt adaptation of Bender-Gestalt test (4th ed.) New York: Grune& Stratton.
5. Prifilera, A., Saklofske, D.H. & Weiss, L.R.(Eds.) (2005). WISC-IV: Clinical use and interpretation. USA: Elsevier Press.
6. Weiver, B (1983). Clinical methods in psychology. New York: Wiley

COURSE 4. COUNSELLING AND PSYCHOTHERAPIES PRACTICUM I

The students would be required to conduct three practical based on theory papers.

Practical exposure will be given on the following areas

- : Case history taking and conducting developmental assessment
- : Therapeutics

1. Case study taking and developmental assessment
2. Psychological tests

SEMESTER II

COURSE 5. FOUNDATIONS OF COUNSELLING

Unit I:

Basics of counselling: Principles and goals; Need and scope for counselling; E Ethical issues

Unit II:

Role of counselor; Counselor and counselee characteristics facilitating counseling; Expectations from counselor; External conditions influencing counseling.

Unit III:

Positive psychology oriented counseling: Enhancing happiness and pleasure; Engagement and meaning making; identifying and developing character strength and virtues.

Unit IV:

Special areas of counseling: Counseling for children with emotional disturbance and learning disability; Drug addiction; marital counseling

Unit V:

Other areas of counselling: Occupational counselling; Counselling for patients with terminal disease /chronic illness - HIV/AIDS, cancer patients and for their caretakers

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6. Peterson, C., &Seligmen, M.E.P. (2004) Character strengths and virtues: A handbook of classification. New York: Oxford University Press.

COURSE 6. PSYCHOTHERAPEUTIC INTERVENTIONS

Unit I

Psychotherapy: Nature and scope; Common goals and ingredients of psychotherapy; Types of psychotherapeutic intervention, structuring therapeutic relationship: Nature of client-therapist relationship, dimensions and stages of client therapist relationship, building the helping relationship; structuring the therapeutic situation

Unit II:

Freudian psychoanalytic therapy: Key concepts, therapeutic techniques/ procedures.

Unit III:

Humanistic and existential therapies: Person centered and Gestalt therapies: Key concepts, therapeutic techniques and procedures; Existential therapy. Other therapeutic approaches: Reality therapy; Family system therapy; Transactional analysis.

Unit IV:

Classical conditioning procedures: Relaxation procedures; flooding systematic desensitization, eye movement desensitization and reprocessing. Operant procedures, Application of reinforcement principles; contingency management; Premack's principles, Behaviour therapy: Modelling; Assertion training

Unit V:

Cognitive behaviour therapy: Ellis' Rational emotive behaviour therapy; Beck's cognitive therapy, Biologically based therapies: Biofeedback- Electromyography; Finger temperature; GSR; EEG; Areas of application; Psychopharmacological therapy: Overview of major psychotropic drug doses.

References

1. Capuzzi, D. and Gross, D.R. (20047). Counselling and Psychotherapy: Theories and interventions. New Delhi: Pearson Education.
2. Corey, G. (2001). Theory and practice of counseling and psychotherapy. New York: Brooks/Cole
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COURSE 7. COMPREHENSIVE VIVA-VOCE

Students need to attend the Viva voce in front of the examiners

Programme Project Report (PPR)

for

Distance Learning Programme under School of Distance Education

Diploma in Autism Spectrum Disorders

Course Co-ordinator: Dr. P T Baburaj

Academic support by

INTER UNIVERSITY CENTRE FOR DISABILITY STUDIES (IUCDS)

Mahatma Gandhi University

Kottayam, Kerala

DIPLOMA IN AUTISM SPECTRUM DISORDERS

PROGRAMME PROJECT REPORT

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Certificate Programme has been designed by Inter University Centre for Disability Studies and is to be conducted by the School of Distance Education with the academic support of the Centre.

a) Programme's mission & Objectives :

This course is designed to provide the student with advanced exploration and analysis of autism spectrum disorders. Autism Spectrum Disorders (ASD) is a group of complex neuro-developmental disorders affecting communication, socialization, thought and behaviour, and includes individuals with wide range of functional abilities. The symptoms may vary from being very severe to being very mild. Persons with ASD are entitled to equal rights and opportunities as all other citizens of the country. The number of persons receiving a diagnosis of ASD is increasing rapidly. The prevalence in Western countries is now believed to be higher than 1 in 500 births (National Research Council 2002). Hence, the understanding of diagnostic & intervention issues increase. Meeting the unique needs of person with ASD is a logical conclusion to this.

b) Relevance of the programme with HEI's Mission Goals :

There is a growing demand for rehabilitation personnel trained especially in the field of autism spectrum disorders. The course is first of its kind to provide human resource development in the field of ASD in Kerala. The course is designed to provide the candidate a comprehensive understanding of ASD and the skills and competence to meet the needs of students with ASD.

c) Nature of prospective target group of learners:

Students from various streams who has a basic knowledge on disabilities can join for the programme. Thus the prospective target group of learners include

- Special educators
- School teachers
- Rehabilitation professionals
- Psychologists, counsellors
- B.Ed., M.Ed., D.Ed. Students
- Other paraprofessionals in the field (undergraduates, postgraduates, researchers)

d) Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence:

Though understanding of the various aspects of autism spectrum disorders will help to improve the qualities of the professionals. So the required information on the disability can be extended to significant section of learners especially to professionals and teachers through the Open and Distance Learning mode.

e) Instructional design:

The programme is of twelve months duration comprising 8 courses with a total of 32 credits. There are adequate contact classes and the assessment involves both internal as well as external components. Each student has to submit a report based case studies or project.

Course Code	Course Type	Course Name	Duration-12 months				
			Contact Sessions (hours)	Credits	*Internal Marks	External Marks	Total Marks
Semester I							
DS-CT- 01	Core course	Introduction to disability and Autism spectrum disorders	12	4	20	80	100
DS-CT- 02	Core course	Autism Spectrum Disorders: Assessment Classification & Diagnosis	12	4	20	80	100
DS-CT- 03	Core course	Autism Spectrum Disorders: Intervention and management	12	4	20	80	100
DS-CT- 04	Practical	Assessment tools, Development of Independent Living Skills & Teaching	60	4	20	80	100

		Learning Material					
Semester II							
DS-CT-05	Core course	Autism Spectrum Disorders: Therapeutic and management plan	12	4	20	80	100
DS-CT-06	Core course	Inclusion and community living of persons with autism spectrum disorders	12	4	20	80	100
DS-CT-07	Internship	Internship: Dissertation		4	20	80	100
DS-CT-08	Viva Voce	Comprehensive Viva-Voce		4		100	100
Total			120	32			800

*Through assignments

f) Procedure for admission, curriculum transaction and evaluation:

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. Candidates (undergraduates, graduates, and postgraduates) are eligible for admission irrespective of age. The study materials will be delivered through online and print forms. Fee structure will be decided by the University. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/ Presentation of case study for each course. Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10

85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

'P' grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Diploma programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

GPA =

Total credit points earned by the student from all the required courses of the programme

Total credits of all courses required in the programme

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

Equivalent Percentage = (GPA obtained) X 10

g) Requirement of the laboratory support and library resources:

The library and infrastructure support of the Centre and the University will be extended to the learners as per the requirement.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library is providing service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. The libraries of teaching departments are open during working hours of the Schools. Reading space is provided in all the three floors housing the various sections of the library. The library provides reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016.

The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-ShodhSindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000

Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	Inter university centre for disability studies (IUCDS)	250

h) Cost estimate of the programme and the provisions:

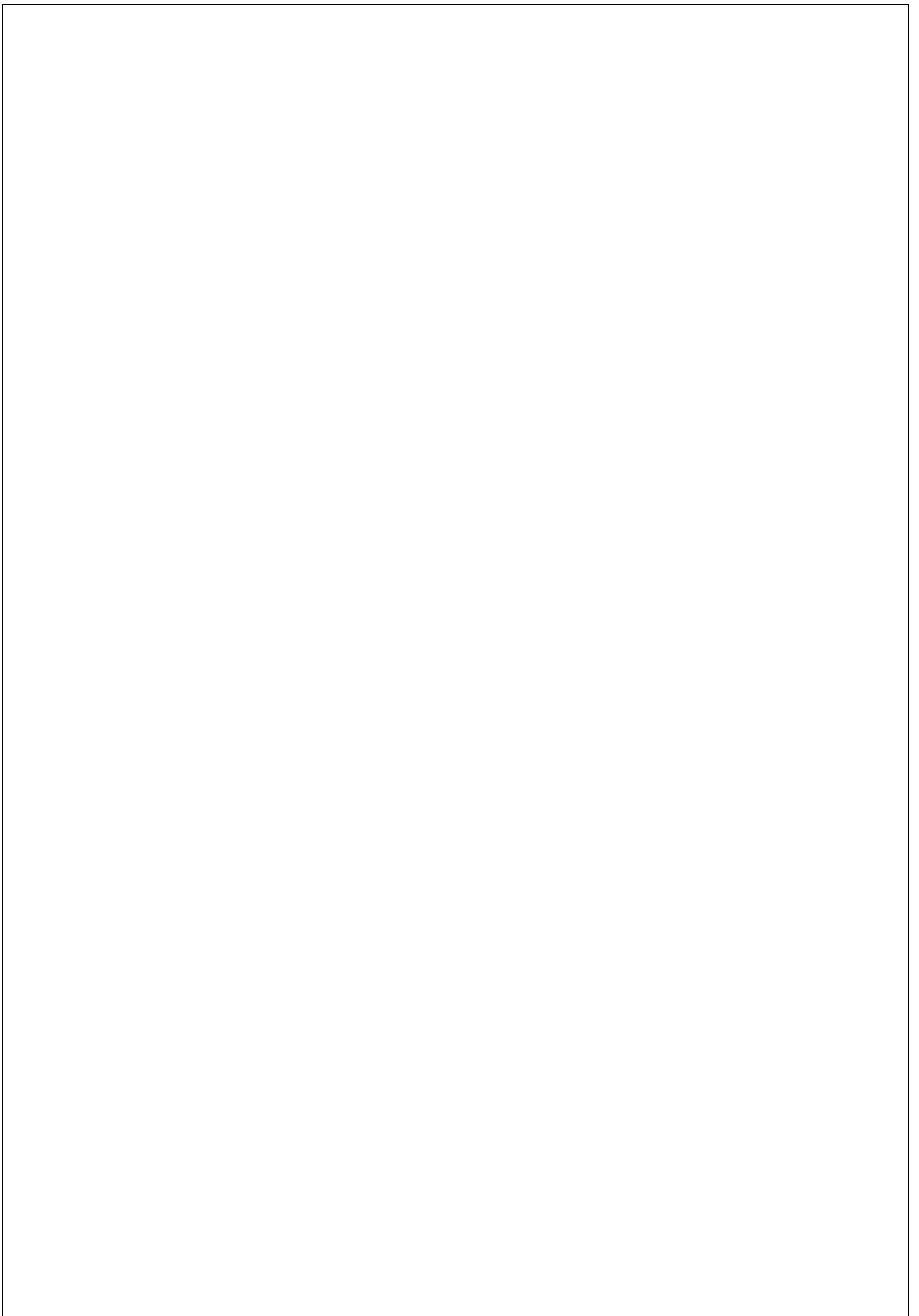
Budget estimate (for 100 students)

S.No.	Item	Amount (Rs. in Lakhs)
1.	Manpower	2.5
2.	Study material	1.5
3.	Laboratory/ Library	1.5
4.	Internal assessment	.5
5.	End semester examination	1.
	Total	7.

Total programme fee: Rs.6000/-

i) Quality assurance mechanism and expected programme outcomes:

The quality of the programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the programme, the subject experts, Director, School of Distance Education and Head of the Inter University center for Disability Studies .The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analyzed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.



SYLLABUS

DIPLOMA IN AUTISM SPECTRUM DISORDERS

SEMESTER I

COURSE 1.INTRODUCTION TO DISABILITY AND AUTISM SPECTRUM DISORDERS

Unit I:

Domains of development: Personal, Social, Motor, Language and cognitive. Mental age, Motor age and Development quotient, Environmental, social and cultural factors influencing disability

Unit II:

Concept of impairment, disability, and handicap, Introduction to different classification systems: DSM, ICD and ICF, Causes and prevention of disability

Unit III:

Different disabilities: Incidence and prevalence of various disabilities, Sensory and physical disabilities: Visual Impairment and Hearing Impairment, Speech and language disabilities, Cerebral Palsy, Leprosy Cured and Locomotor disability

Unit IV:

Mental and Neurological disabilities: Mental Retardation, Autism Spectrum disorders, and Mental Illness, Chronic Neurological Conditions and Multiple Sclerosis, Genetic disabilities, multiple disabilities

Unit V

Autism spectrum disorders: Prevalence and incidence, Definition, types and key characteristics (autism disorder, Asperger's syndrome, Rett's syndrome, childhood disintegrative disorder, and pervasive developmental disorder), The triad of impairments: communication; social interaction, flexibility of thinking and behaviour.

References

- 1.

COURSE 2 AUTISM SPECTRUM DISORDERS: ASSESSMENT, CLASSIFICATION & DIAGNOSIS

Unit 1:

Introduction: Approaches to psychopathology; Early Identification of ASD importance of early identification, methods

Unit II:

ASD: classification, Major assessment tools

Unit III:

Functional Behaviour Analysis and Positive Behaviour Support of persons with ASD

Unit IV:

Non-Verbal Communication Verbal Communication 3. Social emotional reciprocity 4. Interpersonal relationships 5. Variations across the spectrum

Unit V:

References

1. Carson, Butcher and Mineka (2004). Abnormal psychology and modern life (11th ed.). Singapore: Pearson Education.
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COURSE 3. DIAGNOSTIC TECHNIQUES

Unit I:

Psychodiagnostics: Concept and nature, differential diagnosis; Sources of clinical data: Assessment interview, behavioural assessment, behavioural rating scales and checklists, and psychological tests.

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Clinical interview: Nature and types-Intake, diagnostic and crisis interviewing; Diagnostic interviewing skills; Mental status examination.

Unit III:

Assessment of Intelligence: Stanford–Binet (4th Ed); WAIS IV; WISC-IV; Raven’s Progressive Matrices.

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Neuropsychological assessment: AIIMS Battery; WMS-III; Luria-Nebraska Neuropsychological Test Battery; Bender-Gestalt Test.

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Practical exposure will be given on the following areas

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- : Therapeutics

1. Case study taking and developmental assessment
2. Psychological tests

SEMESTER II

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Unit I:

Basics of counselling: Principles and goals; Need and scope for counselling; E Ethical issues

Unit II:

Role of counselor; Counselor and counselee characteristics facilitating counseling; Expectations from counselor; External conditions influencing counseling.

Unit III:

Positive psychology oriented counseling: Enhancing happiness and pleasure; Engagement and meaning making; identifying and developing character strength and virtues.

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Special areas of counseling: Counseling for children with emotional disturbance and learning disability; Drug addiction; marital counseling

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Psychotherapy: Nature and scope; Common goals and ingredients of psychotherapy; Types of psychotherapeutic intervention, structuring therapeutic relationship: Nature of client-therapist relationship, dimensions and stages of client therapist relationship, building the helping relationship; structuring the therapeutic situation

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Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

Diploma in Computerised Financial Accounting and Taxation (DCFAT)

Course Co-ordinator: Dr.Sajimon Abraham

Academic support by
School of Management and Business Studies (SMBS)
Mahatma Gandhi University
Kottayam, Kerala

DIPLOMA IN COMPUTERISED FINANCIAL ACCOUNTING AND TAXATION
(Distance Learning Programme - Diploma Programme)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with a vision to provide the opportunity of quality education to all realms of society. Since the beginning, thousands of students availed this opportunity for higher education throughout Kerala to a great extent and also outside the state to some extent. But after the new directions of UGC in 2014, University had stopped all its Off-Campus Centres of the School of Distance Education inside and outside the State.

Now it is the new endeavour to revamp the functioning of the school with different types of Diploma and Certificate programmes very relevant to the contemporary society, in addition to the conventional Graduate and Post Graduate programmes with the academic and infrastructural support of the eminent Schools and interdisciplinary interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Diploma Programme has been designed by the School of Management and Business Studies and to be conducted by the School of Distance Education with the academic support of the School.

School of Management and Business Studies is a regular statutory Department for Management studies in Mahatma Gandhi University. The School had a humble beginning on 25th March 1999 with a two year full-time MBA program for the management aspirants with the objective of molding enterprising youth into career oriented and competent management professionals. With dedicated and high calibre professional expertise and state-of-art infrastructure, the institution imparts the best of theory and practical knowledge to carve a niche for itself in the challenging two year MBA, MPhil and PhD programmes on Management and Business Studies. Ours is one of the prominent Management Institutes in South India. The MBA program offered by SMBS is aimed at creating business leaders and entrepreneurs by leveraging on its strength in technology, computing and social sciences. The department is currently engaged in a diverse set of activities including teaching, academic research, management development programs, and public sector projects. The department places heavy emphasis on experiential and process oriented learning, and the pedagogical tools include extensive use of case studies, simulation exercises, industry oriented project works to facilitate the same. Besides honing up the skills of individual decision

making, enough emphasis is laid on developing team skills and value focused decision making. Continuous industry interaction, seminars and live projects are a regular part of the curriculum. Organizational environments are simulated to sharpen the skills of decision making, leadership and team building. Teamwork, group assignments, case studies, participation in class discussions and real business issues are strong features of the management program at SMBS.

(a) Programme's mission & objectives :

Professional Diploma programmes aim to keep pace with the emerging trends in higher education and to develop skills essential for career advancement in today's fast paced business world. Each course under this programme is selected after careful evaluation of its content, productivity, shelf-life and market relevance. These courses are reviewed and revised annually in response to the changing needs and demands of the academia and Industry. Financial Accounting is a key skill with application in several areas within banking and finance industry as well as within corporations and SME's.

A participant will get a Diploma Certificate after the successful completion of the programme. The participant will be able to the following task after finishing the programme

- Perform the data entry operations of business organizations.
- Keep ICT resources in proper condition.
- Maintain books of accounts of small traders
- Manage computerized accounting systems
- Prepare accounts of companies using accounting softwares
- Manage commercial taxes and GST
- Manage Income tax
- Prepare and file tax returns

(b) Relevance of the programme with HEI's Mission and Goals :

The objective of the Programmes is to provide a wide spectrum of knowledge, skills and technological advances while fostering literacy in the broadest sense. They help to create a learner centric environment by maximizing academic learning for diverse learners. The courses create a flexible path to earn a specialized credential along with the Graduate Programme. This one year duration knowledge enrichment courses provide students to build up skills in a specific area that relates to their field of interest, which go in-line with the mission of the Institution - To provide skilled manpower to the professional, industrial and service sectors to meet global demands.

(c) Nature of prospective target group of learners:

The course is designed to for candidates who passed plus two programme in any subject group currently studying in a graduate programme or engaged in some job or un-employed or those who stopped their studies after plus two due to some reason.

(d) Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence :

As the programme is targeting for working people and those engaged in regular studies the only way to deliver the programme is through week end contact classes and through distance learning mode like on-line lectures and sharing of video and audio files. Today's internet and networking availability is strong in our country which is reachable to most of the common man we can effectively utilize this facility as a medium for course delivery, evaluation and for other administrative requirements. On completion of this course the students can work as

- Data Analyser
- Excel Programmer/Consultant
- Tax Consultant
- Business Analyst
- Tally Consultant

(e) Instructional Design :

- i. Duration of the Programme: One Year –Two Semesters
- ii. Eligibility: Plus Two, Those completed the “Certificate course in Business Data Analysis using Tally ERP and Excel” offered by M.G University, Distance Education can directly enter into the second semester of this course.
- iii. Number of Courses : 8

Scheme and Evaluation

Course Code	Course Type	Course Name	Contact Classes (Hrs)	Credits	IA Marks	ESE Marks	Total Marks
DCFA T-101	Common Core course (Theory)	Introduction to Business Data & Accounting	12	4	20	80	100
DCFA T-102	Common Core course (Theory)	Accounting using Tally ERP 9	12	4	20	80	100
DCFA T-103	Common Core course (Theory)	Data Analysis Using Microsoft Excel	12	4	20	80	100
DCFA T-104	Common Core course (Practical)	Practical & Business Project	30	Practical -1 Project Work -3	20	80	100

DCFA T-105	Common Core course (Theory)	Income Tax and GST Computation	12	4	20	80	100
DCFA T-106	Common Core course (Theory)	Advanced Accounting Features with Tally ERP 9	12	4	20	80	100
DCFA T-107	Common Core course (Theory)	Advanced Excel	12	4	20	80	100
DCFA T-108	Common Core course (Practical)	Practical & Company Project	30	Practical-1 Project Work -3	20	80	100
Total			132	32	160	640	800

(f) Procedure for admissions, Curriculum Transaction and Evaluation

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. A pass in the Plus Two level is the minimum eligibility for the admission. Fee structure will be decided by the University. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/Presentation of case study for each course. Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

'P' grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Diploma programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

GPA =

$$\frac{\text{Total credit points earned by the student from all the required courses of the programme}}{\text{Total credits of all courses required in the programme}}$$

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

$$\text{Equivalent Percentage} = (\text{GPA obtained}) \times 10$$

(g) Requirement of the laboratory support and Library Resources:

Details of Laboratory support required for the programme

The computational facility available in School of Management and Business Studies shall be used. The computing facility available in the campus as well as the regional centers can also be used for this purpose. Some external computing facilities may be hired based on the number of enrolment.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library is providing service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. The libraries of teaching departments are open during working hours of the Schools. Reading space is provided in all the three floors housing the various sections of the library. The library provides reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016.

The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	School of Management and Business Studies	7549

h) Cost estimate of the programme and the provisions:

Budget estimate (for 100 students)

S.No.	Item	Amount (Rs. in Lakhs)
1.	Manpower	4
2.	Study material	2
3.	Laboratory	2
4.	Internal assessment	0.5
5.	End semester examination	1.5
	Total	10.00

Total Programme fee: Rs.10000/-

i) Quality assurance mechanism and expected programme outcomes

The quality of the programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the programme, the subject experts, Director, School of Distance Education and Head of the School of Management and Business Studies. The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

Syllabus

DIPLOMA IN COMPUTERISED FINANCIAL ACCOUNTING AND TAXATION

DCFAT -101. Introduction to Business Data & Accounting

Business Data, Types of Business data, Managing business data for Decision Making, Introduction to Accountancy, Accounting system-need and benefits of Computerized Accounting-transition from Manual Accounting to Computerized Accounting- list of Accounting softwares, Rules of Accountancy, Advance Concept of Accounting, Journal and Ledger, P& L Account and Balance Sheet, Ledger Scrutiny, Bank Reconciliation, Accruals and Provisioning.

DCFAT-102. Accounting Using Tally ERP 9

Introduction Business functions, Accounting terms, Accounting statements, Tally Start Up • Company Creation • Creation of Group and Ledger • Security Control, Back -up & Restore Process • Inventory Master • Accounting entries and Inventory entries (Sales, Purchase, Returns & Stock) • Invoicing • Cost Centre & Cost Categories • Recording of expenses • Interest Calculations, Projects on Accounting and Tally -Accounting Writing • Reconciliation of Debtors & Creditors • Ledger Scrutiny • Developing a complete Company project in Tally, Business data analysis case studies.

DCFAT-103 Data Analysis Using Microsoft Excel

Introduction to Excel, Worksheet basics, data entry cells, entry of number s, text and formulae, moving data in a worksheet, Moving around the worksheet, selecting data range, using the interface (tool bars, Menus), Editing basics, working with workbooks, saving and quitting, cell referencing, formatting and calculations, calculations and worksheet- using auto fill, working with formulae, efficient data display with data formatting (number formatting, date formatting etc.), working with ranges, worksheet printing, working with graphics and charts, adding formatting text data with auto format, creating embedded chart using chart wizard, sizing and moving parts, updating charts, changing chart types, creating separate chart sheet s, adding titles, legends and grid lines, printing charts, introduction to Macro: Business data analysis case studies.

DCFAT-104. Practical & Business Project

A business accounting Problem of typical business organization has to be identified and have to be implemented using Tally and Excel. A project report has to be submitted.

DCFAT-105 Income Tax and GST Computation

Introduction to Income Tax Act, Heads of Income, Computation of Total Income, Computation of Income Tax,,Filing of Income Tax returns, How to deal with Income Tax Notices, Due dates for filing various returns, Computation of Service Tax liability, Payment of Service Tax, Concept of Service Tax, Registration , Input Tax Credit (Set - off) , Computation of Service Tax liability, Excise Duty – Customs Duty, Payment of Service Tax, GST Computation.

DCFAT-106. Advanced Accounting Features with Tally ERP 9

Voucher types - configuring vouchers-creating vouchers-display, alt, duplicating and cancelling of vouchers-predefined vouchers, Enabling GST -Enabling TDS in tally-Enabling Service Tax in tally, QUICKBOOKS-Introduction to Quick Books-features of QB-uses of QB-set up company accounts- QB centre –setup taxes- -Set up customer -create new customer-utility button -reports related to customers-Set up suppliers -create a new supplier-utility button-report related to suppliers- chart of accounts-working with transaction-reports in QB-customizing reports.

DCFAT-107 Advanced Excel

Introduction to Excel • Functions Introduction • Text Functions • Logical Functions • Summary Functions • Financial Functions • Basic Lookup • Advance Lookup • Index Match • Data Validation • Conditional formatting • Pivot table • Column & Pie chart • What if Analysis • Macro

DCFAT-108. Practical & Company Project

A business accounting Problem including tax related issues of typical company has to be identified and have to be implemented using advanced features of Tally and Excel. A project report has to be submitted at the end of the programme.

Books Recommended:

1. Gupta R. L. and Radhaswamy .M. Advanced Accounting , Sultan Chand & Sons , New Delhi.
2. Shukla M. C .Grewal .T. S. and S.C. Gupta. Advanced Accounts S. Chand &Co. Ltd. New Delhi.
3. Cox et.al. , 2007. MS Office step by step, PHI, New Delhi.
- 4.Tally, Vikas Publishing House, New Delhi.
5. Tally Academy . Tally Manual.
6. TALLY 9 Upto release 3.0, Computech Publications Ltd., New Delhi



Programme Project Report (PPR)

for

Distance Learning Programme under School of Distance Education

**Diploma in Early Detection and Intervention of Disabilities
(DEDID)**

Course Co-ordinator: Dr. P T Baburaj

Academic support by

**International and Inter University center for Disability Studies
(IUCDS)**

Mahatma Gandhi University

Kottayam, Kerala

DIPLOMA IN EARLY DETECTION AND INTERVENTION OF DISABILITIES (DEDID)

PROGRAMME PROJECT REPORT

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Certificate Programme has been designed by Inter University Centre for Disability Studies and is to be conducted by the School of Distance Education with the academic support of the Centre.

a) Programme's mission & Objectives :

The first five years of life are significant in that the foundations of health, learning, communicative competence, social skills and play are laid during this period. Neglect or deprivation during these years can have a lasting impact. Children with disabilities are considered at developmental risk as they need accommodations in interaction and environment to prevent delays in learning and development.

This Programme examines child development from conception to age three by considering the complex interaction between heredity and environmental factors. Children's physical, social, emotional and cognitive developments are discussed as well as the implications for developmentally appropriate practice. This certificate programme is for persons interested in working with young children from infancy to pre-kindergarten age with disability conditions and their families. Additionally, this programme will help professionals working in early care centers and education centers. The Programme also would enable to

provide a developmentally appropriate programme for infants, toddlers and preschool children with special needs.

b) Relevance of the programme with HEI's Mission Goals :

Early intervention applies to children of school age or younger who are discovered to have or be at risk of developing handicapping conditions or other special needs that affect their development. Early intervention provides services to such children and their families for the purpose of lessening the effects of handicaps. It is the term used to describe services that reach a child early in his or her development, usually from birth to age three. Intervention is vital during this very early period. It is important to focus on the crucial part of the child's development, as it would be difficult to teach skills to the child as he or she gets older. At the age of three, children generally become eligible for other educational services.

c) Nature of prospective target group of learners:

Students from various streams can join for the programme. Thus the prospective target groups of learners include

- Parents of children with disabilities
- Anganwadi teachers, School teachers
- Health workers
- Community Based Rehabilitation professionals
- Special Educators
- Other paraprofessionals in the field (undergraduates, postgraduates, researchers)
- General public who are desirous of studying such a programme.

d) Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence:

Early intervention is a crucial part in dropping disabilities. Proper intervention before the age of three can reduce disability up to 80 percent. So the required information on the problem and the adequate trainings can be extended to significant section of learners especially to parents and teachers through the Open and Distance Learning mode.

e) Instructional design:

The programme is of twelve month duration comprising **8 courses** with a total of 32 credits. There are adequate contact classes and the assessment involves both internal as well as external components. Each student has to submit a report based case studies or project.

(Course Co-coordinator: Dr.P.T Baburaj)							
Duration-12 months							
Course Code	Course Type	Course Name	Contact Sessions (hours)	Credits	*Internal Marks	External Marks	Total Marks
Semester I							
DE-EE-1	Core course	Early Intervention: Infant/Toddler Development, Risk and Disability	12	4	20	80	100
DE-EE-2	Core course	Early Intervention: Early assessment of childhood disabilities	12	4	20	80	100
DE-EE-3	Core course	Early Intervention: Planning and Evaluating Early Intervention Services	12	4	20	80	100
DE-EE-4	Practical	Early Intervention: Practicum 1	60	4	20	80	100
Semester II							
DE-EE-5	Core course	Basics of research methodology and statistics	12	4	20	80	100
DE-EE-6	Dissertation	Dissertation	12	4	20	80	100
DE-EE-7	Internship	Internship in an agency		4		100	100
DE-EE-8	Viva voce	Comprehensive viva voce		4		100	100
Total					32		800

*Through assignments

f) Procedure for admission, curriculum transaction and evaluation:

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. Candidates (undergraduates, graduates, and postgraduates) are eligible for admission irrespective of age. The study materials will be delivered through online and print forms. Fee structure will be decided by the University. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/ Presentation of case study for each course. Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
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65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

'P' grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Certificate programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

GPA =

Total credit points earned by the student from all the required courses of the programme

Total credits of all courses required in the programme

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

$$\text{Equivalent Percentage} = (\text{GPA obtained}) \times 10$$

g) Requirement of the laboratory support and library resources:

The library and infrastructure support of the Centre and the University will be extended to the learners as per the requirement.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

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The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener.

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A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	Inter University Centre for Disability Studies	250

h) Cost estimate of the programme and the provisions:

Budget estimate (for 100 students)

S.No.	Item	Amount (Rs. in Lakhs)
1.	Manpower	2.5
2.	Study material	1.5
3.	Laboratory/ Library	2
4.	Internal assessment	.5
5.	End semester examination	1.5
	Total	8.

Total programme fee: Rs.8000/-

i) Quality assurance mechanism and expected programme outcomes:

- j) The quality of the programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the programme, the subject experts, Director, School of Distance Education and Head of the Inter University center for Disability Studies .The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analyzed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

SYLLABUS

DIPLOMA IN EARLY DETECTION AND INTERVENTION OF DISABILITIES (DEDID)

SEMESTER I

COURSE 1. EARLY INTERVENTION: INFANT/TODDLER DEVELOPMENT, RISK AND DISABILITY

Course Description: Introduces students to the major theories of development and their implications for intervention. Presents and discusses infant/toddler development, risk, and disability in the areas of cognition, communication, motor, social/emotional, and self-care areas and considers variation in development as a result of multiple factors. Assessments in these areas are introduced, including an evaluation of development through children's play activities. Development and risk are evaluated in relation to culturally diverse beliefs and practices. The course is interdisciplinary; students from diverse programs participate, and experts from school and counselling psychology, special education, speech-language pathology, physical therapy, and nursing teach it.

Unit I :

Overview of course; class project; group discussion format; Introduction to Early Intervention: eligibility categories and professional roles, Rationale and importance of early intervention, Criteria of eligibility for early intervention services

Unit II :

Introduction to basic concepts of development; stages of development, Major theories of child development: Theory of Psychosexual development, Piaget's theory of cognitive development, Vygotsky's Sociocultural theory, Attachment theory, Erik Erikson's theory of Psychosocial development, Behavioural, Others

Unit III:

Developmental abnormalities - structural, biochemical and behavioural abnormalities, Introduction to risks in development. Biological, Environmental, Childhood cognitive and emotional disabilities: Autism, ADHD, Learning Disability, And Mental Retardation, Childhood physical and sensory disabilities: CP, Muscular Dystrophy, HI, VI, Impact of child with delays and disabilities on family.

Unit IV:

Prevention of developmental disabilities – pre – conceptual, pre- natal, natal, post natal and psychosocial, Child rearing – immunization, home environment, implication of social and cultural practices

References

1. Bricker, D. & Cripe, J. (1995). An Activity-Based approach to Early Intervention. Paul Brookes: Maryland
2. Dodson-Burk, B. & Hill, E.W. (1989). An Orientation and Mobility primer for families and young children. AFB: New York
3. Indian Association of Preschool Education. Activity Based, developmentally appropriate curriculum for young children.
4. Fogel, Alan. (2011). Infant Development: A Topical Approach. Cornwall-on-Hudson, NY: Sloan Publishing, LLC.
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7. Panda, K.C. (1999) Education of Exceptional Children. New Delhi: Vikas Publications.
8. Early Intervention Series – NIMH
9. School Readiness-NIMH
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11. Pehshawaria, R. Menon, D.K., Bailey, D., & Skinner, D. (2000). NIMH Family Efficacy scale. NIMH, Secunderabad.
12. Pehshawaria, R. Menon, D.K., Bailey, D., & Skinner, D. (2000). NIMH Family Support scale. NIMH, Secunderabad.
13. Pehshawaria, R. Menon, Ganguly, R., Roy, S., Pillay, R. Gupta, A. (1995). NIMH Family Needs Schedule. NIMH, Secunderabad.

COURSE 2. EARLY INTERVENTION: EARLY ASSESSMENT OF CHILDHOOD DISABILITIES

Course Description: This is an interdisciplinary course for personnel who will serve infants and toddlers, parents and others with documented disabilities or who are considered, 'at risk' for developmental delay. Students will learn to serve infants, toddlers, and families from linguistically and culturally diverse backgrounds. Information and training will be provided in the content and process of assessment and the delivery of early intervention services to infants and toddlers.

Unit 1:

Introduction to assessment – purpose and methods to collect data, Types of assessment – Developmental and functional, Introduction to assessment tools in early intervention, Selection and administration of tools

Unit II:

Individualized early intervention Programming: Early intervention – aims and objectives, Development and implementation of the Individualized Early Intervention Programme (IEIP), Individual Family Service Plan (IFSP), and Record maintenance

Unit III:

Therapeutics: Physiotherapy, Occupational Therapy, Speech, language and communication intervention, Use of aids and appliances

Unit IV:

Intervention Strategies: Intervention strategies – prompting and fading, modelling, shaping and chaining, Family needs, copying and adaptation mechanism, Role of community and community awareness programme, working in collaboration with other professionals and agencies

References

1. Noonan, M. & McCormick, L. (1993) Early intervention in Natural Environments. Brooks/Cole: California
2. Muralidharan, R. (1990). Early stimulation activities for young children. New Delhi: NCERT.
3. Panda, K.C. (1999) Elements of child development (Sixth Revised Edition). Ludhiana: Kalyani Publishers.
4. Sharma, P. (1995) Basics on development and growth of a child. New Delhi: Reliance Publishing House.
5. Shrivastava, P. (1991) Education nutrition and child development. Allahabad: Chugh Publications.

COURSE 3. EARLY INTERVENTION: PLANNING AND EVALUATING EARLY INTERVENTION SERVICES

Course Objective: A systematic, family-centered, collaborative and consultative approach to service delivery will be emphasized. Cases will be used as a focal point for learning how to plan and evaluate individualized family services plans. Important aspects of consultation, teamwork, service coordination and leadership in early intervention will be covered. Practical approaches to collaboratively setting and evaluating goals within the context of consultation. The impact of legal and financial issues on service coordination and approaches to service delivery will be addressed.

Unit I:

Mission and key principles of Early Intervention and their importance to all stakeholders. Characteristics of successful collaboration and consultation, assuring the Family's Role on the Early Intervention Team: Explaining Rights and Safeguards

Unit II:

Theory pertaining to teamwork in early intervention, Skills needed: Approaches to teamwork, Leadership, communication and interpersonal skills, preparation of projects and reports, Service coordination, Transition planning

Unit III:

Acts and policies relevant to early intervention, Legal issues, central and state regulations, Organization of early intervention services in India,

Unit IV:

Ethical issues, Community collaboration, institution and community based services, monitoring and evaluating early intervention programs

References

1. Aggarwal, J.C. (1992). History and philosophy of pre-primary and nursery education. Doaba House: New Delhi
2. McWilliam, R.A. (2010). Routines Based Early Intervention: Supporting Young Children and their Families. Baltimore, Maryland: Paul H. Brookes Publishing Co.
3. Baine, D. (1988) Handicapped children in developing countries: Assessment, curriculum and instruction. Edmonton (Alberta): University of Alberta.
4. Bonnet 1. Lingerfelt, V. & Nelson, D.E. (1990) Developing individualized family support plans - A training manual. Cambridge, MA: Brookline Books.
5. Narayan, J. & Kutty, A.T.T. (1989) Handbook for trainers of the mentally retarded persons - Pre-primary level. Secunderabad: NIMH.
6. Narayan, J. & Menon, O.K. (1989) Organization of special school for mentally retarded children. Secunderabad: NIMH.
7. Seth, K. (1996) Minimum specifications for pre-school. New Delhi: NCERT.

COURSE 4. CASE STUDY / PROJECT AND REPORT

Practical exposure will be given on the following areas

: Case history taking and conducting developmental assessment
: Therapeutics

1. Case study taking and developmental assessment
2. Therapeutics – Physiotherapy / occupational therapy/ speech therapy/behavior modification
3. Individualized early intervention / education/ education programme (IEIP/IEP), Family counseling.
4. Project report

SEMESTER II

COURSE 5. BASIC RESEARCH METHODOLOGY AND STATISTICS

Course Objective: This course intended to provide basic knowledge in different types of research, methodology and various research methods and develop abilities to apply various measures of descriptive and inferential statistics. This course will help to improve the skills of the students to write the research/ project reports

Unit I:

Basic principles of research, Meaning and importance of Research, Theory building, Creativity, innovation,

Unit II:

Preparation of proposal, Selection and formulation of research problem, Review of literature, Literature search procedures, Sources of Literature
Formation and types of hypothesis and testing of the hypothesis, Organization of project Report – Types, Structure and Components – Contents, Bibliography, Appendices

Unit III:

Research methods: Qualitative and quantitative methods, Descriptive, Experimental and Epidemiological methods

Unit IV:

Review of descriptive statistics: Scales of measurement, Measures of central tendency and dispersion, Measures of Variability, Measures of relationships, Measures of correlation, Probability, normal distribution and other theoretical distributions

References

- 1 Best, J.W., and Kahn, J.V. (1992). *Research in Education*. Prentice Hall of India Pvt. Ltd., New Delhi.
- 2 Borg, W.R., and Gall, M.D. (1989). *Educational Research (5th edn.)*. Longman, New York.
- 3 Christenson, L.B. (1988). *Experimental Methodology (4th edn.)*. Boston: Allyn and Bacon Inc.,
- 4 Kerlinger, F.N. (1983). *Foundations of Behavioural Research (2nd edn.)*. Surjeet Publications, Delhi.
- 5 Kothari, C.R. (2006). *Research Methodology, Methods and Techniques (2nd edn.)*. New Age International Pvt. Ltd., New delhi.
- 6 Panneerselvam, R. (2005). *Research Methodology*. Prentice-Hall of India Pvt. Ltd., New Delhi.
- 7 Belle, G., Fisher, L.D., Heagerty, P.J., and Lumley, T. (2004). *Biostatistics (2nd edn.)*. John Wiley & Sons, Inc., Washington.
- 8 Garrett, H.E. (1996). *Statistics in Psychology and Education*. Vakils, Feffer and Simons Ltd., Bombay.
- 9 Gupta, S.P. (1994). *Statistical Methods*. Sultan Chand and Sons, New Delhi.

COURSE 6. DISSERTATION

The students need to conduct an intervention project in the field of early intervention and submit the report in the form of a dissertation.

COURSE 7. INTERNSHIP IN AN AGENCY

The students need to undergo an internship programme for 4 weeks in an NGOs /other related agency working in the field of disability studies and early intervention and submit the report

COURSE 8. COMPREHENSIVE VIVA VOCE

Students need to attend for a comprehensive viva voce in front of the examiners.

Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

DIPLOMA IN ECO TOURISM (DET)

Course Co-ordinator: Dr. Robinet Jacob

Academic support by

School of Tourism Studies
Mahatma Gandhi University
Kottayam, Kerala

DIPLOMA IN ECO TOURISM (DET)

(Distance Learning Programme - Diploma Programme)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State had also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all its Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Diploma Programme has been designed by the School of Tourism Studies and is to be conducted by the School of Distance Education with the academic support of the School.

The School of Tourism Studies, which came up in 2010 is envisaged as a centre of higher learning and research in Tourism and Hospitality Studies and is the first University department of its kind in Kerala. The aim of the School is to develop skilled human resources specific to regional and global needs in applied, technical, interpersonal, analytical and communication abilities to master in travel management, hospitality management, foreign languages and allied areas.

Studies on tourism and hospitality education conducted by the Ministry of Tourism, GOI and FHRAI highlighted the need for more professionals. A survey by the Ministry of Tourism indicates that there is a demand for 2.03 lakh trained professionals every year of which 66 percent is at skill level and 34 percent at managerial level (69020). FHRAI's 43rd annual convention reaffirmed the fact about the mismatch between demand and supply, with Indian students still needing more institutions as the existing institutions meet only 15 percent of the industry requirements. A study conducted by the Dept. of Tourism, Govt. of Kerala says that there is a paucity of qualified talent for middle management positions in Kerala and most companies are bringing talent from outside the state to fill positions.

(a) Programme's mission & objectives:

The aim of the Diploma Programme in Eco-Tourism emphasizes on nature based tourism and analyses the history, concepts, principles, marketing, planning and management of Ecotourism activities in eco-tourism centers. It also highlights the development of ecological and cultural sustainability, education interpretation and economic benefits at the local level. This module will provide the student with an understanding of the theory and in managing the eco-tourism resources effectively. The course helps in the following:

1. To create basic understanding of tourism industry and knowledge of current trends in Ecotourism.
2. To acquire ability to understand the importance of local ecology, culture, history and economic development of Ecotourism.
3. To conserve the natural resources and maintain the integrity of indigenous culture.
4. To identify the Ecotourism markets and develop knowledge for potential Ecotourism projects.
5. To understand various methods of tour planning and site development.
6. To evaluate and study the Ecotourism resources in India and its environmental and economic aspects.

(b) Relevance of the programme with HEI's Mission and Goals:

The course focuses on the developments, practices as well as issues to deal with the conservation and management of eco-tourism resources. This course places a strong emphasis on the professional development of the students in ecotourism sector in particular. Such a qualification will enable and facilitate career progression for the students in eco-tourism sectors.

(c) Nature of prospective target group of learners:

Students with SSLC / Plus Two can join for the programme. Students interested to strengthen their knowledge in environment and eco-tourism can pursue this course.

(d) Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence:

This course places a strong emphasis on the professional development of the students. Such a qualification will enable and facilitate career progression for the students. On successful completion of this module, a student will be able to (i) Understand the principles and practices associated with eco-tourism tourism management, (ii) Field visit to eco-tourism centers and sites to study the properties of the eco systems in detail (iii) Development of professional skills to work in the eco-tourism sector (iv) Critically appraise the literature and identify emerging trends in the eco-tourism sector.

(e) Instructional Design:

The course is of one year which includes theory classes, assignments, seminars and field visits.

Course Structure and Scheme of Examination

Course Duration: 1 year

No. of semesters: 2

Course Code	Course Name	Credits	Contact classes (Hours)	Internal Marks	External Marks	Total Marks
SDE-PS-1	Paper – 1 Fundamentals of Tourism and Ecotourism	4	12	20	80	100
SDE-PS-2	Paper II – Tourism Planning, Policy and Development	4	12	20	80	100
SDE-PS-3	Paper III- Geography, heritage and tourism	4	12	20	80	100
SDE-PS-4	Paper IV - Management functions and practices in tourism	4	12	20	80	100
SDE-PS-5	Paper V- Tourism Marketing and Communication	4	12	20	80	100
SDE-PS-6	Paper VI – Environment, Conservation of natural resources and Ecotourism	4	12	20	80	100
SDE-PS-7	Paper VII- Emerging trends in Ecotourism	4	12	20	80	100
SDE-PS-8	Paper VIII – Dissertation	4	12	20	80	100
Total		32	96	160	640	800

Internal Assessment of 20 marks each is based on assignments.

(f) Procedure for admissions, curriculum transaction and evaluation:

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. Any student with SSLC/Plus two can apply. Fee structure will be decided by the University. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/Presentation of case study for each course. Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Final project: At the end of the course the candidate will be asked to submit a final dissertation. It will consist of a written report of fifty to sixty pages that focuses on the utilization of analytical techniques for various applications.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

'P' grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Diploma programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

$$\text{GPA} = \frac{\text{Total credit points earned by the student from all the required courses of the programme}}{\text{Total credits of all courses required in the programme}}$$

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

$$\text{Equivalent Percentage} = (\text{GPA obtained}) \times 10$$

(g) Requirement of the laboratory support and Library Resources:

To handle the practical components in syllabus field visits are required. Books relating to eco-tourism management and environmental studies are needed.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University

Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor. Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library is providing service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. The libraries of teaching departments are open during working hours of the Schools. Reading space is provided in all the three floors housing the various sections of the library. The library provides reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016.

The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC

INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	School of Tourism Studies	1464

(h) Cost estimate of the programme and the provisions:

The budget details for the course are given in the following Table.

Budget estimate (for 100 students)

S.No.	Item	Amount (Rs. in Lakhs)
1.	Manpower	2
2.	Study material	1.5
3.	Laboratory/Library	1
4.	Internal assessment	.5
5.	End semester examination	1
	Total	6.00

Total Programme fee: Rs.6000/-

(i) Quality assurance mechanism and expected programme outcomes:

The quality of the programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the programme, the subject experts,

Director, School of Distance Education and Head of the School of Tourism Studies. The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

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Syllabus

Diploma in Ecotourism

Semester I

Course I – Fundamentals of Tourism and Ecotourism

Unit 1: Introduction to Tourism and Ecotourism

Tourism concepts and definitions
Evolution and characteristics of ecotourism
Forms and types of tourism
Motivation of travel
Future trends

Unit 2: Tourism – Historical perspectives and development

Travel and tourism through ages
Development of ecotourism
Sources of Historical data
Modern tourism in India

Unit 3: Tourism industry and organizations

Viewpoints on tourism industry and major constituents
Tourism industry in India
Tourism organizations – international, national, state level and private sector
Importance of tourism statistics

Unit 4: Tourism legislations and Ecotourism guidelines

Tourism legislations
National and State level ecotourism guidelines
Various acts and laws
Tourism bill of rights and code for environment responsible tourism
World Ecotourism Summit

Unit 5: Tourism Impacts

Significance of Tourism
Tourism and environment
Economic, social, political and environmental impact
Sustainable Ecotourism –prospects and problems
Threats and obstacles to tourism

Course II –Tourism planning, policy and development

Unit 1: Tourism policy and planning

The evolution of Tourism planning
Tourism planning in India
National Action Plan 1992
Infrastructural development

Unit 2: Role of local bodies and officials in tourism

Importance of local level planning
Local bodies in India
Local bodies and tourism planning
Local level planning in public and private sector

Unit 3: Understanding tourists and hosts

Characteristics of tourists and hosts
Profiling foreign and domestic tourists
Guest – host relationship
Sociology, anthropology and tourism

Unit 4: Tourism products and operation

Guides and escorts
Sources of information for planning the tour
Planning, preparing and undertaking the tour
Tourist's expectations and guides

Unit 5: Tourist sites and attractions

Festivals and fares
Dance, Music, folk arts and crafts
Cuisines and customs
Hill stations, beaches, adventure and sports
Business cities, travel marts and heritage hotels

Course III –Geography, Heritage and Tourism

Unit 1 : Geography and Bio-diversity of India

Geography of India
India's biodiversity
Environmental concerns
Need for environmental conservation

Unit 2: Seasonality and destination in tourism

Climate and seasons

Destination management

Festivals, fares and seasonality

Unit 3: Map and chart work

Importance of maps and charts

Types of maps

Map language and map reading

Types of charts

Geo- information system and tourism

Unit 4: Preparation of maps and charts

Road map

Weather charts

Travel circuits

Rail and Air routes

Flora and fauna chart

Unit 5: Relevance of history in tourism

Knowledge of history in tourism

Monuments and museums

Performing arts

Religions of India

CourseIV –Management functions and practices in tourism

Unit 1 : Managing personnel in tourism

Personnel Management – concepts and features

Recruitment , selection, induction and placement

Training, development and motivational aspects in tourism

Career planning and performance appraisal

Employee counseling, discipline and grievance handling

Unit 2: Management functions in tourism

Financial Management

Information, technology and management

Waste Management

Unit 3: Managerial practices in tourism

Tour Operation
Travel Agencies
Hotel Services
Role of public relations in tourism

Unit 4: Management of conventions

Meetings, conferences, seminars, workshops, symposiums etc.
Understanding trade fares and exhibitions
Convention Industry
Convention planning, management and implementations
Event Management

Unit 5: Tourism services and management

Food services
Tourist transport system
Tourist operations
Airlines and airports

Semester II

Course V –Tourism Marketing and Communication

Unit 1: Tourism information and communication

Importance and sources of information in tourism
Advertising and publicity in tourism
Role of media in tourism
Tourism writing
Communication skills and tourism

Unit 2: Tourism markets

Tourism marketing- definition, concepts and features
Market segmentation
International and domestic tourism markets
Marketing research and analysis
Tourism forecasting
Role of technology in tourism marketing

Unit 3: Developmental role of tourism marketing and marketing mix

Tourism marketing and development
Role of public organization, local bodies and NGOs
Product designing and pricing strategies

Sales promotion and distribution strategies
People as an element for marketing mix

Unit 4: Destination and accommodation marketing

Marketing of regions, cities and leisure spots
Events, individuals, shopping, local foods, education and culture
Accommodation marketing- hotels, alternate and supplementary accommodation
Linkages within tourism segment

Unit 5: Transport and travel service marketing

Airlines marketing
Travel Agency marketing
Tour operation marketing
Eco-Tourism marketing

Course VI –Environment, Conservation of Natural Resources and Eco Tourism

Unit 1: Environment - Introduction

Environment - definition and concepts
Ecosystem - components of ecosystem
Biomes - major biomes of the world and biomes of India
Community interaction and nature
Biodiversity and ecological balance

Unit 2: Conservation of natural resources

Environmental conservation- definition, history and relevance
Ecotourism as a tool for conservation
The impact of Ecotourism on environment
Environmental degradation and Ecotourism
Environmental movements

Unit 3: Environment management

Environment management- principles and practices
Environmental auditing
Major environmental acts and regulations
Ecotourism and natural resource management

Unit 4: Sustainable tourism and society

Community based Ecotourism
Significance of ecotourism planning
Carrying capacity and development
Benefits of sustainable tourism

Peoples' initiatives on Ecotourism

Unit 5: Development of Ecotourism

Relevance of responsible tourism

World Ecotourism Summit- policies and formulations

Ecotourism development in India

Ecotourism in Kerala- possibilities and problems

Case study- ecotourism development in a hill station (existing infrastructural development and alternative measures to be suggested)

Course VII –Emerging trends in Ecotourism

Unit 1 : Trends and scope of Ecotourism

Innovation in Ecotourism

Special Interest Tourism – definition and scope

Importance of developing Special Interest Tourism

Factors related to Special Interest Tourism

Unit 2: Recent trends in tourism- I

Cultural tourism

Pilgrimage tourism

Ethnic and Rural tourism

Farm tourism

Unit 3: Recent trends in tourism- II

Adventure of sports tourism

Health tourism

Wildlife tourism

Unit 4: Recent trends in tourism- III

Backwater tourism

Island and beach tourism

Mountain tourism

Mangrove Tourism

Wetland Tourism

Course VIII –Dissertation

Dissertation topics can be selected by the student in consultation with the Faculty. A separate Dissertation guide will be provided to them at the beginning of the second semester

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- Krishan K Kamra, 2006. *Economics of Tourism*, Kanishka, New Delhi
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Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

DIPLOMA IN FOOD PROCESSING (DFP)

Course Co-ordinator: Dr. Anoja Thomas

Academic support by

**Inter University centre for Organic Farming and Sustainable Agriculture
(IUCOFSA)**

Mahatma Gandhi University

Kottayam, Kerala

DIPLOMA IN FOOD PROCESSING

(Distance Learning Programme - Diploma Programme)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with a vision to provide the opportunity of quality education to all realms of society. Since the beginning, thousands of students availed this opportunity for higher education throughout Kerala to a great extent and also outside the state to some extent. But after the new directions of UGC in 2014, University had stopped all its Off-Campus Centres of the School of Distance Education inside and outside the State.

Now it is the new endeavour to revamp the functioning of the school with different types of Diploma and Certificate programmes very relevant to the contemporary society, in addition to the conventional Graduate and Post Graduate programmes with the academic and infrastructural support of the eminent Schools and interdisciplinary interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Diploma Programme has been designed by the Inter University center for Organic Farming and Sustainable Agriculture and to be conducted by the School of Distance Education with the academic support of the School.

Mahatma Gandhi University has established an Inter University Centre for Organic Farming and Sustainable Agriculture (IUCOFS) to encourage and promote development of organic farming and sustainable agriculture in the country.

a) Programme Objective :

The food industry is one of the largest industries in the world and needs highly trained professionals to ensure the sustainable supply, quality and safety of food and food engineering. The objective of this course is to offer in- depth study of various areas related to Food Science and Technology so as to enable the students to understand food composition its nutritional, microbiological and sensory aspects. This program also trains the students in the processing and preservation techniques of food items .They are also taught about the importance of safety, quality, plant sanitation of food, food laws and regulations, and packaging in food industry.

b) Relevance of the programme

Food Scientists: Food Technology students have good career opportunities to work as Food scientists who work on determining the quality of existing methods of food packaging and processing. The Food Corporation of India (FCI) offers jobs to large number of people in the purchase, storage, transport and distribution of food grains. Private enterprises market bread, fruit juices, edible oils and soft drink concentrates. Food processing companies and food research labs hospitality industry are also looking for expert degree holders in food technology. Government is mulling over adding five hundred more Food parks all over the country. This will generate more jobs for Food technologists.

c) Nature of prospective target group of learners:

Students from various streams can join for the programme. Thus the prospective target groups of learners include undergraduates, postgraduates, researchers and the general public who are desirous of studying such a programme.

d) Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence:

The course provides an outline of theoretical information and practical experience, directly and indirectly related to a better understanding of food processing and also its issues and solutions. The programme is framed for transmission of both knowledge and know-how of local importance and global significance to the students.

e) Instructional design:

The programme is of twelve month durationwith comprising of eight courses with a total of 32 credits. There are adequate contact classes and practicals involve both internal as well as external components. Each student has to submit a report based case studies or project.

Duration of Course – 12 Months

Course Code	Course Name	Contact Session (hrs)	Credits	*Internal Marks	External Marks	Total Marks
DFP 101	Fundamentals of Food Science	12 Hrs	4	20	80	100
DFP 102	Food Preservation	12 Hrs	4	20	80	100
DFP 103	Agro-Processing	12 Hrs	4	20	80	100
DFP 104	Bakery and Confectionary	12 Hrs	4	20	80	100
DFP 105	Milk and Milk Product Processing	12 Hrs	4	20	80	100
DFP 106	Fundamentals of Nutrition	12 Hrs	4	20	80	100
DFP 107	Food Quality Control and Waste Management	12 Hrs	4	20	80	100
DFP 108	Practical and Project Report	60 Hrs	2 +2	20	80	100
	Total	144Hrs	32	160	640	800

f) Procedure for admission, curriculum transaction and evaluation:

Candidates (10+2, undergraduates, graduates, and postgraduates) are eligible for admission irrespective of age.

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. A pass in the Plus Two level is the minimum eligibility for the admission. Fee structure will be decided by the University. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/Presentation of case study for each course. Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9

75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

'P' grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Certificate programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

GPA =

$$\frac{\text{Total credit points earned by the student from all the required courses of the programme}}{\text{Total credits of all courses required in the programme}}$$

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

$$\text{Equivalent Percentage} = (\text{GPA obtained}) \times 10$$

g) Requirement of the laboratory support and library resources:

The library and infrastructure support of the Centre and the University will be extended to the learners as per the requirement.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library is providing service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. The libraries of teaching departments are open during working hours of the Schools. Reading space is provided in all the three floors housing the various sections of the library. The library provides reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016.

The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-ShodhSindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

h) Cost estimate of the programme and the provisions:

Budget estimate

S.No.	Item	Amount (Rs. in Lakhs)
1.	Manpower	5
2.	Study material	2
3.	Laboratory	3
4.	Books and Periodicals	1
5.	Institutional visit	1
6.	End semester examination	1.5
7.	Project Work	1
	Total	14.5 Lakh

Total Programme fee: Rs. 15000/-

i) Quality assurance mechanism and expected programme outcomes:

The quality of the programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the programme, the subject experts, Director, School of Distance Education and Head of the Inter University center for Organic Farming and Sustainable Agriculture. The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the

outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

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Syllabus

DIPLOMA IN FOOD PROCESSING (DFP)

DFP 101: Fundamentals of Food Science

(4+0: Theory Course)

Objectives:

To enable students to

- 1) Understand the basic concept, functions, and classification of food.

Unit 1- Carbohydrates and Proteins

Classification and structure of Carbohydrates: Sources of carbohydrates; Physico-chemical and functional properties; (reaction with phenyl hydrazine, NH_2OH , oxidation, reduction, ring formation); Basic concepts of Starch, cellulose, Glycogen, Pectin, Agar-agar, Gum-Arabic; Reducing and nonreducing sugar: concept and their estimation. Basic idea about Gelatinization, Gel formation, Retrogradation, Crystallization, Caramelization, Maillard reaction.

Classification of amino acid, Sources and physico-chemical and functional properties of proteins; structure of protein; protein denaturation; Common food proteins. protein determination methods, Separation of amino acid by chromatographic method.

Unit II Fats

Fatty acids concepts, classification; essential fatty acids, cis and trans fats; physico chemical and functional properties; Defects (rancidity) and their prevention; Chemical constants of fats (acid value, per-oxide value, Saponification number, Iodine value, Reichert-Meissl number); Basic idea about plasticity, hydrogenation, winterization; fats estimation by solvent extraction method

Unit III -Vitamins & Minerals

Minerals and Vitamins: Sources and physiological functions of minerals & vitamins; deficiency disorder; Effect of processing and storage of vitamins, Pro vitamins A & D; Vitamins as antioxidants.

Unit 4 Pigments& Flavouring Agents

Chlorophyll, xanthophylls, anthocyanin, anthoxanthin, tannin, carotenoids, myoglobin (property, functions, stability), synthetic colour, permitted and non-permitted colour

Food Additives

Definition, examples, use and property of — Preservatives – Emulsifying Agent – Food Additives – Antioxidant

Reference Books

1. Text Book of Biochemistry / Webb, Todd, Mason
2. Principles of Biochemistry / Albert L. Leninger / CBS Publishers & Distributors, New Delhi
3. Biochemistry Laboratory Techniques / Sterling Chaykin / Wiley Eastern Pvt. Ltd.
4. Foods Facts & Principles / N. ShakuntalaManay& M. Shadaksharaswamy / New Age International
4. Food Science / N.N. Potter
5. Food Chemistry / L. H. Meyer

DFP 102: Food Preservation

(4+0: Theory Course)

Objectives:

To enable students –

- 1) to acquire knowledge of food preservation and preservation technique.
- 2) to know the importance and basic principles of food preservation.

Unit I Introduction to food preservation. Rationale and specific aspects of food preservation; the importance of preserving of food in terms of food quality and safety. Characteristics of biochemical, microbiological and physicochemical processes.

Unit – II -
-Preservation by low temperature. Methods involved in preservation of food by low temperature. Principles underlying the above methods. Quick and slow freezing – merits and demerits. Thawing, refrigeration, cold storage, dehydrofreezing, Cryogenic freezing etc

Unit – III - Preservation by use of high temperature. - Concept and importance .- Various methods used – Pasteurization, Boiling, Canning - Effect of high temperature on food. Preservation by drying .Preservation by dehydration .Steps in process of dehydration Merits and demerits of dehydration. Effects on Nutritive value in dehydrated foods.

Unit IV Preservation by Fermentation and Irradiation-

Introduction to fermentation (general view), Different fermented food & their quality aspect

Factors effecting fermentation, Intermediate moisture food.

Preservation by radiation, chemicals and preservatives: Definition, methods of irradiation, direct and indirect effect, measurement of radiation dose, dose distribution, effect on microorganisms. Deterioration of irradiated foods- physical, chemical and biological, effects on quality of foods.

Unit –V

Preservation by preservatives. Objectives, principles, types of preservatives. Chemical preservative used in preservation of food, their Role and function, Different types of chemical preservatives. Safety in use and certification levels etc

Reference books

1. Food Process Engineering / D.R. Heldman & R.P. Singh / AVI
2. Food Processing and Preservation / G. Subbulakshmi & S.A. Uddipi / New Age International
3. The Technology of Food preservation / N.W Desrosier / AVI
4. Laboratory manual for Food Canners & Processors 2 vols. / NCA / AVI
5. Principles of Food Science Vol 2 / Karek & Luno Marcel Delker

DFP 103: Agro-Processing

(4+0: Theory Course)

Objectives:

To enable students –

- 1) To understand the processing techniques of agro products.
- 2) To know the use of agro processing equipments.

Course Content:

- Unit I**
- Agro processing industry.
 - Introduction to Agro processing industry.
 - Scope and importance of Agro processed products.
 - Processing equipments – Floor mill, mini grain mill pulverizers, Hammer mill, Floor separator, Dal mill, Packing and Sealing machine, Balance
- Unit – II**
- Cereal grain Processing
 - Different grains suitable for agro processing.
 - Primary and secondary processing of wheat and corn. Types of corn. Methods of Cleaning, grading, milling. Standards for the wheat flour. Adulteration in flour
- Unit – III**
- Pulses and Legumes processing
 - Classification of pulses. Pre milling treatments of pulses, pulse milling and recent developments. Principle of dal milling. Pulses suitable for milling. Different Methods of dal milling Working and principle of dal mill. By-products utilization. Adulteration in pulse
- Unit IV** Storage and packaging Need and importance of storage and packaging methods, Types of packaging materials e.g. paper, glass, metal, plastic, packaging form. Quality standards for packed processed products. Packaging evaluation WVTR, GTR, Bursting strength, tensile strength, tearing strength, drop

DFP 104: Milk, Meat and Fish processing Technology

(4+0: Theory Course)

Unit – 1 Technology of milk and milk products

Sources, and composition of milk, processing of market milk, standardization, toning of milk, homogenization, pasteurization, sterilization, storage, packaging, transportation and distribution of milk. Milk product processing-cream, butter, ghee, cheese, cheese spread, condensed milk, evaporated milk, whole and skimmed milk powder, ice cream, khoa, channa, chakka, paneer, pedha, fermented milk products - Youghurt, dahi, shrikhand and similar products. Instantization

of milk and milk products. Judging and grading of milk and its products. In-plant cleaning system.

Unit – II Technology of meat products

Sources and types of meat, meat products in India, its importance in national economy. Chemical composition and microscopic structure of meat. Effect of feed, breed and management on meat production and quality. Slaughtering of animals and poultry, inspection and grading of meat. Factors affecting post-mortem changes, properties and shelf-life of meat. Meat quality evaluation. Mechanical deboning, meat tenderization. Aging, pickling and smoking of meat. Meat plant sanitation and safety, Byproduct utilization. Recent trends in meat processing.

Unit – III Technology of poultry products

Structure, composition, nutritive value and functional properties of eggs and its preservation by different methods. Factor affecting egg quality and measures of egg quality. Recent development in eggs processing.

Unit – IV Fish Processing Technology

Types of fish, composition, structure, post-mortem changes in fish. Handling of fresh water fish. Canning, smoking, freezing and dehydration of fish. Fish sausage and home making. Radiation processing, meat safety.

DFP 105 FRUIT AND VEGETABLE PROCESSING TECHNOLOGY

(4+0: Theory Course)

Unit I Introduction

Scenario of fruits and vegetables in India and World. Post harvest management of fruits and vegetables-control of losses in harvesting, and handling operations. Scope of fruit and vegetable preservation industry in India. Present status, constraints and prospects

Unit II Canning of Fruits and Vegetables

Preparation of fruits and vegetables for canning. – Washing, peeling, grating, slicing dicing, deseeding, blanching - Importance of Blanching operations - Batch and Continuous Blanching.- Hot water and Steam Blanching.- Canning operations – precautions in canning operations, Spoilage of canned foods. Common machinery for operations like Peeling, Slicing/Dicing, Pulping, Grating and canning process.

Unit-III Value addition of fruits and vegetables

Processing technology for manufacturing of fruit juices, pulp, RTS beverage, nectars, squash, syrups, cordials, Carbonated.

Processing of Tomato: paste, ketchup, sauce, puree, soup, chutney etc. Drying and dehydration technology of fruits and vegetables: preparation of raisins, anardana, dried fig, dried leafy vegetables, juice powders, flakes, wafers, chips etc. Fermented fruits and vegetables products like sauerkraut, pickles, wines etc. Utilization of By-products and wastes from fruits and vegetables processing industry

Unit IV Aseptic and other methods of processing

Aseptic processing and Bulk packing of Fruit juice concentrates, Pulps and Puree - Brief information on Asepticity and how it is strictly maintained in the plant - Aseptic heat exchangers for sterilizing and concentrating the product - Aseptic fillers. Different system of filling practiced. Tetra pack for small quantities - Dole system and Scholle system for bulk storage in Bag & Boxes and Bag & Drums. - Storage of Aseptically packed products. Minimal Processing and packaging of vegetables, Brief study of Hurdle technology as applied to Vegetable and Fruit processing

Reference books

1. Post Harvest Physiology, Handling and Utilization of Tropical and Subtropical Fruits and Vegetable- E. B. Pantastico, AVI Publishing Company, INC.
2. Post Harvest: An Introduction to the Physiology and Handling of Fruits and Vegetables- R.B. Wills, M.B. Mc Glasson, D. Graham, T.L. Lee and E.G. Hall.
3. Post Harvest Technology of Fruits and Vegetables: Handling, Processing, Fermentation and Waste Management Vol. I and II- Verma L. R. and Joshi V.K.
4. Fruit and Vegetable Preservation Principles and Practices -Srivastava R.P. and Sanjeev Kumar
5. Preservation of Fruits and Vegetables-Khader
6. Fruit and Vegetable Preservation -Bhutani R.C.
7. Principles of Fruit Preservation- Morris, Thomas Norman,.

DFP 106 EMERGING TECHNOLOGIES IN FOOD PROCESSING

(4+0: Theory Course)

Objectives

To enable the student to understand:

1. Emerging / alternative technologies applied to food processing

Unit I High pressure processing of Foods

Principles – applications to food systems – effect on quality – textural, nutritional and microbiological quality – factors affecting the quality – modeling of high pressure processes – High Pressure Freezing, Principles and Applications

Unit II Pulsed electric field processing of Foods

Principles – Mechanism of action – PEF treatment systems – Main processing parameters – PEF Technology – Equipments – Mechanism of microbial and enzyme inactivation- safety aspects– Processing of liquid foods using PEF – Process models – Comparison of High pressure processing and PEF – Enzymatic Inactivation by PEF, Examples – Microbiological and chemical safety of PEF foods

Unit III Osmotic dehydration of Foods

Principle – Mechanism of osmotic dehydration – Effect of process parameters on mass transfer – Methods to increase the rate of mass transfer – Applications – Limitations of osmotic dehydration – Management of osmotic solutions

Unit IV Hurdle technology

Basics of hurdle technology – Mechanism Application to foods - Newer Chemical and Biochemical hurdles- organic acids – Plantderived antimicrobials – Antimicrobial enzymes – bacteriocins – chitin / chitosan (only one representative example for each group of chemical and biochemical hurdle)

Text Books

1. Da-wen Sun: Emerging Technologies for Food Processing, Elsevier Academic PressMarcel Dekker Inc. NY (1995)

DFP 107. Food Legislation, Quality control & Packaging

(4+0: Theory Course)

Unit 1 sensory evaluation

Food Sensory Characteristics, Sensory evaluation of food by subjective method- Difference tests, Sensitivity test, Rating test, Objective method- colour (Theory of spectrophotometer & colorimeter, selection of filter, Colour measurement by CIE system (principle only), Colour specification), viscosity & texture (Fluid behaviour-Newtonian and Non-Newtonian fluid characteristics, Plastic behaviour of liquid food, Brookefield Viscometer (Principle), Rheological properties of fruit juice and concentrate, Different textural attributes of food, Texture measurement instruments and unit of measurement, Instron testing machine).

Unit –II food packaging

Introduction to packaging. Packaging operation, package-functions and design. Principle in the development of protective packaging. Deteriorative changes in foodstuff and packaging methods for prevention, shelf life of packaged foodstuff, methods to extend shelf-life. Food containers-rigid containers, corrosion of containers (Tin plate). Flexible packaging materials and their properties. Food packaging materials and their properties. Food packagesbags, pouches, wrappers, carton and other traditional package. Containerswooden boxes, crates, plywood and wire bound boxes, corrugated and fibre board boxes, textile and paper sacks.

Unit –III Special problems in packaging of food stuff

Consideration in the packaging of perishables and processed foods. Evaluation of packaging, material and package performance, packaging equipment, package standards and regulation. Shrink packaging. Bar coding, aseptic and retortable pouches. Flexible and laminated pouches, aluminium as packaging material. Biodegradable packaging. Active packaging

Unit- IV Food quality control and assurance

Objectives, importance and functions of quality control. Methods of quality assessment, GMP, GLP, assessment of food materials-fruits, vegetables, cereals, dairy products, meat, poultry, egg and processed food products, sampling and specification of raw materials and finished products, sorting and grading. Food laws and standards, food regulations, grades and standards, Concept of Codex / FPO / FSSAI / HACCP / USFDA / ISO 9000 / AGMARK /MPO/ MMPO /MFPO series

etc. Food adulteration and food safety. Sensory evaluation-introduction, panel screening, selection methods. Interaction and thresholds. Sensory and instrumental analysis in quality control. IPR and patents

Unit- V Marketing and business administration

Principles of marketing and business administration, patents and trademarks, statutory rules, health regulations, Indian and foreign regulations. Export regulations. Trade Act regulations relating to maintaining hygienic conditions. Export and inspection agencies. Nature, objectives and scope of financial management, financial planning and control, capital structure, recent developments in financial management.

DFP 108: Practical and Project Report

- 1)Weights and Measures of raw and cooked food.
- 2)Preparation of product by Gelatinization.
- 3)Introduction to drying equipments
- 4)Processing of food product
 - i)Jack Fruit
- 5)Blanching of vegetables
- 6)Introduction to freezing equipments
- 7)Preservation by using chemical preservatives
 - i)Tomato ketchup
 - ii)Fruit squash
- 8)Introduction to Bakery and Confectionery Equipments
- 9)Preparation of Cake
- 10)Preparation of Cookies
- 11)Preparation of Chocolate
- 12)Physical examination of milk
- 13)Platform tests of milk
- 14)Determination of Fat content of milk
- 15)Preparation of Flavoured milk
- 16)Preparation of Condensed milk
- 17)Preparation of Curds and Shrikhand
- 18)Preparation of Khoa
- 19)Preparation of Gulabjamun
- 20)Preparation of Paneer
- 21)Preparation of Rasgulla
- 22)Preparation of Ice-cream and Kulfi

Programme Project Report (PPR)

for

Distance Learning Programme under School of Distance Education

Diploma in Prosthetics and Orthotics (DPO)

Course Co-ordinator: Dr. P T Baburaj

Academic support by

**International and Inter University center for Disability Studies
(IUCDS)**

Mahatma Gandhi University

Kottayam, Kerala

DIPLOMA IN PROSTHETICS AND ORTHOTICS (DPO)

(Distance Learning Programme - Diploma Programme)

PROGRAMME PROJECT REPORT

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State had also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all its Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Diploma Programme has been designed by the International and Inter University center for Disability Studies and to be conducted by the School of Distance Education with the academic support of the Centre.

A) Programmers vision, mission & objectives

This programme is envisaged to provide knowledge and practical exposure in orthotics and prosthetics education. The programme is designed to prepare individuals to be experts in the field of prosthetics and orthotics technology as a frame work for problem solving. The one year diploma programme in applied science curriculum combines clinical orientation programme such as rehabilitation medicine, allied health sciences, prosthetics and orthotics engineering. This programme failure to meet the needs of business, technology and health case. The curriculum formed aim to impart knowledge and to train category 3 personnel (bench workers) for assembly and filling of orthopedic appliances, artificial limbs and other rehabilitation aids under the supervision of prosthetics and orthotics. (category 1, profession)

B) Relevance of the programme with HEI's mission gods.

The need to provide better prosthetic and orthotic care in the treatment of physically challenged in the rehabilitation setting is very high. To meet the requirement of these personnel this course will provide the students with clinical problem solving skill for lifelong learning combined with bio-mechanical education. This course will also help the society and the institute in the field of prosthetics and orthotics with growing technological advancement and human resource development.

C) Nature of prospective target group learners.

Students from science streams and ITI trades such as fitter, carpenter, leather and certificate course in prosthetics and orthotics, special educators, professionals in the field of nursing and paramedicals, undergraduates, NGO's volunteers working in the field of disability and rehabilitation.

D) Appropriateness of the programme to be conducted in open and distance learning mode to acquire specific skills and competency:

Importance of prosthetics and orthotics is crucial part in the rehabilitation of differently abled persons. Timely intervention and management can reduce the degree of disablement and empower the individual to the maximum. Hence the information on prosthetics and orthotics will provide adequate knowledge and training to significant section of learners through the open and distance learning programme.

E) Instructional Design

The programme is of one year duration comprising six courses with a total of 32 credits. There are adequate contact classes, practical session and the assessment involve both internal as well as external components.

Course Co-ordinator: Dr. P.T. Baburaj

Duration :12 months

Course Code	Course Type	Course Name	Contact Sessions (hours)	Credits	*Internal Marks	External Marks	Total Marks
Semester I							
DE-PO -1	Core course	Basic Clinical Science (a. Anatomy b. Physiology c. Physical medicine and rehabilitation d. Surgery/	12	4	20	80	100

		orthopaedics.)					
DE-PO -2	Core course	Workshop practice, machines and tools & materials	12	4	20	80	100
DE-PO -3	Core course	Orthotics (lower, upper and spinal)	12	4	20	80	100
DE-PO-4	Practical	Prosthetics (upper and lower)	90	4	20	80	100
Semester II							
DE-PO-5	Core course	Basics of research methodology and statistics	12	4	20	80	100
DE-PO 6	Project	Project work and viva voce	12	4	20	80	100
DE-PO 7	Agency Visit	Observation visit to an agency and Case Study Analysis		4	20	80	100
DE-PO 8	Core Course	Psychology & Sociology	12	4	20	80	100
Total			162	32	160	640	800

F) Procedure for admission, curriculum transaction and evaluation:

Candidates (undergraduates, graduates, and postgraduates in science stream, ITI and diploma in Technology, certificate course in Prosthetics and orthotics etc..) are eligible for admission irrespective of age. The study materials will be delivered through online and print forms. Assignments and reports can be submitted online. The candidate will be graded based on the grading pattern after assessment.

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. Fee structure will be decided by the University. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/ Presentation of case study for each course. Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

'P' grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Certificate programme is 4. **Minimum Credit requirement for the Post Graduate Diploma in Prosthetics and Orthotics is 32.**

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

GPA =

Total credit points earned by the student from all the required courses of the programme

Total credits of all courses required in the programme

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P

< 4	F
Absent	Ab

Conversion of GPA to percentage

Equivalent Percentage = (GPA obtained) X 10

G) Requirement of the laboratory support and library resources:

The library and infrastructure support of the Centre and the University will be extended to the learners as per the requirement.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library is providing service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. The libraries of teaching departments are open during working hours of the Schools. Reading space is provided in all the three floors housing the various sections of the library. The library provides reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016.

The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

H) Cost estimate of the programme and the provisions:

B	Name of School/Centre	Total No. of books	Books added during the last three years
	Inter University Centre for Disability Studies	250	123

Budget estimate (for 100 students)

S.No.	Item	Amount (Rs. in Lakhs)
1.	Manpower	2.5
2.	Study material	1.5
3.	Laboratory/ Library	2
4.	Internal assessment	.5
5.	End semester examination	1.5
	Total	8.

Total programme fee: Rs.8000/-

I) Quality assurance mechanism and expected programme outcomes:

The quality of the programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the programme, the subject experts, Director, School of Distance Education and Head of the International and Inter University center for Disability Studies .The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analyzed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the

Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

The students trained from this programme could have worked as an expert Orthotist and Prosthetist in the Physical Medicine and rehabilitation fields.

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SYLLABUS

DIPLOMA IN PROSTHETICS AND ORTHOTICS (DPO)

Paper 1. Basic Clinical Science (a. Anatomy b. Physiology c. Physical medicine and rehabilitation d. Surgery/ orthopaedics.)

1. Anatomy

- Introduction to anatomy , surface anatomy , muscular system(different types of muscles and attachment , nerve and blood supply , action, lower extremity) some for upper extremity trunk, abdomen and spine)
- Skeletal system and
- Basic biomechanics .

2 Physiology

- Introduction to Physiology , circulatory system, cardiac system , - heart and its function – blood pressure – pulse- control of heart.
- Respiratory system, structure of lungs- mechanism of respiration
- Urinary system , mechanism of micturition
- Digestive system, mechanism of defecation .
- Nervous system –chief tracts- reflex action – postural reflex-peripheral nervous system .

3 Surgery/ orthopaedics

- Introduction to Surgery/ orthopaedics, various levels of amputation , both upper extremity and lower extremity
- Examination of stump skin condition , sensation , contractures deformities etxc.
- Congenital and acquired deformities
- Disease of nervous system – polio myelitis obstetrical paralysis – spastic paralysis – hemiplegia, paraplegia – pyogenic infection – leprosy
- Chronic arthritis – neuropathic arthritis – metabolic disease – rickets – avitaminosis
- **Disorders** : paralysis pain and deformities of spine foot and upper extremity

4. Physical medicine and rehabilitation

- Introduction to physical medicine and rehabilitation
- Basic knowledge of physical therapy/ occupational therapy

- Basic understanding of human locomotion and gait
- CBR concept in rehabilitation , govt schemes for rehabilitation and concretion to handicapped.

REFERENCES

1. Prosthetics atlas and orthotics atlas – C V Mosby
2. Orthotics in neurological Rehabilitation - Aisen , Demos publication .
3. Chaurasia's Human Anatomy (2005) Sathish Kumar Jain, CBS Publishers and distributors, New Delhi , 5th edition .

Paper II Workshop practice, machines and tools & materials

- Knowledge of operating and maintenance of different machines required in limb fitting centres such as Sewing machines, Ortho- Vac , Grinders, Drill machines etc.
- Hand tools like screw drivers files clamps etc.
- Special purpose tools
- Materials used in Orthotics and Prosthetics such as plastic, wood, aluminium , iron , rubber , foam , leather etc.
- Workshop safety and first aid.
- Handling and transportation of patients , persons with disabilities.

REFERENCES

- The functional foot orthosis, New York, Churchill Living stone Philips J W (1995).
- Lower Limb amputations : A guide to rehabilitation F A Davis
- Three dimensional analysis of human movement , human kinetics –Allard P Stokes I Bianchi .

Paper III Orthotics (lower, upper and spinal)

a. Orthotics (lower)

- Orthotics lower extremity, deformities, disorders and pains in lower extremity .
- Nomenclature and knowledge of different type of orthosis their purpose of giving and check up
- Measurement casting –impressions.
- Selection of components , assembly , alignment , check ups of different type of orthotics

b.Orthotics (upper)

- Orthotics upper extremity

- Deformities , disorders and pains in upper extremity
- Nomenclature and knowledge of different types of orthosis their purpose of giving and check up .
- Measurement – casting – impressions.
- Selection of components , assembly, alignment , check up of different type of orthosis

c. Spinal Orthotics

- Spinal orthotics
- Deformities, disorders and pain
- Nomenclature and knowledge of different types of orthosis their purpose of giving and check up
- Measurement – casting – impressions.
- Selection of components , assembly, alignment , check up of different type of orthosis

REFERENCES

- Orthotics: Clinical practice and rehabilitation technology – Churchill Living stone Reford, J B (1993)
- Scientific basis of human movement – Gowitzke, Williams and Wilkins , Blatimore ,1988.
- Hand splinting : Principles and methods (2nd edition) , St. Louis, C V Mosby

Paper IV Prosthetics(upper and lower)

a. Prosthetics upper

- Prosthetics upper
- Measurement- casting- impressions
- Nomenclature and knowledge of different type of prosthesis their purpose of giving and check up
- Selection of components , assembly, alignment , check up of different type of prosthesis

b. Prosthetics lower

- Prosthetics lower
- Measurement- casting- impressions
- Nomenclature and knowledge of different type of prosthesis their purpose of giving and check up
- Selection of components , assembly, alignment , check up of different type of prosthesis

c. Mobility aids and other appliances

- Wheel chairs and tricycle : types, design, strength and special purpose wheel chair/ tricycle dimensions.
- Crutches, canes and sticks : measurements strength, types etc.
- Walkers / other mobility aids : measurements types design strength.

REFERENCES

- Hand rehabilitation Christine , Churchill , Living stone , London.
- Bio feedback – a practitioners guide Kerb D , Guiford press.
- Gait Analysis – Perry J , Black Thorofare , New Jersey, 1992.

Paper V

BASIC RESEARCH METHODOLOGY AND STATISTICS

Course Objective: This course intended to provide basic knowledge in different types of research, methodology and various research methods and develop abilities to apply various measures of descriptive and inferential statistics. This course will help to improve the skills of the students to write the research/ project reports

Unit I:

Basic principles of research, Meaning and importance of Research, Theory building, Creativity, innovation,

Unit II:

Preparation of proposal, Selection and formulation of research problem, Review of literature, Literature search procedures, Sources of Literature
Formation and types of hypothesis and testing of the hypothesis, Organization of project Report – Types, Structure and Components – Contents, Bibliography, Appendices

Unit III:

Research methods: Qualitative and quantitative methods, Descriptive, Experimental and Epidemiological methods

Unit IV:

Review of descriptive statistics: Scales of measurement, Measures of central tendency and dispersion, Measures of Variability, Measures of relationships, Measures of correlation, Probability, normal distribution and other theoretical distributions

References

- 1 Best, J.W., and Kahn, J.V. (1992). *Research in Education*. Prentice Hall of India Pvt. Ltd., New Delhi.
- 2 Borg, W.R., and Gall, M.D. (1989). *Educational Research (5th edn.)*. Longman, New York.
- 3 Christenson, L.B. (1988). *Experimental Methodology (4th edn.)*. Boston: Allyn and Bacon Inc.,
- 4 Kerlinger, F.N. (1983). *Foundations of Behavioural Research (2nd edn.)*. Surjeet Publications, Delhi.
- 5 Kothari, C.R. (2006). *Research Methodology, Methods and Techniques (2nd edn.)*. New Age International Pvt. Ltd., New Delhi.
- 6 Panneerselvam, R. (2005). *Research Methodology*. Prentice-Hall of India Pvt. Ltd., New Delhi.

PAPER VI. PROJECT WORK AND VIVA VOCE

The students need to conduct a project and submit the report in the field of early intervention. Students need to attend the viva voce also.

PAPER VII. OBSERVATION VISIT TO AN AGENCY

To visit atleast one of the well established rehabilitation centres in the country , other than the place of work.

Note:

1. Practices will be provided for each lecture.
2. practical work (orthosis) Each student will be given on the job training and will have to bend, assemble and fit 2 B K. Orthosis, 2.A.K Orthosis, and various types of splints (bracing of feet deformities – shoe modifications , fabrication of shoes below knee orthosis – above knee orthosis , knee cage , bilateral orthosis – orthosis of upper limbs, orthosis spina.
3. Practical work (prosthetics)
 - a. Prosthetics : Each student will be given on the job training in the fabrication of socket, assembly, alignment and fitting on patients.
 - b. Lower limb prosthetics : each student will be required to independently take cast of stump, modify cast, fabrication of socket , shaping of socket , assembly of components , static and dynamic alignment and gait analysis . At least two B K Prosthesis and one A.K Prosthesis is to be fitted.
 - c. Upper limb prosthesis : at least two upper limb prosthesis are to be fitted after taking cast of stump, modification, fabrication of socket and assembly of all components with harness and control.

PAPER VIII. PSYCHOLOGY AND SOCIOLOGY

A. Psychology & Social work:

Introduction to Psychology, Outline of Psychology and behavior, Intelligence and abilities, Learning and Remembering, Psychological Development, Cognitive Processes, Personality, Moral Development, Psychological aspect of disability. The Role of the Family, Child with the disability, parents of the disabled child. Acceptance of Severely disabled persons. Social-Sexual Relationships. Independent Living.

Introduction to Sociology and outline of Society, definitions, Outline of Social works, Nature of Social organization, types of organizations. Non-governmental organisations and its role in prosthetics & orthotics. Structure and functions of Social Institutions.

Village as a community. Social Changes, Social Problems, Social Welfare, Vocational Rehabilitation, Employment, Self-Employment Job analysis, Job placement.

Disability & Development:

Background to social, political and economic issues in India and other Low Income countries. Affect on poor who live in rural and urban areas. Disability and women 57.

Introduction to community based rehabilitation as compared to the existing medical model and its function.

Local resources available and referral. Income generation schemes, Purpose of Sangha/group of PWDs. Access, adaptations and change of environment where people live or work.

Removing Environmental Barriers, Recreation for the Disabled Community Welfare organizations, Social welfare programmes. Professional and social work in medical & rehabilitation set up. Practical and environmental difficulties of patients in use of appliances. Outline of Educational aspects, PWD act.

References

- 1 James N. Butcher ,Susan Mineka ,Jill M.Hooley, Abnormal Psychology, Fifteenth Education published by Pearson Education Inc.2013.
- 2 Robert A. Baron ,Nyla R. Branscombe,Social Psychology,2015 ,Pearson Education Inc.
- 3 Carr, J.H. andShepherd, R.B, Butterworth, Oxford, Neurological Rehabilitation.
- 4 Kottke, F.J. and Lehman J.F.W B Saunders, London, Handbook of Physical Medicine and Rehabilitation.
5. Bromley, Ida Churchill-Livingston, London, Tetraplegia and Paraplegia

Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

FIRST DEGREE PROGRAMME IN ECONOMICS (BA ECONOMICS)

Course Co-ordinator: Dr. Jose J. Naduthotty

Academic support by
K.N. Raj Centre for Planning & Centre-State Relations
Mahatma Gandhi University
Kottayam, Kerala

FIRST DEGREE PROGRAMME IN ECONOMICS (BA ECONOMICS)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State had also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all its Off Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Conventional Graduate and Post Graduate Programmes in addition to Diploma and Certificate Programmes which are very relevant to contemporary society. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University.

1. Programme's Mission & Objectives

In line with the mission of the University, to provide flexible learning opportunities to all, particularly to those who could not join regular colleges or universities owing to social, economic and other constraints, the Degree Programme in Economics (BA), offered in the Open and Distance Education Mode aims at providing good quality education at affordable fee. It is also suitable for those who are already employed to improve their academic qualification which motivate them to move to higher grades (add to vertical mobility) in their profession. The various objectives are discussed below

Economics is a widely sought-after subject since it offers considerable employment opportunity in diverse fields like banks, industry and government service. Having a graduation in Economics opens opportunity for higher learning in management (MBA), Law etc, besides being the primary requirement if one plans to do advanced courses in Economics (PG and Research).

The specific objectives of the Programme are:

- (i). To provide an opportunity to those who are already employed in different professions to improve their chances of progressing to higher positions in their job.
- (ii). To cater to those who could not procure admission in a Regular Programme offered by colleges affiliated to the University due to various reasons (such as non-availability of colleges within convenient distance, failure to obtain required cut off mark at the qualifying examination to apply in regular colleges, lack of required financial capability, and urgency to work and support family)
- (iii). To help in the creation and development of manpower that would provide intellectual leadership to the community and in the process make available required manpower to the industry and service sector as well as in government service.

2. Relevance of the Programme with HEI's Mission and Goals

The Course is relevant for three sets of students. The first set includes those who want to pursue higher studies like a regular PG course in Economics, Management etc., or going a step further to Research. The second set of students look upon the Course as a means of entering better avenues of employment. The third category consists of those who are already employed, to improve vertical mobility.

In congruence with goals of the University, the Programme envisages at providing skilled manpower to the professional, industrial and service sectors in the country so as to meet domestic and global demands. The Programme also aims at making students fit for taking up various jobs and to initiate and run self-employment ventures. All the core papers taught in the Regular Course in affiliated colleges of the University are available as such. Under the Choice Based Credit and Semester pattern students have reasonable choice with regard to Open, Elective and Complementary subjects.

3. Nature of Prospective Target Group of Learners:

The BA Course offered under the Open and Distance mode is in every sense comparable to the three year full time choice-based credit and semester system which is in operation in regular colleges. It is more flexible and can be very useful to students with special difficulty (due to financial backwardness and those living in rural areas that do not have regular colleges). This course aims at inculcating essential skills as demanded by the industry and service sectors. The curriculum has been designed to cater to the emerging needs of the economy and society. The syllabus has been developed to offer sufficient breadth and depth in the main subject so that those who wish to continue in academic line will have no problem adjusting to the demands of PG in Economics or Research in the subject. As only a small percentage of the aspirants who wish to attend a degree course in Economics in Kerala are being accommodated in the regular mode through colleges. It is hoped that the Programme offered through the distance mode of the university will be a boon for those who could not join regular colleges owing to social, economic and other constraints such as eligibility for enrolment, age of entry, time and place etc.

In the recent period, a large number of self-financing institutions have come up to serve those who could not get admission in regular colleges; but these are unaffordable to the poor and lower middle-class families. The Open and Distance mode of courses are also likely to bring more women into higher education as many parents don't like to send their daughters to colleges which are situated at a considerable distance from home.

4. Appropriateness of Programme to be conducted in Open and Distance Learning Mode to acquire specific skills and competence

The Self Learning Material (SLM) for the Programme has been developed keeping in mind the needs and special difficulties of the said categories of learners ensuring that it is self-explanatory, self-contained, comprehensive and simple. The norms and guidelines suggested in the University Grants Commission (Open and Distance Learning) Regulations, 2017 such as the

background of the learner and learning needs, learning experiences, and support and preparation in adapting to flexible learning have been strictly adhered to during the planning period of developing SLM. The ingredients considered while developing SLMs include: (a) Learning Objectives (b) Assessment of prior knowledge (c) Learning activities (d) Feedback of learning activities (e) Examples and illustrations (f) Self-assessment tests (g) Summaries and key points (h) Study tips etc.

The Programme could be considered appropriate to be conducted in ODL mode to acquire specific skills and competence for the following reasons:

- 1) The specific skill and competencies required for a B.A graduate can be imparted to a great extent through SLMs that are self-explanatory, self-contained and self motivating.
- 2) Large volume of study material on the various courses under the B.A Degree Programme is available on the internet or websites of the UGC or Universities in the form of notes in Word/PDF format, PPTs, Videos etc. Information on them can be provided during the counselling hours earmarked per Course. There is some variation in hours allocated for papers as some of them like Econometrics and Mathematical Economics may require practice sessions.
- 3) The Programme stresses the application of theory to practice through the use of quantitative techniques. Fair amount of training will be given in execution of project work, case studies, presentations and practical assignments
- 4) Necessary library materials will be provided to students. Though students of Open and Distance Course cannot be granted membership of the university library they will be allowed to refer books and make use of the online resources in the library. An ID card will be issued to students which will enable them to access resources in the university library.

5. Instructional Design

5.1 Curriculum Design

The University is revising the curriculum and syllabi of its BA Economics Programme (regular) once in every three years to ensure that the content is updated to reflect current academic knowledge and practice, and also to ensure that the University provide the best learning experiences possible for students. As part of curriculum design, a curriculum and syllabus revision workshop is organized which consider improvements in curriculum to reflect latest developments in the subject. In this context, the committee identifies what are the specific needs, translates the needs into course after splitting the broad objectives into specific objectives, groups the specific objectives into subjects, derives the subjects from the classification, specifies enabling objectives, unitizing each subject matter and specifies required time for syllabus formulation. The curriculum of BA Economics has been prepared by considering the challenges of offering the Programme through distant mode. The curriculum and syllabus of BA Economics delivered in Distance mode is same as the Programme of the regular Course.

The BA Economics Course is designed in such a way that students have considerable choice in selection of papers. Choice Based Credit and Semester System which is followed for

regular course is available to the students who register for the Open and Distance Education Course. For each Core paper offered, 16 hours of contact class is arranged at each of the different Centres. The University will appoint sufficient number of well-qualified full-time faculty for conducting such classes. Students are required to submit assignments and appear for test papers to be able to pass internal examination for which 20 percent of marks are earmarked.

Programme details:

Sem	Course code	Course Title	Course Type	Credit	Contact session (Hrs)	CE Marks	ESE Marks	Total Mark
I	DEN1CC01	English 1		4	12	20	80	100
	DEN1CC02	English Common 1	Common	3	9	20	80	100
	*DML1CC02 **DHN1CC02	Second Language 1	Common	4	12	20	80	100
	DEC1CRT01	Perspectives & Methodology of Economics	Core	4	12	20	80	100
	DEC1CMT01	Complementary 1	Complementary	4	12	20	80	100
		Semester I Total			19	57	100	400
II	DEN2CC03	English 2		4	12	20	80	100
	DEN2CC04	English common 2	Common	3	9	20	80	100
	*DML2CC02 **DHN2CC02	Second Language 2	Common	4	12	20	80	100
	DEC2CRT02	Microeconomics I	Core	5	15	20	80	100
	DEC2CMT02	Complementary 2	Complementary	4	12	20	80	100
		Semester II Total			20	60	100	400
III	DEN3CC05	English 3	Common	4	12	20	80	100
	*DML3CC03 **DHN3CC03	Second Language Common 1	Common	4	12	20	80	100
	DEC3CRT03	Microeconomics 2	Core	4	12	20	80	100
	DEC3CRT04	Economics of Growth & Development	Core	4	12	20	80	100
	DEC3CMT01	Complementary 3	Complementary	4	12	20	80	100
		Semester III Total			20	60	100	400
IV	DEN4CC06	English 4	Common	4	12	20	80	100
	*DML4CC04 **DHN4CC04	Second Language common 2	Common	4	12	20	80	100
	DEC4CRT05	Macroeconomics 1	Core	4	12	20	80	100
	DEC4CRT06	Public Finance	Core	4	12	20	80	100
	DEC4CMT02	Complementary 4	Complementary	4	12	20	80	100
		Semester IV Total			20	60	100	400

V	DEC5CRT07	Quantitative Techniques.	Core	4	12	20	80	100
	DEC5CRT08	Macroeconomics 2	Core	5	15	20	80	100
	DEC5OPT01/2/3/4	Open Course	Open Course	3	9	20	80	100
	DEC5GET01/02/03	Environmental Economics	General Elective	4	12	20	80	100
	DEC5CRT11	Introductory Econometrics	Core	4	12	20	80	100
		Semester V Total		20	60	100	400	500
VI	DEC6CRT12	Quantitative Methods	Core	4	12	20	80	100
	DEC6CRT13	International Economics	Core	4	12	20	80	100
	DEC6CB1-3	Choice-based Course	Choice Based	3	9	20	80	100
	DEC6CBT01-03	Money & Financial Markets	Choice Based	4	12	20	80	100
	DEC6CRT16	Indian Economy	Core	4	12	20	80	100
	DEC6PRP01	Project		2		20	80	100
		Semester VI Total		21	57	120	480	600
		Grand Total		150	354	620	2480	3100

Second Language *Malayalam **Hindi

BA Economics (Open and Distance Mode)

Open Courses Offered: Semester V-Core 9

Sl No.	Course code	Course Title
1	DEC5OPT01	Foundations of Economics
2	DEC5OPT02	Economics of Population
3	DEC5OPT03	Gender Economics

Choice Based Core Courses—Elective, Semester VI-Core 14

Sl. No.	Course code	Course Title
1	DEC6GET 01	Mathematical Economics
2	DEC6GET 02	Business Economics
3	DEC6GET 03	History of Economic Thought

Complementary Courses (Economics) for Other BA Programmes

Sl. No.	Course code	Course Title
1	DEC1/3 CMT01	Principles of Economics
2	DEC2/4	Basic Economic Studies

List of Complementary Courses

1. History
2. Political Sciences
3. Psychology
4. Sociology
5. Mathematics
6. Mathematics for Economic Analysis
7. Logic

5.3 Duration of the Programme

The normal duration of the Programme shall be three years consisting of Six Semesters.

5.4 Faculty and Support Staff Requirement

Course Co-ordinator

Dr. Jose J. Naduthotty
Faculty, K.N. Raj Centre for Planning & Centre-State Relations, MG University
Qualifications: MA (Eco), PhD (Eco)

Teaching faculty

The two Common Courses (Languages) will be taught by teachers with a Master's degree in relevant disciplines along with other qualifications prescribed by the University. The core courses including all practical papers, and open course have to be taught by teachers with M.com qualification along with other qualifications prescribed by the University.

Instructional Delivery Mechanisms

In addition to provide SLMs prepared in line with the UGC guidelines on preparation of SLMs, students are being offered a minimum of 57 contact hours for each semester. The personal contact Programmes are being taken using audio visual aids, and students are encouraged to use web resources to prepare personal notes, videos etc.

Student Support Service Systems at SDE

The SDE has Learner Support Centres for students at different locations within the jurisdiction of the University to facilitate contact classes and practical sessions.

In addition to this, the university has centralized resources to enable the student support activities in respect of Information Centre, Library with good collection of books and journals, Wi-Fi connectivity, Counselling, Students Grievance Redressal Cell, Post Office , Snack bar and Refreshment Centre, Reprographic centre, Drinking water etc.

6. Procedure for Admissions, Curriculum Transaction and Evaluation

Admission

The admission notifications for BA Economics Programme will be issued in leading national and regional dailies in April. The detailed information regarding admission is being given on the SDE website and on the admission website. Students seeking admission shall apply online.

Minimum Eligibility for Admission

Eligibility for admission to the Programme is a pass in Higher Secondary Examination of the State or an examination accepted by the University as equivalent thereto.

Fee Structure

BA Economics Rs.14000 for full Programme (collected in three installments)

Programme Delivery

The Programme is being delivered with the help of SLM and Personal Contact Programmes. The SLM is being dispatched to the students during each semester directly or by post. At the beginning of each semester assignments are given, which are to be submitted by the end of the respective semester and the marks are included in the internal marks.

Evaluation

The evaluation of the Programme will consist of two parts: a) Continuous Evaluation (CE) b) End Semester Evaluation (ESE) The external theory examination of all semesters shall be conducted by the University at the end of each semester/year. Internal evaluation is to be done by continuous assessment. Total marks of external examination is 80 and total marks of internal evaluation is 20.

For projects

a) Marks of external evaluation: 80

b) Marks of internal evaluation: 20

Components of External Evaluation of Project Marks

Item	Marks
Dissertation	50
Viva-voce	30
Total	80

Components of internal evaluation of project

Item	Marks
Punctuality	5
Experimentation/ Data collection	5
Knowledge	5
Report	5
Total	20

Assignments:-Assignments are to be done from 1st to 4th Semesters. At least one assignment should be done in each semester for all courses.

Seminar/Viva:- A student shall present a seminar in the 5th semester for each paper and appear for Viva-voce in the 6th semester for each course.

Internal assessment shall not be used as a tool for personal or other type of vengeance. A student has all rights to know, how the teacher arrived at the marks. In order to address the grievance of students, a three-level Grievance Redressal mechanism is envisaged. A student can approach the upper level only if grievance is not addressed at the lower level.

7. Requirements of Library Resources

Computer Lab is not mandatory for BA Economics. The students can use the library resources available at the University Central Library and Learning Support Centers.

Mahatma Gandhi University Library and Information System consists of University Library, Libraries of the Schools and 4 Study Centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies

purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The Library is providing service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. The libraries of teaching departments are open during working hours of the Schools. Reading space is provided in all the three floors housing the various sections of the library. The library provides reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016.

The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener.

The Library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

The Library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the Library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	KN Raj Centre for Planning and Centre -State relations	1146

8. Cost Estimate of the Programme and the Provisions

Sl.No.	Expenditure heads	Expenditure (Rs.) for 1000 students
1	Pay and allowances	20,00000
2	Contact classes and evaluation	10,00000
3	Course material	9,00000
4	Advertisement charges	12,000
5	Postage and telephone	10,000
6	Books and periodicals	60,000
7	Miscellaneous	13,000
	TOTAL	39,95,000
	Provisions @10%	3,99,500
	Grand Total	43,94,500
		Cost per student/year = Rs.4395/-

9. Quality Assurance Mechanism and expected Programme outcomes

The SDE has devised the following mechanism for monitoring the effectiveness of the BA Economics Programme to ensure good standards of curriculum, instructional design etc.

(a). Established a Monitoring Committee at the University level to develop and put in place a comprehensive and dynamic internal quality assurance system to enhance the quality of the Programmes offered through distance mode as per the norms and guidelines of the University Grants Commission (Open and Distance Learning) Regulations, 2017.

(b). The SDE has an approved panel of experts for preparing SML. The SLM prepared is being edited by the board of subject expert. The SLMs are developed with the approach of self explanatory, self-contained, self-directed, self-motivating and simple to understand.

(c). The SDE of the University has full time faculty members exclusively for co-ordinating the Programme and also has a panel of qualified guest teachers for counseling students and engaging in personal contact Programmes.

Towards the end of the Programme, students will be able to:

- Develop an ability to effectively communicate both orally and verbally
- Appreciate importance of working independently and in a team
- Have exposure of complex economic problems and find their solution
- Process data by using the quantitative techniques imparted in the course.
- Understand required analytical and statistical tools for economic analysis
- Develop an understanding of econometric tools which are useful in evaluating economic performance of firms and other economic entities
- Develop self-confidence and awareness of general issues confronting the economy and the society.

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Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

FIRST DEGREE PROGRAMME IN ENGLISH (BA ENGLISH)

Course Co-ordinator: Dr. Saji Mathew

Academic support by

School of Letters

Mahatma Gandhi University

Kottayam, Kerala

FIRST DEGREE PROGRAMME IN ENGLISH (BA ENGLISH)

PROGRAMME PROJECT REPORT

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Conventional Graduate and Post Graduate Programmes in addition to Diploma and Certificate Programmes which are very relevant to contemporary society. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University.

1. Programme's Mission & Vision

- To conduct and support undergraduate, postgraduate and research-level/Programmes of quality in different disciplines.
- To foster teaching, research and extension activities for the creation of new knowledge for the development of society. To help in the creation and development of manpower that would provide intellectual leadership to the community.
- To provide skilled manpower to the professional, industrial and service sectors to meet global demands.
- To help promote the cultural heritage of the nation and preserve the environmental sustainability and quality of life.
- To cater to the holistic development of the region through academic leadership.

In today's global scenario the significance and role of English goes without saying. While the inevitability of a foundation in the English language does not merit any detailed justification, a Programme that combines the benefits of the English language with the input from the world of literature makes it all the more fascinating as literature is man's highest achievement in terms of creativity and innovativeness, not to speak of its philosophical underpinnings

2. Relevance of the Programme with the HEI's Mission and Goals

The vision behind the introduction of the BA Programme in English is that a proper foundation in English, the international lingua franca, ensures a foundation in many other

disciplines. The mission is to produce a generation of young minds who can combine linguistic capability with literary creativity in whichever field they engage themselves.

In today's global scenario the significance and role of English goes without saying. While the inevitability of a foundation in the English language does not merit any detailed justification, a Programme that combines the benefits of the English language with the input from the world of literature makes it all the more fascinating as literature is man's highest achievement in terms of creativity and innovativeness, not to speak of its philosophical underpinnings.

3. Nature of Prospective Target Group of Learners:

The Programme is open to students who have taken English as either an elective or common course at the higher secondary level. They will be selected on the basis of their performance in the final examination of higher secondary course. The curriculum is designed in such a way that a good student can comprehend the portions and the requirements of a potential candidate is identified and satisfied.

4. Appropriateness of Programme to be Conducted in Open and Distance Learning Mode to acquire specific Skills and Competence

The distance mode suits the BA Programme in English for some important reasons. For one thing, the Programme with no laboratory component can be designed to suit the BA in English. This enables pupils who are unable to pursue university education as full time candidate for various reasons, since the course design, study materials, duration of the Programme and contact classes have been arranged to suit their convenience. A solid foundation in English language and literature helps the candidates progress in their respective careers. Moreover, the syllabus of the Programme covers the whole gamut of concerns in the literary studies. The student undergoing the course is sure to acquire a comprehensive understanding of literary theory, criticism, translation, world literatures and issues of social concern like the environment. In that respect it also enables one to become a conscientious citizen endowed with a sensibility attuned to the concerns of the world.

5. Instructional design

The candidates will be supplied with study materials from time to time and will be required to attend the contact classes regularly. In the place of the Project they will need to study an additional course namely Appreciating Films

5.1 Duration of Programme(s)

The BA in English is a Programme designed to be completed in three years or six semesters. It has been designed in such a way that the pupil becomes acquainted not only with English language and literature but with the institution called literature, not to speak of the methodology of literary studies, current trends in world literature apart from issues of broad humanistic concern as well. The Programme has Six Common Courses, Four Second Language Courses, Fourteen Core Courses, Four Complementary Courses, One Open Course and One Choice based Course. The course Appreciating Films can be chosen in the place of the Project undertaken by regular students.

5.2 Programme Detail

Sem	Title	Course Category/Code	Contact Hours	Credits	Internal Assessment	External Exam	Total
I	Fine-tune Your English	Common Course-1 DEN1CC01	12	4	20	80	100
	Pearls from the Deep	Common Course -2 DEN1CC02	9	3	20	80	100
	Second Language	Common Course - *DML1CC01 **DHN1CC01	12	4	20	80	100
	Methodology for Studying Literature	Core Course-1 DEN1CRT01	12	4	20	80	100
	World History/Political Science	Complementary Course – DEN1CMT01	12	4	20	80	100
	Total		57	19	100	400	500
II	Issues that Matter	Common Course -3 DEN2CC03	12	4	20	80	100
	Savouring the Classics	Common Course -4 DEN2CC04	9	3	20	80	100
	Introducing Language and Literature	Core Course -2 DEN2CRT02	12	4	20	80	100
	Second Language	Common Course*DML2CC02 **DHN2CC02	12	4	20	80	100
	History /Political Science	Complementary Course DEN2CMT02	12	4	20	80	100
	Total		57	19	100	400	500
III	Literature and/as Identity	Common Course -5 DEN3CC05	12	4	20	80	100
	Second Language	Common Course *DML3CC03 **DHN3CC03	12	4	20	80	100
	Harmony of Prose	Core Course -3 DEN3CRT03	12	4	20	80	100
	Symphony of Verse	Core Course -4 DEN3CRT04	12	4	20	80	100
	Evolution of Literary Movements: the Shapers of Destiny	Complementary Course 3 DEN3CM03	12	4	20	80	100
	Total		60	20	100	400	500

IV	Illuminations	Common Course -6 DEN4CC06	12	4	20	80	100
	Second Language	Common Course*DML4CC04 **DHN4CC04	12	4	20	80	100
	Modes of Fiction	Core Course -5 DEN4CRT05	12	4	20	80	100
	Language and Linguistics	Core Course -6 DEN4CRT06	12	4	20	80	100
	Evolution of Literary Movements: the Cross	Complementary Course 4 - DEN4CMT04	12	4	20	80	100
Total			60	20	100	400	500
V	Currents of Change	DEN5CROPT01 Appreciating Films	9	3	20	80	100
	Open Course	DEN5CR0PT02 Theatre Studies DEN5CR0PT03 English for Careers					
	Acts on the Stage	Core Course -7 DEN5CRT07					
	Literary Criticism and Theory	Core Course -8 DEN5CRT08					
	Indian Writing in English	Core Course -9 DEN5CRT09					
Environmental Science and Human Rights	Core Course DEN5CRENT01	12	4	20	80	100	
Total			60	20	100	400	500
VI	Choice Based Course	DEN6CBT01 Comparative Literature DEN6CBT02 Modern Malayalam Literature in Translation DEN6CBT03 Regional Literatures in Translation DEN6CBT04 Voices from the Margins	12	4	20	80	100
	Postcolonial Literatures	Core Course -10 DEN6CRT10	12	4	20	80	100
	Women Writing	Core Course -11 DEN6CRT11	12	4	20	80	100
	American Literature	Core Course -12 DEN6CRT12	12	4	20	80	100
	Modern World Literature	Core Course -13 DEN6CRT13	12	4	20	80	100
	Project	DEN6PR01	6	2	20	80	100
	Total			66	22	120	480
Grand Total			360	120	620	2480	3100

Second Language *Malayalam ** Hindi

Faculty and support staff requirements

Course Co-ordinator

Dr. Saji Mathew

Asst. Professor, School of Letters, Mahatma Gandhi University

Qualifications : Ph D,MA, M.Phil

Teaching faculty

All the courses are to be taught by those qualified in English, with the exception of the following. Second language portions are to be taught by the faculty qualified in the respective subject and the Open Course by the faculty in that subject.

Instructional delivery mechanism

In addition to providing SLMs prepared in line with the UGC guidelines on preparation of SLMs, students are being offered 55 to 70 contact hours for each semester. The personal contact Programmes are being taken using audio visual aids, and students are encouraged to use web resources to prepare personal notes, videos etc.

Student Support Service Systems at SDE

The SDE establishes Learner Support Centres for the students at different locations within the jurisdiction of the University to facilitate contact classes and practical sessions.

6. Procedure for admissions, Curriculum Transaction and Evaluation

Admission

The admission notifications for B.A English Programme, among others are being issued in leading national and regional dailies during June-July. The detailed information regarding admission is being given on the SDE website and on the admission website. Students seeking admission shall apply online.

Minimum Eligibility for Admission

Students who have successfully completed their higher secondary education in any stream are eligible to apply for this, provided:

(a) they have studied a minimum of three papers in English (b) they have scored a minimum of 45% marks in the subject. Eligible concessions in marks will be given to those who submit relevant documents.

Verification of Documents

1. Qualifying Certificates ie SSLC, Plus Two
2. Applicants possessing qualifications from Universities / Institutions other than Universities in Kerala should apply for recognition. Applications for Matriculation/ Recognition are also provided with the Application Form.
3. Candidates possessing qualifications from other Universities should also produce migration certificates / NOC from the Universities or other board of examinations.
4. TC from the educational institution where the candidate last studied.

Fee Structure

BA (English) Rs.14000/- for full Programme

The transaction will take place using the following methods.

- a)Using notes prepared by experienced faculty
- b>Contact classes
- c)Remedial coaching for the needy

Evaluation of the students' performance will be made using the following methods

- a) Continuous assessment using interactive method
- b) Assignments
- c) End semester examination

7. Requirements of Library Resources

Mahatma Gandhi University Library and Information System consists of University Library, Libraries of the Schools and Libraries of the 4 Study Centres. The University Library was established in 1989. The University Library which is situated on the main campus and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area and consists of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The Library provides service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. Reading space is provided on all the three floors housing the various sections of the library. The Library provides reading facility to visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016. The libraries of teaching departments are open during working hours of the Schools.

The University Library has a Library Advisory Committee. It is an 18 member committee with the Vice-Chancellor as Chairman and University Librarian as Convener.

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Journal Article Index, Bi-monthly Bibliography compilation and Literature Search Service are also available

The Library is a member of the INFLIBNET Centre, Ahmedabad as well as & DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its online thesis digital library. The various department libraries too have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-Shodh Sindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	School of Letters	7549

8. Cost Estimate of the Programme and the Provisions

Sl.No	Expenditure	Cost estimate for BA Programme (1000 students)
01	Pay and Allowance	25,00,000
02	Contact classes and evaluation	7,00,000
03	Course materials	3,00,000
04	Advertisement charges	25,000
05	Postage and telephone	50,000
06	Books and Periodicals	1,50,000
07	Miscellaneous	90,000
	Total	38,15,000
	Provisions (10%)	3,81,500
	Total	41,96,500
		Cost per student per year Rs.4197/-

9. Quality assurance mechanism and expected Programme outcomes

While text books prepared by eminent scholars have been included in the syllabus, notes prepared by equally eminent scholars will be made available to the pupils. The contact classes too will be handled by experienced faculty to ensure quality of instruction. The expected outcome in terms of quality will be a generation of students who would do well even outside the areas of language and literature.

The progress and the quality of the Programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

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MAHATMA GANDHI UNIVERSITY
SYLLUBUS FOR ENGLISH LANGUAGE AND LITERATURE (MODEL 1)
2017 ADMISSIONS ONWARDS
SCHEME

Semester	Title	Course Category/Code	Hours Per Week	Credits	Internal Assessment	External Exam
1	Fine-tune Your English	Common Course-1 EN1CC01	5	4	20	80
1	Pearls from the Deep	Common Course -2 EN1CC02	4	3	20	80
1	Second Language	Common Course	4	4	20	80
1	Methodology for Studying Literature	Core Course-1 EN1CR01	6	4	20	80
1	World History/Political Science	Complementary Course	6	4	20	80
2	Issues that Matter	Common Course -3 EN2CC03	5	4	20	80
2	Savouring the Classics	Common Course -4 EN2CC04	4	3	20	80
2	Introducing Language and Literature	Core Course -2 EN2CR02	6	4	20	80
2	Second Language	Common Course	4	4	20	80
2	History /Political Science	Complementary Course	6	4	20	80
3	Literature and/as Identity	Common Course -5 EN3CC05	5	4	20	80
3	Second Language	Common Course	5	4	20	80
3	Harmony of Prose	Core Course -3 EN3CR03	4	4	20	80
3	Symphony of Verse	Core Course -4 EN3CR04	5	4	20	80
3	Evolution of Literary Movements: the Shapers of Destiny	Complementary Course 3 - EN3CM03	6	4	20	80
4	Illuminations	Common Course -6 EN4CC06	5	4	20	80
4	Second Language	Common Course	5	4	20	80
4	Modes of Fiction	Core Course -5 EN4CR05	4	4	20	80
4	Language and Linguistics	Core Course -6 EN4CR06	5	4	20	80
4	Evolution of Literary Movements: the Cross	Complementary Course 4 - EN4CM04	6	4	20	80

	Currents of Change					
5	Open Course	EN5CROP01 Appreciating Films EN5CROP02 Theatre Studies EN5CROP03 English for Careers	4	3	20	80
5	Acts on the Stage	Core Course -7 EN5CR07	6	5	20	80
5	Literary Criticism and Theory	Core Course -8 EN5CR08	5	4	20	80
5	Indian Writing in English	Core Course -9 EN5CR09	5	4	20	80
5	Environmental Science and Human Rights	Core Course EN5CREN01	5	4	20	80
6	Choice Based Course	EN6CB01 Comparative Literature EN6CB02 Modern Malayalam Literature in Translation EN6CB03 Regional Literatures in Translation EN6CB04 Voices from the Margins	4	4	20	80
6	Postcolonial Literatures	Core Course -10 EN6CR10	5	4	20	80
6	Women Writing	Core Course -11 EN6CR11	5	4	20	80
6	American Literature	Core Course -12 EN6CR12	5	4	20	80
6	Modern World Literature	Core Course -13 EN6CR13	5	4	20	80
6	Project	EN6PR01	1	2	20	80

Common Courses

MAHATMA GANDHI UNIVERSITY

SYLLABI FOR COMMON COURSES - UG PROGRAMMES

2017 ADMISSIONS ONWARDS

COURSE 1- Fine-tune Your English

Course Code	EN1CC01
Title of the course	Fine-tune Your English
Semester in which the course is to be taught	1
No. of credits	4
No. of contact hours	90

AIM OF THE COURSE

The course is intended to introduce the students to the basics of grammar, usage and effective communication.

OBJECTIVES OF THE COURSE

On completion of the course, the student should be able to:

1. confidently use English in both written and spoken forms.
2. Use English for formal communication effectively.

COURSE OUTLINE

Module 1

(18 Hours)

The Sentence and Its Structure - How to Write Effective Sentences – Phrases -What Are They? - The Noun Clauses - The Adverb Clause - “If All the Trees Were Bread and Cheese” - The Relative Clause - How the Clauses Are Conjoined -

Word-Classes and Related Topics - Understanding the Verb - Understanding the Auxiliary Verb - Understanding the Adverbs - Understanding the Pronoun - The Reflexive Pronoun - The Articles I - The Articles II - The Adjective - Phrasal Verbs - Mind Your Prepositions

Module 2**(18 Hours)**

To Err Is Human - Concord - A Political Crisis - Errors, Common and Uncommon - False Witnesses - The Anatomy of Mistakes- A Fault-finder Speaks - A Lecture on AIDS - A Test for You, Reader - Ungrammatical Gossip - Round Circles and Equal Halves: A Look at Tautology - Comparisons are Odious - In Defence Of A Friend - An Invitation

Spelling and Pronunciation - Pronunciation: Some Tips - More Tips on Pronunciation – Spelling - An Awesome Mess? - Spelling Part II

Module 3**(18 Hours)**

Singleness of Meaning - Shades of Meaning - Confusing Pairs - What Is the Difference? - Mismatching Mars the Meaning

The Tense and Related Topics - ‘Presentness’ and Present Tenses- The ‘Presentness’ of a Past Action - Futurity in English - Passivization

Idiomatic Language- ‘Animal’ Expressions - Idiomatic Phrases - ‘Heady’ Expressions - Body Language

Module 4**(18 Hours)**

Interrogatives and Negatives - Negatives- How to Frame Questions -What’s What? The Question Tag

Conversational English - Polite Expressions - Some Time Expressions - In Conversation - Is John There Please?

Miscellaneous and General Topics - On Geese and Mongooses - Pluralisation - On Gender and Sexisms

Module 5**(18 Hours)**

The world of words- have a hearty meal- word formation-Use the specific word- word games-the irreplaceable word- Let’s play games- body vocabulary

Get your doubts cleared

Very Good but Totally Incompetent - Long Live the Comma - The Possessive Case-Reading - Letter Writing- Academic Assignments

Core Text: *Fine-tune Your English* by Dr Mathew Joseph. Orient Blackswan and Mahatma Gandhi University

MAHATMA GANDHI UNIVERSITY
SYLLABI FOR COMMON COURSES - UG PROGRAMMES
2017 ADMISSIONS ONWARDS
COURSE 2 - Pearls from the Deep

Course Code	EN1CC02
Title of the Course	Pearls from the Deep
Semester in which the Course is to be taught	1
No. of Credits	3
No. of Contact Hours	72

AIM OF THE COURSE

To introduce students to the different genres of literature and to the niceties of literary expression.

OBJECTIVES OF THE COURSE

On completion of the course, the student should be able to:

1. appreciate and enjoy works of literature.
2. appreciate the aesthetic and structural elements of literature.

COURSE OUTLINE

Module 1 [Fiction] (18 hours)

Ernest Hemingway: *The Old Man and the Sea*

Module 2 [One Act Plays] (18 hours)

Susan Glaspell: Trifles
 Asif Currimbhoy: The Refugee
 A. A. Milne: The Boy Comes Home

Module 3 [Short Stories] (18 hours)

Guy De Maupassant: Two Friends
 O. Henry: The Gift of the Magi
 K. A. Abbas: Sparrows

Flora Annie Steel: Valiant Vicky, the Brave Weaver

Module 4 [Poems]

(18 hours)

Rumi: Chance for Humming

Walter Scott: Lochinvar

John Keats: La Belle Dame sans Mercy

Robert Frost: After Apple Picking

Chinua Achebe: Refugee Mother and Child

Kamala Das: My Grandmother's House

Ted Hughes: Jaguar

Pablo Neruda: Tonight I can Write

P. P. Ramachandran: How Simple It Is!

Core Text: *Pearls from the Deep*. Cambridge University Press and Mahatma Gandhi University

MAHATMA GANDHI UNIVERSITY
SYLLABI FOR COMMON COURSES - UG PROGRAMMES
2017 ADMISSIONS ONWARDS
COURSE 3 - Issues that Matter

Course Code	EN2CC03
Title of the course	Issues that Matter
Semester in which the course is to be taught	2
No. of credits	4
No. of contact hours	90

AIM OF THE COURSE

To sensitize the learners to contemporary issues of concern.

OBJECTIVES

By the end of the course, the learner should be able to:

1. Identify the major issues of contemporary significance
2. Respond rationally and positively to the issues raised
3. Internalise the values imparted through the selections.

COURSE OUTLINE

Module 1 **(18 hours)**

Luigi Pirandello: War

Judith Wright: The Old Prison

Arundhati Roy: Public Power in the Age of Empire

Module 2 **(18 hours)**

Bertolt Brecht: The Burning of the Books

W. H. Auden: Refugee Blues

Romila Thapar: What Secularism is and Where it Needs to be Headed

Module 3 **(18 hours)**

Zitkala- Sa: A Westward Trip

Bandhumadhav: The Poisoned Bread

Temsula Ao: The Pot Maker

Module 4

(18 hours)

Khushwant Singh: A Hosanna to the Monsoons

Ayyappa Paniker: Where are the woods, children?

Sarah Joseph: *Gift in Green* [chapter 2] - Hagar: A Story of a Woman and Water

Module 5

(18 hours)

Ghassan Kanafani: Six Eagles and a Child

Sanchari Pal: The Inspiring Story of How Sikkim Became India's Cleanest State

Indrajit Singh Rathore: Hermaphrodite

Core Text: *Issues that Matter*

MAHATMA GANDHI UNIVERSITY
SYLLABI FOR COMMON COURSES – UG PROGRAMMES
2017 ADMISSIONS ONWARDS
COURSE 4 - Savouring the Classics

Course Code	EN2CC04
Title of the Course	Savouring the Classics
Semester in which the course is to be taught	2
No. of credits	3
No. of contact hours	72

AIM OF COURSE

To introduce the students to the taste of time tested world classics.

OBJECTIVES OF THE COURSE

On completion of the course, the student should:

1. become familiar with the classics from various lands.
2. understand the features that go into the making of a classic.

OUTLINE OF THE COURSE

Module 1 [Poems] (18 hours)

Homer: Odysseus tells Eurycleia to conceal his identity (*Odyssey* - Book 19: 476 - 507)

Sappho: Jealousy

Kalidasa: Look to This Day

Omar Khayyam: Rubaiyat (last four quatrains: 72-75)

Dante - Dante meets Virgil (*Inferno* - Canto 1: 61-99)

Matsuo Basho: Haikus

Alexander Pushkin: The Song of the Kazak

Module 2 [Shakespeare Excerpts] (18 hours)

Romeo and Juliet: ACT II, Scene ii

The Merchant of Venice: ACT IV, Scene i

Module 3 [Novel Excerpts] (18 hours)

Victor Hugo: *Les Miserables* (Part 1- Fantine Book II)
Mark Twain: *The Adventures of Huckleberry Fin* (Raft Passage)

Module 4 [Short Fiction]

(18 hours)

Dostoyevsky: A Christmas Tree and a Wedding
Arthur Conan Doyle: The Adventure of the Dancing Men

Core Text: *Savouring the Classics*

Recommended Reading

Italo Calvino: *Why Read the Classics?*

A. C. Bradley: *Shakespearean Tragedy*

Katherine Armstrong: *Studying Shakespeare: A Practical Introduction*

Gemma McKenzie: *Foundations of European Drama*

Harold Bloom: *The Western Canon*

Jeremy Hawthorn: *Studying the Novel*

C. Marydas: *Shakespearean Aesthetics for University Wits*

MAHATMA GANDHI UNIVERSITY
SYLLABI FOR COMMON COURSES - UG PROGRAMMES
2017 ADMISSIONS ONWARDS
COURSE 5 - Literature and/as Identity

Course Code	EN3CC05
Title of the course	Literature and/as Identity
Semester in which the course is to be taught	3
No. of credits	4
No. of contact hours	90

AIM OF THE COURSE

The course is intended to sensitivise students to the various ways in which literature serves as a platform for forming, consolidating, critiquing and re-working the issue of ‘identity’ at various levels.

OBJECTIVES OF THE COURSE

On completion of the course, the student should be aware of the following:

1. The subtle negotiations of Indigenous and Diasporic identities with-in Literature.
2. The fissures, the tensions and the interstices present in South Asian regional identities.
3. The emergence of Life Writing and alternate/alternative/marginal identities.

COURSE OUTLINE

Module 1 (Diasporic Identities) (18 hours)

Agha Shahid Ali: I See Kashmir from New Delhi at Midnight
M.G. Vassanji: Leaving
Imtiaz Dharker: At the Lahore Karhai
Chitra Banerjee Divakaruni: Indian Movie, New Jersey

Module 2 (South Asian Identities) (18 hours)

C. V. Velupillai: No State, No Dog Sadaat
Hasan Manto: The Dog of Tetwal Intizar
Hussain: A Chronicle of the Peacocks Selina
Hossain: Double War

Module 3 (Life Writings)

(18 hours)

Malcolm X: “Nightmare”, excerpt from *The Autobiography of Malcolm X*.

Sashi Deshpande: Learning to be a Mother in *Janani – Mothers, Daughters, Motherhood*,
(ed.) Rinki Bhattacharya.

Module 4 (Indigenous Identities)

(18 hours)

Excerpts from *Binti*, the Santhal creation song of cosmology, the *Bhilli Mahabharat* and
Garhwali Songs in Painted Words - An Anthology of Tribal Literature - Edited by G. N.
Devy.

Amos Tutuola: *The Palm-Wine Drinkard*. [Excerpt]

Module 5 (Alter Identities)

(18 hours)

Nathaniel Hawthorne: The Birth Mark

John Henrik Clarke: The Boy Who Painted Christ Black

Ruskin Bond: The Girl on the Train

Core Text: *Literature and/as Identity*

MAHATMA GANDHI UNIVERSITY
SYLLABI FOR COMMON COURSES - UG PROGRAMMES
2017 ADMISSIONS ONWARDS
COURSE 6 – Illuminations

Course Code	EN4CC06
Title of the course	Illuminations
Semester in which the course is to be taught	4
No. of credits	4
No. of contact hours	90

AIM OF THE COURSE

To acquaint the learners with different forms of inspiring and motivating literature.

OUTLINE OF THE COURSE

At the end of the course, the student shall be able to:

1. maintain a positive attitude to life.
2. evaluate and overcome setbacks based on the insights that these texts provide.

COURSE OUTLINE

Module 1 [Life Sketches] (18 hours)

Helen Keller: Three Days to See
 Jesse Owens: My Greatest Olympic Prize
 Dominic Lapierre: Mother Teresa

Module 2 [Essays] (18 hours)

Lafcadio Hearn: On Reading
 Stephen Leacock: Are the Rich Happy?
 A.G. Gardiner: On Courage

Module 3 [Speeches] (18 hours)

J. K. Rowling: The fringe benefits of failure and the importance of imagination
 Malala Yousafzai: Nobel Lecture

Module 4 [Short Stories] (18 hours)

Oscar Wilde: The Nightingale and the Rose
 George Orwell: The Miser

John Galsworthy: Quality
Paolo Coelho: The Beggar and the Baker

Module 5 [Poems]

(18 hours)

William Ernest Henley: Invictus
Robert Frost: The Road Not Taken
Kahlil Gibran: Of Good and Evil
Joyce Kilmer: Trees

Core Text: *Illuminations*

Core Courses

MAHATMA GANDHI UNIVERSITY

SYLLABI FOR CORE COURSES - UG PROGRAMMES

2017 ADMISSIONS ONWARDS COURSE 1 -

Methodology for Studying Literature

Course Code	EN1CR01
Title of the course	Methodology for Studying Literature
Semester in which the course is to be taught	1
No. of credits	4
No. of contact hours	108

AIM OF THE COURSE

The course seeks to introduce the student to the major signposts in the historical evolution of literary studies from its inception to the current postcolonial realm.

OBJECTIVES OF THE COURSE

On completion of the course, the student should be able to discern the following:

1. The emergence of literature as a specific discipline within the humanities.
2. The tenets of what is now known as ‘traditional’ approaches and also that of ‘formalism.’
3. The shift towards contextual-political critiques of literary studies.
4. The questions raised by Cultural Studies and Feminism(s)
5. The issues of sublaternity and regionality in the literary domain.

COURSE OUTLINE

Module 1

(18 hours)

Part A: W. H. Hudson: “Some Ways of Studying Literature” from *An Introduction to the Study of Literature*.

Part B: William Shakespeare: Sonnet 116 – “Let Me Not to the Marriage of True Minds”

Module 2

(18 hours)

Part A: Cleanth Brookes: “The Formalist Critics” from the *My Credo* series: *The Kenyon Review*

Part B: Emily Dickinson: “Because I could not stop for Death” (poem 479)

Module 3

(18 hours)

Part A: Terry Eagleton: “What is Literature?” from *Literary Theory: An Introduction*.

Part B: Mahasweta Devi: “Kunti and the Nishadin”

Module 4

(18 hours)

Part A: Lois Tyson: “Feminist Criticism”

Part B: Sara Joseph: “Inside Every Woman Writer”

Module 5

(18 hours)

Part A: Peter Barry: Postcolonial Criticism

Part B: 2 Poems in tandem: Mahmoud Darwish: “Identity Card” and S. Joseph: “Identity Card”

Module 6

(18 hours)

Part A: Pradeepan Pampirikunnu: “What did Literary Histories Say to You?”

Part B: Paul Chirakkarodu: “Eli, Eli, La’ma Sabach Tha’ni?”

Approaching the Course:

Ideally this paper should have a consistent linearity from Module 1 to 6; such a step-by-step progression will help trace the following trajectory effectively: **Traditional** to **Formalist** to **Political-Contextual** to **Feminist** to **Postcolonial** to **Regional-Subaltern** methodologies.

Core Text: *Nuances: Methodology for Studying Literature*. Macmillan and Mahatma Gandhi University

MAHATMA GANDHI UNIVERSITY
SYLLABI FOR CORE COURSES - UG PROGRAMMES
2017 ADMISSIONS ONWARDS
COURSE 2 – Introducing Language and Literature

Course Code	EN2CR02
Title of the course	Introducing Language and Literature
Semester in which the course is to be taught	2
No. of credits	4
No. of contact hours	108

AIM OF THE COURSE

The course seeks to introduce the student to the basics of English language and literature.

OBJECTIVES OF THE COURSE

On completion of the course, the student should be able to discern the following:

1. The evolution and the differential traits of the English language till the present time.
2. The evolution of literature from antiquity to postmodern times.
3. The diversity of genres and techniques of representation and narration
4. The links between literature and film as narrative expressions.
5. The emergence of British and American Literature through diverse periods

COURSE OUTLINE

Module 1

(18 hours)

Language families - Indo European family of languages: Branches of Indo European - Home of the Indo Europeans - Main characteristics of Indo European languages

Germanic family of Languages: Characteristics - Grimm's Law - Verner's Law. - The position of English in Indo European family

Periods in the history of English language:

Old English period - Old English Dialects - Old English vocabulary

Middle English period - Norman Conquest - Middle English Vocabulary - Middle English dialects - Latin influence

Modern English period: Early modern English - The Great Vowel Shift - Renaissance and Reformation - The invention of printing - Authors and Books: The Bible - Shakespeare - Milton - Dictionaries - Loan words: Celtic, Scandinavian, Latin, French

Module 2**(18 hours)**

Language Varieties

Dialect - Sociolect - Idiolect - Register - Pidgin - Creole -

English Today: Evolution of Standard English - Standard British English - Received

Pronunciation - English as Global language - American English - Australian English -

General Indian English - African English - Caribbean English - Second language acquisition

Word Formation: Compounding - Derivation - Abbreviation - Onomatopoeic words -

Clipping - Acronyms - Portmanteau words

Historical Semantics - Semantic change: Generalisation - Specialisation - Association of Ideas - Euphemism - Popular misunderstanding

Module 3**(36 hours)**

Classical Genres: Epic - Drama - Poetry

Modern Genres: Novel - Short Story - Novella

Genre Types:

Poetry - Narrative poetry and lyrical poetry - Elegy - Ode - Sonnet - Ballad - Dramatic Monologue

Drama - Tragedy - Comedy - Closet Drama – Epic Theatre - Theatre of the Absurd

Ambience:

Plot - Character - Point of View - Setting

Module 4**(18 hours)**

Film and Literature - Dimensions of Film: Visual, Auditory and Spatial - Film Language:

Montage and Mise-en-scene - Cut and the Shot - Styles of acting – Auteur theory -

Adaptation

Module 5**(18 hours)**

Periods of Literature: British and American

Old English - Middle English - Renaissance - Restoration - Neo-classical - Romantic -

Victorian - Modern - Postmodern - American Crossover - American Transcendentalism

Core text for Modules 1 and 2:V. Shyamala: *A Short History of English Language*.**Core Texts for Modules 3, 4 and 5:**Mario Klarer: *An Introduction to Literary Studies* [excluding the 4th chapter on 'Theoretical approaches to literature.']

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SYLLABI FOR CORE COURSES - UG PROGRAMMES

2017 ADMISSIONS ONWARDS

COURSE 3 – Harmony of Prose

Course Code	EN3CR03
Title of the course	Harmony of Prose
Semester in which the course is to be taught	3
No. of credits	4
No. of contact hours	90

AIM OF THE COURSE

The student is given space to mature in the presence of glorious essays, both Western and Non-Western.

OBJECTIVES OF THE COURSE

On completion of the course, the student shall be:

1. familiar with varied prose styles of expression.
2. aware of eloquent expressions, brevity and aptness of voicing ideas in stylish language.

COURSE OUTLINE

Module 1

(18 hours)

Francis Bacon: Of Friendship

Jonathan Swift: The Spider and the Bee

Joseph Addison: Meditations in Westminster Abbey

Module 2

(18 hours)

Samuel Johnson: Death of Dryden

Charles Lamb: Dream Children; a reverie

William Hazlitt: The Fight

Module 3**(18 hours)**

Robert Lynd: Forgetting

Virginia Woolf: A Room of One's Own (an extract)

Aldous Huxley: The Beauty Industry

Module 4**(18 hours)**Nirad C. Choudhari: Indian Crowds (extract from *The Autobiography of an Unknown Indian*)

Amartya Sen: Sharing the World

A. K. Ramanujan: A Flowery Tree: A Woman's Tale

Module 5**(18 hours)**

Kamau Brathwaite: Nation Language

Pico Iyer: In Praise of the Humble Coma

William Dalrymple: The Dancer of Kannur (extract from *Nine Lives*)**Core Text: *Harmony of Prose***

MAHATMA GANDHI UNIVERSITY

SYLLABI FOR CORE COURSES - UG PROGRAMMES

2017 ADMISSIONS ONWARDS

COURSE 4 – Symphony of Verse

Course Code	EN3CR04
Title of the course	Symphony of Verse
Semester in which the course is to be taught	3
No. of credits	4
No. of contact hours	90

AIM OF THE COURSE

To acquaint the student with the rich texture of poetry in English.

OBJECTIVES OF THE COURSE

On completion of the course the students shall have:

1. an understanding of the representation of poetry in various periods of the English tradition.
2. an awareness of the emerging cultural and aesthetic expressions that poetry makes possible.

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COURSE OUTLINE

Module 1 (Renaissance and Restoration)

(18 hours)

Edmund Spenser: One Day I Wrote Her Name

William Shakespeare: Sonnet 130

John Donne: Canonization

John Milton: Lycidas

John Dryden: A Song for St. Cecilia's Day

Module 2 (Romantic Revival)

(18 hours)

William Wordsworth: Lucy Gray

Samuel Taylor Coleridge: Christabel (Part I)

Percy Bysshe Shelley: Ode to the West Wind

John Keats: To Autumn

Module 3 (Victorian)

(18 hours)

Alfred, Lord Tennyson: Ulysses
Robert Browning: Porphyria's Lover
Matthew Arnold: Dover Beach
Christina Rossetti: A Hope Carol

Module 4 (Twentieth Century)

(18 hours)

W. B. Yeats: Easter 1916
T S Eliot: The Love Song of J Alfred Prufrock
Philip Larkin: The Whitsun Weddings
Sylvia Plath: Lady Lazarus

Module 5 (Contemporary)

(18 hours)

A. D. Hope: Australia
Maya Angelou: Phenomenal Woman
Seamus Heaney: Digging
Carol Ann Duffy: Stealing

Core Text: *Symphony of Verse*

MAHATMA GANDHI UNIVERSITY
SYLLABI FOR CORE COURSES - UG PROGRAMMES
2017 ADMISSIONS ONWARDS
COURSE 5 – Modes of Fiction

Course Code	EN4CR05
Title of the course	Modes of Fiction
Semester in which the course is to be taught	4
No. of credits	4
No. of contact hours	90

AIM OF THE COURSE

To acquaint students with various modes of fiction.

OBJECTIVES OF THE COURSE

On completion of the course, the student will have comprehended the categories of British and non- British short fiction, and also the novel as a form of literary expression.

COURSE OUTLINE

Module 1 [Short Fiction: British] (36 hours)

Mary Shelley: The Mortal Immortal
 Jerome K. Jerome: The Dancing Partner
 H. G. Wells: The Stolen Body
 Somerset Maugham: Rain
 G. K. Chesterton: The Blue Cross
 James Joyce: Araby
 Muriel Spark: The Executor
 A. S. Byatt: On the Day E. M. Forster Died

Module 2 [Short Fiction: Non British] (36 hours)

Henry Lawson: The Drover's Wife
 Maxim Gorky: Mother of a Traitor
 Stephen Crane: A Dark Brown Dog
 Katherine Mansfield: A Cup of Tea
 Pearl S Buck: Once upon a Christmas
 Gabriel Garcia Marquez: A Very Old Man with Enormous Wings

Mary Lerner: *Little Selves*
Nadine Gordimer: *Once Upon a Time*

Module 3 [Fiction]

(18 hours)

Charles Dickens: *Great Expectations*

Core Text for Modules 1 and 2: *Modes of Fiction*

MAHATMA GANDHI UNIVERSITY
SYLLABI FOR CORE COURSES - UG PROGRAMMES
2017 ADMISSIONS ONWARDS
COURSE 6 – Language and Linguistics

Course Code	EN4CR06
Title of the course	Language and Linguistics
Semester in which the course is to be taught	4
No. of credits	4
No. of contact hours	90

AIM OF THE COURSE

This course is an introduction to the science of linguistics. It seeks to give an overview of the basic concepts of linguistics and linguistic analysis to the students.

OBJECTIVES OF THE COURSE

This course seeks to achieve the following:

1. To show the various organs and processes involved in the production of speech, the types and typology of speech sounds, segmental & suprasegmental features of the English language, and transcription using IPA.
2. To describe and explain morphological processes and phenomena.
3. To show the various processes involved in the generation of meaning.
4. To enhance students' awareness that natural language is structure dependent and generative and to develop their ability to observe, describe and explain grammatical processes and phenomena.

COURSE OUTLINE

Module 1 [Introduction to Language, Linguistics and Phonetics] (36 hours)

What is Language? - What is Linguistics? Arbitrariness - Duality -Displacement - Cultural transmission

Basic Notions - Phonetics and Phonology - Branches of Phonetics – Articulatory, Acoustic, Auditory

Organs of Speech - Air Stream Mechanism – Pulmonic, Glottal, Velaric

Respiratory System - Phonatory System –Voiced and Voiceless Sounds

Articulatory System - Oral, nasal & nasalised sounds

Classification of Speech Sounds: Consonants and Vowels -

Criteria for Classification of Consonants - The Consonants of English RP

Place of Articulation - Bilabial, Labio-Dental, Dental, Alveolar, Post-Alveolar, Palato-Alveolar, Palatal & Velar Sounds
Manner of Articulation – Plosives, Fricatives, Affricates, Nasals, Lateral, Frictionless Continuants, Semi-Vowels, Trills & Taps
Criteria for Classification of Vowels - The Vowels of English RP
Tongue height: Close Vowels, Open Vowels, Half-Close Vowels, Half-Open Vowels
Part of the Tongue Raised: Front Vowels, Back Vowels, and Central Vowels
Position of Lips: Rounded Vowels, Unrounded Vowels
Diphthongs: Monophthongs and Diphthongs, Falling and Rising Diphthongs, Centring and Closing Diphthongs, Fronting and Retracting Diphthongs
Cardinal Vowels
Vowel Diagram – Diphthongs - Tense and lax Vowels
Phonemes and Allophones
Phone, Phoneme, Minimal pairs - Allophone, Aspiration, Dark and Clear / l /
Contrastive Distribution and Complementary Distribution
Syllable
What is a syllable? - Syllabic Structure – Onset, Nucleus, Coda - Syllabic Consonants
Consonant Clusters, Abutting Consonants
Suprasegmentals
Segmentals and Suprasegmentals - Suprasegmental Phonemes
Word Stress - Sentence Stress - Weak forms and Strong Forms
Rhythm – Intonation - Tone, Tonic Syllable, Tonicity - Intonation patterns
Intonation – Functions
Juncture
Liasion
Assimilation
Elision
Linking / r / and Intrusive / r /
Transcription
The incongruity between spelling and pronunciation in English
IPA
Broad and narrow Transcription
Transcription Practice

Module 2 [Morphology]

(36 hours)

Basic Notions
What is morphology?
Morph, Morpheme
Morpheme Types and Typology
Free and bound morphemes
Root, Base, Stem
Different types of affixes: Prefix, Suffix, Infix
Inflection
Inflectional and derivational affixes
Class-changing and class- maintaining affixes
Allomorphy
Allomorph
Zero Morph
Conditioning of allomorphs: Phonological & Morphological

Word

Why is a word a difficult concept to define in absolute terms?

Lexeme

Form class and Function Class words

Morphological Operations/Processes

Affixation

Reduplication

Ablaut

Suppletion

Structure of Words

Simple Words

Complex Words

Compound Words

SEMANTICS

Basic Notions

What is semantics?

Lexical and grammatical meaning

Sense, reference, referent

Sense Relations

Synonymy – Antonymy – Hyponymy – Homonymy – Homography – Polysemy – Metonymy
– Ambiguity – Tautology - Collocation

Module 3 [Syntax & Branches of Linguistics]

(18 hours)

Basic Notions

What is syntax?

Grammar

Grammaticality and Acceptability

Descriptive and Prescriptive Grammar

Synchronic and Diachronic Grammar

Syntagmatic and Paradigmatic Relationships

Sign, Signified and Signifier

Langue and Parole

Competence and Performance

Introduction to theories on Grammar

Traditional Grammar

Problems with traditional Grammar

Structural grammars

Phrase Structure Grammars

Transformational Generative Grammars

Kernel Sentences

Deep and Surface Structures

One question from the essay section will be compulsory and shall deal with transcribing a passage of five lines of conversation and a set of five words using IPA symbols.

READING LIST

S. K. Verma and N. Krishnaswamy: *Modern Linguistics: An Introduction*. New Delhi: OUP, 1989.

H. A. Gleason: *Linguistics and English Grammar*. New York: Holt, Rinehart & Winston, Inc., 1965.

Radford A, Atkinson M, Britain D, Clahsen H and Spencer A: *Linguistics - An Introduction*. Cambridge University Press, Cambridge, 1999

Robins R H: *General Linguistics: An Introductory Survey*, Longman Group Limited, London: 1971

Fasold R. W. and Connor-Linton J (ed.): *An Introduction to Language and Linguistics*, Cambridge University Press, Cambridge, 2006

Daniel Jones: *The Pronunciation of English*. New Delhi: Blackie and Sons, 1976

A. C. Gimson. *An Introduction to the Pronunciation of English*. London: Methuen, 1980.

J. D. O'Conner. *Better English Pronunciation*. New Delhi: CUP, 2008.

T. Balasubramanian. *A Textbook of English Phonetics for Indian Students*. New Delhi: Macmillan, 1981.

T. Balasubramanian. *English Phonetics for Indian Students: A Workbook*. New Delhi: Macmillan, 1992.

MAHATMA GANDHI UNIVERSITY
SYLLABI FOR CORE COURSES - UG PROGRAMMES
2017 ADMISSIONS ONWARDS
COURSE 7 – Acts on the Stage

Course Code	EN5CR07
Title of the course	Acts on the Stage
Semester in which the course is to be taught	5
No. of credits	4
No. of contact hours	108

AIM OF THE COURSE

The course seeks to introduce the student to select theatre texts that form the canon of English drama.

OBJECTIVES OF THE COURSE

On completion of the course, the student shall be:

1. familiar with the works of the playwrights included in the course.
2. informed about the broad genre-based nuances in the realm of drama.
3. able to appreciate and critique drama as an art form.

COURSE OUTLINE

Module 1 **(72 Hours)**

William Shakespeare: *King Lear*

Module 2 **(36 Hours)**

One Act Plays

George Bernard Shaw: *The Dark Lady of the Sonnets*

Anton Chekov: *The Boor*

Maurice Maeterlinck: *The Intruder*

John Galsworthy: *Strife*

Core Text: *Acts on the Stage*

MAHATMA GANDHI UNIVERSITY
SYLLABI FOR CORE COURSES - UG PROGRAMMES
2017 ADMISSIONS ONWARDS

COURSE 8 – Literary Criticism and Theory

Course Code	EN5CR08
Title of the course	Literary Criticism and Theory
Semester in which the course is to be taught	5
No. of credits	4
No. of contact hours	90

AIM OF THE COURSE

The course seeks to introduce students to the major signposts in Literary Criticism, Literary Theory and Indian Aesthetics.

OBJECTIVES OF THE COURSE

On completion of the course, the student:

1. will have awareness about the major developments in literary criticism from the ancient times to the twentieth century.
2. will be initiated to the realm of literary theory and major theoretical schools.
3. will have awareness about the chief strains of Indian literary criticism.
4. will be able to analyse short poetical pieces critically.

COURSE OUTLINE

Module 1 [Literary Criticism]

(36 hours)

- A. Classical Criticism
Plato - Aristotle
- B. Neoclassical Criticism
Neoclassicism in England - Dryden, Pope, Aphra Behn, Samuel Johnson
- C. Romantic criticism
German Idealism - British Romantic criticism: Wordsworth, Coleridge
- D. Victorian Criticism
Matthew Arnold
- E. From Liberal Humanism to Formalism
The poetics of Modernism: Yeats, Pound, Eliot
Formalism - Russian Formalism: Boris Eichenbaum, Mikhail Bakhtin, Roman Jakobson- New Criticism: John Crowe Ransom, Wimsatt and Beardsley

F. Early 20th Century Criticism

F. R. Leavis - Marxist and Left Wing critics - Early feminist critics: Virginia Woolf, Simone de Beauvoir

From M. A. R Habib: *Literary Criticism from Plato to the Present: An Introduction*. Oxford: Wiley Blackwell, 2011

Module 2 [Literary Theory]

(36 hours)

A. Structuralism - Poststructuralism - Deconstruction - Psychoanalysis

B. Ideology and Discourse

C. Postmodernism

From Mary Klages: *Literary Theory: A Guide for the Perplexed*. London: Continuum, 2008.

Module 3 [Indian Aesthetics & Practical Criticism]

(18 hours)

A. Indian Aesthetics

Rasa - Dhvani - Vakrokti

From G. Balamohan Thampi: *Essays on Eastern Aesthetics*

B. Practical Criticism

Critical analysis of poetry

Based on Neil McCaw: Close Reading (Chapter 3 of *How to Read Texts: A Student Guide to Critical Approaches and Skills*. London: Viva-Continuum, 2008.)

Note: A compulsory question on practical criticism to be included in Section B (5 Marks) of the Question Paper

Core Text: *Literary Criticism and Theory*

MAHATMA GANDHI UNIVERSITY
SYLLABI FOR CORE COURSES - UG PROGRAMMES
2017 ADMISSIONS ONWARDS
COURSE 9 – Indian Writing in English

Course Code	EN5CR09
Title of the course	Indian Writing in English
Semester in which the course is to be taught	5
No. of credits	4
No. of contact hours	90

AIM OF THE COURSE

The course is intended to sensitivise students to the various ways in which literature written in English, in the Indian sub-continent serves as a platform for forming, consolidating, critiquing and re-working the issue of national ‘identity’ at various levels.

OBJECTIVES OF THE COURSE

On completion of the course, the student should be aware of the following:

1. The subtle flavours that distinguish the ‘Indian’ quotient in English writings from India.
2. The different concerns that Indian English writers share, cutting across sub-nationalities and regionalities.
3. The *locus standi* of diasporic ‘Indian’ writers.

COURSE OUTLINE

Module 1 (Poetry)

(18 Hours)

Henry Derozio: The Harp of India
 Nissim Ezekiel: The Patriot
 Jayanta Mahapatra: Freedom
 Kamala Das: Introduction
 Dom Moraes: Absences

Module 2 (Fiction)

(18 Hours)

Anita Nair: *Ladies Coupe*

Module 3 (Drama)

(18 Hours)

Girish Karnad: *Tughlaq*

Module 4 (Short Fiction)

(18 Hours)

R. K. Narayan: The Antidote

Salman Rushdie: The Free Radio

Jhumpa Lahiri: The Interpreter of Maladies

Chitra Banerjee Divakaruni: Mrs Dutta Writes a Letter

Module 5 (Prose)

(18 Hours)

Rabindranath Tagore: Nationalism in India

B. R. Ambedkar: Back from the West and Unable to Find Lodging in Baroda

Satyajit Ray: Odds Against Us

Amitav Ghosh: The Imam and the Indian

Core Text: *Indian Writing in English*

MAHATMA GANDHI UNIVERSITY
SYLLABI FOR CORE COURSES - UG PROGRAMMES
2017 ADMISSIONS ONWARDS
COURSE – Environmental Science and Human Rights

Course Code	EN5CREN01
Title of the course	Environmental Science and Human Rights
Semester in which the course is to be taught	5
No. of credits	4
No. of contact hours	90

Core module syllabus for Environmental Studies & Human Rights for under-graduate courses of all branches of higher education

VISION

The importance of environmental science and environmental studies cannot be disputed. The need for sustainable development is a key to the future of mankind. Continuing problems of pollution, solid waste disposal, degradation of environment, issues like economic productivity and national security, Global warming, the depletion of ozone layer and loss of biodiversity have made everyone aware of environmental issues. The United Nations Conference on Environment and Development held in Rio de Janeiro in 1992 and World Summit on Sustainable Development at Johannesburg in 2002 have drawn the attention of people around the globe to the deteriorating condition of our environment. It is clear that no citizen of the earth can afford to be ignorant of environment issues.

India is rich in biodiversity which provides various resources for people. Only about 1.7 million living organisms have been described and named globally. Still many more remain to be identified and described. Attempts are made to conserve them in ex-situ and in-situ situations. Intellectual property rights (IPRs) have become important in a biodiversity-rich country like India to protect microbes, plants and animals that have useful genetic properties. Destruction of habitats, over-use of energy resource and environmental pollution has been found to be responsible for the loss of a large number of life-forms. It is feared that a large proportion of life on earth may get wiped out in the near future.

In spite of the deteriorating status of the environment, study of environment has so far not received adequate attention in our academic programme. Recognizing this, the Hon'ble Supreme Court directed the UGC to introduce a basic course on environment at every level in college education. Accordingly, the matter was considered by UGC and it was decided that a

six months compulsory core module course in environmental studies may be prepared and compulsorily implemented in all the University/Colleges of India.

The syllabus of environmental studies includes five modules including human rights. The first two modules are purely environmental studies according to the UGC directions. The second two modules are strictly related with the core subject and fifth module is for human rights.

OBJECTIVES

Environmental Education encourages students to research, investigate how and why things happen, and make their own decisions about complex environmental issues by developing and enhancing critical and creative thinking skills. It helps to foster a new generation of informed consumers, workers, as well as policy or decision makers.

Environmental Education helps students to understand how their decisions and actions affect the environment, builds knowledge and skills necessary to address complex environmental issues, as well as ways we can take action to keep our environment healthy and sustainable for the future. It encourages character building, and develops positive attitudes and values.

To develop the sense of awareness among the students about the environment and its various problems and to help the students in realizing the inter-relationship between man and environment and helps to protect the nature and natural resources.

To help the students in acquiring the basic knowledge about environment and the social norms that provides unity with environmental characteristics and create positive attitude about the environment.

Module I

(18 hours)

Unit 1: Multidisciplinary nature of environmental studies - Definition, scope and importance
Need for public awareness.

Unit 2: Natural Resources: Renewable and non-renewable resources: Natural resources and associated problems.

- a) Forest resources: Use and over-exploitation, deforestation: case studies - Timber extraction, mining, dams and their effects on forest and tribal people.
- b) Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.
- c) Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources: case studies.
- d) Food resources: World food problems - changes caused by agriculture and overgrazing - effects of modern agriculture – fertilizer & pesticide problems – water logging – salinity: case studies.
- e) Energy resources: Growing energy needs - renewable and non renewable energy sources - use of alternate energy sources: case studies.
- f) Land resources: Land as a resource - land degradation - man induced landslides – soil

erosion and desertification.

Role of individual in conservation of natural resources - Equitable use of resources for sustainable life styles.

Unit 3: Ecosystems

Concept of an ecosystem - Structure and function of an ecosystem - Producers, consumers and decomposers - Energy flow in the ecosystem.

Ecological succession - Food chains, food webs and ecological pyramids.

Introduction, types, characteristic features, structure and function of the given ecosystem - Forest ecosystem

Module II

(26 hours)

Unit 1: Biodiversity and its conservation

Introduction - Bio-geographical classification of India

Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values.

India as a mega-diversity nation.

Hot-spots of biodiversity

Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts -

Endangered and endemic species of India

Unit 2: Environmental Pollution

Definition - Causes, effects and control measures of: Air pollution - Water pollution - Soil pollution - Marine pollution - Noise pollution - Thermal pollution - Nuclear hazards
Solid Waste Management: Causes, effects and control measures of urban and industrial wastes

Role of an individual in prevention of pollution - Pollution case studies

Disaster management: floods, earthquake, cyclone and landslides

Unit 3: Social Issues and the Environment

Urban problems related to energy - Water conservation, rain water harvesting, watershed management

Resettlement and rehabilitation of people: its problems and concerns: case studies

Environmental ethics: Issues and possible solutions

Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust: case studies - Consumerism and waste products

Environment Protection Act - Air (Prevention and Control of Pollution) Act – Water

(Prevention and control of Pollution) Act - Wildlife Protection Act - Forest Conservation Act

Issues involved in enforcement of environmental legislation - Public awareness

Module III

(10 hours)

Jean Giono: *The Man Who Planted Trees*

K. Satchitanandan: Hiroshima Remembered

Module IV

(10 hours)

Bessie Head: Heaven is not Closed

Safdar Hashmi: Machine

Module V

(26 hours)

Unit 1: Human Rights

An Introduction to Human Rights: Meaning, concept and development - Three Generations of Human Rights (Civil and Political Rights, Economic, Social and Cultural Rights).

Unit 2: Human Rights and United Nations

Contributions, main human rights related organs - UNESCO, UNICEF, WHO, ILO, Declarations for women and children, Universal Declaration of Human Rights.

Human Rights in India – Fundamental rights and Indian Constitution, Rights for children and women, Scheduled Castes, Scheduled Tribes, Other Backward Castes and Minorities

Unit 3: Environment and Human Rights

Right to Clean Environment and Public Safety

Issues of Industrial Pollution - Prevention, Rehabilitation and Safety Aspect of New Technologies such as Chemical and Nuclear Technologies - Issues of Waste Disposal - Protection of Environment

Conservation of natural resources and human rights: Reports, Case studies and policy formulation.

Conservation issues of Western Ghats: Mention Gadgil committee report, Kasthuri Rangan report.

Over-exploitation of ground water resources, marine fisheries, sand mining, etc.

Internal: Field study

Visit to a local area to document environmental grassland/ hill /mountain

Visit a local polluted site: Urban/Rural/Industrial/Agricultural Study of common plants, insects, birds, etc

Study of simple ecosystem: pond, river, hill slopes, etc

(Field work Equal to 5 lecture hours)

REFERENCES

Bharucha, Erach. *Text Book of Environmental Studies for Undergraduate Courses*. University Press, 2nd Edition 2013 (TB)

Clark, R. S. *Marine Pollution*, Oxford: Clarendon (Ref)

- Cunningham, W. P., Cooper, T. H., Gorhani, E & Hepworth, M. T. 2001 *Environmental Encyclopaedia*, Mumbai: Jaico. (Ref)
- Dc A. K. *Environmental Chemistry*, Wiley Eastern. (Ref)
- Down to Earth*, Centre for Science and Environment (Ref)
- Heywood, V. H & Watson, R. T. 1995. *Global Biodiversity Assessment*, Cambridge UP (Ref)
- Jadhav, H & Bhosale, V. M. 1995. *Environmental Protection and Laws*. Delhi: Himalaya (Ref)
- McKinney, M. L & Schock, R. M. 1996. *Environmental Science Systems & Solutions*. Web enhanced edition (Ref)
- Miller T.G. Jr., *Environmental Science*, Wadsworth (TB)
- Odum, E. P 1971. *Fundamentals of Ecology*. W. B. Saunders (Ref)
- Rao, M. N. & Datta, A. K. 1987. *Waste Water Treatment* Oxford & IBII (Ref)
- Rajagopalan, R. *Environmental Studies from Crisis and Cure*, Oxford UP, 2016 (TB)
- Sharma B.K., 2001. *Environmental Chemistry*. Meerut: Geol. (Ref)
- Townsend C. Harper J, and Michael Begon, *Essentials of Ecology*, Blackwell Science (Ref)
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- Trivedi, R. K. and P. K. Goel. *Introduction to Air Pollution*. Techno-Science (Ref)
- Wanger, K. D. 1998. *Environmental Management*. Philadelphia: W.B. Saunders (Ref)
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Human Rights

- Amartya Sen. *The Idea Justice*. New Delhi: Penguin, 2009.
- Chatrath, K. J. S. Ed. *Education for Human Rights and Democracy*. Shimla: Indian Institute of Advanced Studies, 1998.
- Law Relating to Human Rights*. Asia Law House, 2001.
- Shireesh Pal Singh, *Human Rights Education in 21st Century*. New Delhi: Discovery
- S. K. Khanna. *Children and the Human Rights*. Common Wealth, 2011.
- Sudhir Kapoor. *Human Rights in 21st Century*. Jaipur: Mangal Deep, 2001.

United Nations Development Programme. *Human Development Report 2004: Cultural Liberty in Today's Diverse World*. New Delhi: Oxford UP, 2004.

Six months compulsory core module course in Environmental Studies & Human Rights for undergraduates

Teaching Methodologies

The core Module Syllabus for Environmental Studies includes class room teaching and Field Work. The syllabus is divided into five modules covering 72 lectures. The first two modules will cover 44 lectures which are class room based to enhance knowledge skills and attitude to environment. The third and fourth is based on subject related environmental studies which will be covered in 20 lecture hours and would provide student a multidisciplinary knowledge on environmental issues in relation with the core subject. Human rights is also included in the fifth module and 8 lectures are set apart for that. Field study is one of the most effective learning tools for environmental concerns and is purely for internal evaluation. This moves out of the scope of the text book mode of teaching into the realm of real learning in the field, where the teacher merely acts as a catalyst to interpret what the student observes or discovers in his/her own environment. Field studies are as essential as class work and form an irreplaceable synergistic tool in the entire learning process.

Course material provided by UGC for class room teaching and field activities be utilized.

The universities/colleges can also draw upon expertise of outside resource persons for teaching purpose.

Environmental Core Module shall be integrated into the teaching programmes of all undergraduate courses.

MAHATMA GANDHI UNIVERSITY
SYLLABI FOR CORE COURSES - UG PROGRAMMES
2017 ADMISSIONS ONWARDS
COURSE 10 – Postcolonial Literatures

Course Code	EN6CR10
Title of the course	Postcolonial Literatures
Semester in which the course is to be taught	6
No. of credits	4
No. of contact hours	90

AIM OF THE COURSE

To familiarize the students the varied dimension s of postcolonial subjectivity through theory and literature.

OBJECTIVES OF THE COURSE

On completion of the course, the student will:

1. be aware of the social, political, cultural aspects of postcolonial societies.
2. realise the impact of colonialism and imperialism on native cultural identities.
3. get an insight into the links between language, history and culture.

COURSE OUTLINE

Module 1 [The Domain] (36 hours)

Bill Ashcroft, Gareth Griffiths and Helen Tiffin: Introduction of *The Empire Writes Back*
Edward Said: Orientalism [an excerpt]
Frantz Fanon: The Fact of Blackness

Module 2 [Poetry] (18 hours)

Faiz Ahmed Faiz: A Prison Evening
A. K. Ramanujan: Small Scale Reflections on a Great House
David Malouf: Revolving Days Wole
Soyinka: Civilian and Soldier Margaret
Atwood: Journey to the Interior

Module 3 [Fiction]

(18 hours)

Peter Carey: *Jack Maggs*

Module 4 [Drama]

(18 hours)

Ngugi wa Thiong'o: *The Trial of Dedan Kimathi*

Core Text: *Postcolonial Literatures*

MAHATMA GANDHI UNIVERSITY
SYLLABI FOR CORE COURSES - UG PROGRAMMES
2017 ADMISSIONS ONWARDS
COURSE 11 – Women Writing

Course Code	EN6CR11
Title of the course	Women Writing
Semester in which the course is to be taught	6
No. of credits	4
No. of contact hours	90

AIM OF THE COURSE

To introduce the theoretical and literary responses by women and the concerns that govern feminist literature.

OBJECTIVES OF THE COURSE

On completion of the course, the students will be able to:

1. critically respond to literature from a feminist perspective.
2. realize how the patriarchal notions pervade in the social and cultural scenario and how feminism exposes these notions.
3. identify how stereotypical representations of women were constructed and how these are subverted by feminist writing

COURSE OUTLINE

Module 1 [Essays] (36 hours)

Betty Friedan: The Problem that has No Name (Chapter 1 of *The Feminine Mystique*)
 Elaine Showalter: Towards a Feminist Poetics
 Patricia Hill Collins: Mammies, Matriarchs and Other Controlling Images (Chapter 4 of *Black Feminist Thought* pp. 79-84)

Module 2 [Poetry] (18 hours)

Anna Akhmatova: Lot's Wife

Mamta Kalia: After Eight Years of Marriage
Julia Alvarez: Women's Work
Meena Alexander: House of a Thousand Doors
Sutapa Bhattacharya: Draupadi
Kristine Batey: Lot's Wife
Vijayalakshmi: Bhagavatha

Module 3 [Short Fiction]

(18 hours)

Charlotte Perkins Gilman: The Yellow Wallpaper
Willa Cather: A Wagner Matinee
Isabel Allende: And of the Clay We Created
Sara Joseph: The Passion of Mary

Module 4 [Fiction]

(18 hours)

Alice Walker: *The Color Purple*

Core Text: *Women Writing*

MAHATMA GANDHI UNIVERSITY

SYLLABI FOR CORE COURSES - UG PROGRAMMES

2017 ADMISSIONS ONWARDS

COURSE 12 – American Literature

Course Code	EN6CR12
Title of the course	American Literature
Semester in which the course is to be taught	6
No. of credits	4
No. of contact hours	90

AIM OF THE COURSE

To enable the students to have a holistic understanding of the heterogeneity of American culture and to study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts.

OBJECTIVES OF THE COURSE

At the end of the course, the student shall be:

1. familiar with the evolution of various literary movements in American literature.
2. acquainted with the major authors in American Literary History.

COURSE OUTLINE

Module 1 [Prose]

(18 hours)

M. H Abrams: Periods of American Literature in *A Glossary of Literary Terms*

Robert E. Spiller: The Last Frontier in *The Cycle of American Literature*

Ralph Waldo Emerson: Gifts

James Baldwin: If Black English isn't Language, then Tell me, What is?

Module 2 [Poetry]

(18 hours)

Walt Whitman: I Hear America Singing

Emily Dickinson: I dwell in Possibility

Robert Frost: Love and a Question

e. e. cummings: Let's Live Suddenly without Thinking

Langston Hughes: Let America be America Again

Allen Ginsberg: A Supermarket in California

Adrienne Rich: In a Classroom

Marianne Moore: Poetry

Module 3 [Short Story]

(18 hours)

Nathaniel Hawthorne: My Kinsman, Major Molineux

Edgar Allan Poe: The Purloined Letter

Mark Twain: How I Edited an Agricultural Paper

Leslie Marmon Silko: Lullaby

Kate Chopin: A Respectable Woman

Module 4 [Drama]

(18 hours)

Arthur Miller: *The Crucible*

Module 5 [Novel]

(18 hours)

Harper Lee: *To Kill a Mocking Bird*

Core Text: *American Literature*

MAHATMA GANDHI UNIVERSITY
SYLLABI FOR CORE COURSES - UG PROGRAMMES
2017 ADMISSIONS ONWARDS
COURSE 13 – Modern World Literature

Course Code	EN6CR13
Title of the course	Modern World Literature
Semester in which the course is to be taught	6
No. of credits	4
No. of contact hours	90

AIM OF THE COURSE

To make the students aware of the stupendous variety that resides in Literatures the world over.

OBJECTIVES OF THE COURSE

On completion of the course, the students should be able to discern the following:

1. That literatures the world over engage in very deep ways with the vicissitudes of life.
2. World literatures often defy genres/regionalities and canonical assumptions to emerge as a platform where poetics and politics fuse.
3. The notion of Major and Minor, Central and Peripheral literatures is a myth.

COURSE OUTLINE

Module 1 [Poetry]

(18 hours)

Marina Tsvetaeva: Meeting
 Federico Garcia Lorca: New Heart
 Pablo Neruda: Ars Poetica
 Leopold Sedar Senghor: Black Woman
 Wizlawa Szymborska: The Terrorist, He's Watching
 Adonis: Nothing but madness remains
 Bei Dao: The Answer
 Ko Un: A Poet's Heart

Module 2 [Short Stories: European]

(18 hours)

Leo Tolstoy: God Sees the Truth, but Waits
 Bjornstjerne Bjornson: The Father
 Franz Kafka: Before the Law

Bertolt Brecht: *The Monster*
Albert Camus: *The Guest*
Javier Marias: *The Life and Death of Marcelino Iturriaga*

Module 3 [Short Stories: Non-European] (18 hours)

Ryunosuke Akutagawa: *In a Grove*
Jorge Luis Borges: *The Garden of Forking Paths*
Naguib Mahfouz: *Half of a Day*
Julio Cortazar: *Continuity of Parks*
Danilo Kis: *The Encyclopaedia of the Dead*
Juan Gabriel Vasquez: *The Dogs of War*

Module 4 [Novel] (18 hours)

Italo Calvino: *The Cloven Viscount*

Module 5 [Drama] (18 hours)

Eugene Ionesco: *Chairs*

Core Text: *Modern World Literature*

Complementary Courses

MAHATMA GANDHI UNIVERSITY

SYLLABI FOR COMPLEMENTARY COURSES - UG PROGRAMMES

2017 ADMISSIONS ONWARDS SEMESTER 3
(BA English Model 1 & Model 2)

COURSE 3: The Evolution of Literary Movements: The Shapers of Destiny

Course Code	EN3CM03
Title of the course	The Evolution of Literary Movements: The Shapers of Destiny
Semester in which the course is to be taught	3
No. of credits	4
No. of contact hours	108

1. AIM OF THE COURSE

To make the learner aware of the way in which history shapes the life and literature of a people

2. OBJECTIVES OF THE COURSE

To give the learner a comprehensive overview of the history of Britain and its impact upon the rest of the world

To enable him to understand English literature in the light of historical events

To analyse the manner in which a person is moulded by the historical events of his personal and communal life

3. COURSE OUTLINE

Module 1: Moulding and Being Moulded

18 hours

Early settlers and invaders- the Iberians, the Celts and Romans, the Angles, Saxons, Jutes. The Anglo Saxon heptarchy- The coming of Christianity- Theodore of Tarsus and the organization of the church- Alfred the Great – St. Dunstan and Edgar – Canute the Danish king- Edward the Confessor, Harold Godwin- Society and literature of the time-the

Witangemot -the Anglo Saxon Chronicle, Beowulf, Caedmon, Cynewulf, Venerable Bede and others-

Module 2: The True Briton

36 hours

Normans: the last invaders –William the Conqueror –the reforms of Henry I- Feudalism- the Angevin kings - the struggle between the church and the state, St. Thomas Becket – the universities of Oxford and Cambridge–the Guilds - Richard the Lionheart and the Crusades- the Magna Carta- Henry III – Simon de Montfort, and the Parliament- Edward I, annexation of Wales, Scotland and Ireland – Edward II and Edward III – The Black Death, The Hundred Years War, The Peasants Revolt – the effects of these on society and literature- The Wars of the Roses – Chaucer and the growth of the East Midland dialect into standard English – Growth of drama and stage performances- Chaucer’s contemporaries- John Wycliffe and the Lollards..

Module Three : Britannia Rules the Waves

36 hours

The Tudor Dynasty- benevolent despots – Renaissance – maritime discoveries – the scientific temper and scientific inventions- flamboyant Henry VIII, Reformation- religious persecution- Thomas More, Erasmus, Thomas Cromwell-The Book of Common Prayer- Elizabeth I- Shakespeare – nest of singing birds- Francis Drake- peace and prosperity- The Stuarts and the Divine Right Theory- The Authorised Version- The Civil War- Oliver Cromwell and the Protectorate – John Milton- the Jacobean playwrights – Restoration- Caroline writers- The Whigs and Tories- Queen Anne and the expansion of colonialism – The Glorious Revolution

Module Four : A Precious Stone Set in the Silver Sea

18 hours

The United Kingdom today- Physical features of the British Isles, geography, demography – Customs and practices – myths and legends –the growth and development of the English language –the position held by the UK in today’s world

Reading List

1. Trevelyan, G. M. Illustrated English Social History (Vol 1-6). England: Penguin, 1968.
2. Churchill, Winston. A History of the English Speaking Peoples (Vol 1-12). London: Cassel and Co., 1966.
3. Nehru, Jawaharlal. Glimpses of World History. New Delhi: Penguin, 2004.
4. Alexander, Michael (ed.) A History of English Literature. New York: Palgrave-Macmillan, 2007.
5. Sampson, George (ed.) A History of English Literature. Delhi: Foundation, 2004.
6. Thorndike, Lynn. Encyclopedia of World Civilization (Vol 2). Delhi: Shubi Publications, 1990.
7. Yeats, W. B. Writings on Irish Folklore Legend and Myth. London: Penguin, 1999.
8. Warner, Marina. From the Beast to the Blond. London: Vintage, 1995.

4. Core Text: Susan Varghese. *Evolution of Literary Movements: The Shapers of Destiny*. Current Books.

MAHATMA GANDHI UNIVERSITY

SYLLABI FOR COMPLEMENTARY COURSES - UG PROGRAMMES

2017 ADMISSIONS ONWARDS SEMESTER 4

(BA English Model 1 & Model 2)

COURSE 4: The Evolution of Literary Movements: The Cross Currents of Change

Course Code	EN4CM04
Title of the course	The Evolution of Literary Movements: The Cross Currents of Change
Semester in which the course is to be taught	4
No. of credits	4
No. of contact hours	108

AIM OF THE COURSE

To enable students to have a notion of the evolution of literature and to help them perceive the interplay of social processes and literature

OBJECTIVES OF THE COURSE

By the end of the course it is hoped that:

1. students will be competent to understand literature against the backdrop of history.
2. students will be inspired to contribute dynamically to historical and literary processes.

COURSE OUTLINE

Module 1 [Literature and Revolution] (36 hours)

- a. The interaction between the French Revolution and the literature of the age
- b. Literature in the context of the Russian Revolution

Module 2 [Literature and Renaissance] (18 hours)

- a. The social context of the burgeoning of literature in Latin America
- b. Kerala at the dawn of awakening

Module 3 [Literature and Liberation] (36 hours)

- a. Literature and feminism
- b. Dalit writing

Module 4 [Literature and the Third World]

(18 hours)

- a. Articulating the Postcolonial Experience
- b. An overview of New Literatures

Core Text: Dr B Keralavarma. *Evolution of Literary Movements: The Cross-currents of Change.*

Open Courses

MAHATMA GANDHI UNIVERSITY SYLLABI FOR

OPEN COURSES - UG PROGRAMMES

2017 ADMISSIONS ONWARDS

COURSE 1 – Appreciating Films

Course Code	EN5CROP01
Title of the course	Appreciating Films
Semester in which the course is to be taught	5
No. of credits	4
No. of contact hours	72

AIM OF THE COURSE

The course seeks to introduce the student to the major elements that constitute cinema. Also the attempt will be to equip the student to academically discuss cinema in terms of critiques and close analyses.

OBJECTIVES OF THE COURSE

On completion of the course, the student should be able to discern the following:

1. The broad contours of the history and aesthetics of films.
2. The overarching film genres and the basic terminology of film studies.
3. The distinction between mere appreciation of films and sustained ideological film analysis.
4. The questions raised by Cultural Studies and Feminism(s) in their encounter with films.
5. The issues raised by cinematic adaptations of literature.

COURSE OUTLINE

Module 1 (Broad Film Genres)

(18 hours)

Lumiere vs. Melies [*Arrival of a Train* vs. *An Impossible Voyage*]

Narrative Cinema vs. Documentary Cinema

Hollywood Style as Norm - Roland Emmerich's *Independence Day* (1996)

German Expressionism - F.W. Murnau's *Nosferatu* (1922)

Neo-realism - Vittorio De Sica's *Bicycle Thieves* (1948)

Module 2 (Film Languages)

(18 hours)

Montage Theory: [Clippings from Eisenstein's *Battleship Potemkin* and Chaplin's *Modern*

Times]

Mise-en-scene: [The opening sequence from Werner Herzog's *Aguirre, Wrath of God* (1972) and the infamous 'horse head' scene from Francis Ford Coppola's *The Godfather* (1972)]

Deep Focus, the Long Take and psychological representation: [Select scenes from Orson Welles' *The Magnificent Ambersons* (1942)]

Jump Cut (anti-seamless-dissolve) [Examples from Godard's *Breathless* (1960)]

Module 3 (Reading Films)

(18 hours)

Cinema and Ideology/Identity Politics

[Kamal Haasan's *Hey Ram* (2000) and Shaji Kailas's] *Aaram Thampuran* (1997)]

Cinema and Feminism

[Rajkumar Hirani's *PK* (2014) and K. G. George's *Aadaminte Variyellu* (1983)]

Module 4 (Film Adaptations)

(18 hours)

Shakespeare/Hamlet: Vishal Bhardwaj's *Haider* (2014)

Basheer/Mathilukal: Adoor Gopalakrishnan's *Mathilukal* (1990)

Films Recommended for Background Viewing

George Melies: *An Impossible Voyage*

Lumiere brothers: *Arrival of a Train*

Sergei Eisenstein: *Battleship Potemkin*

Charlie Chaplin: *Modern Times*

Werner Herzog: *Aguirre, Wrath of God*

Francis Ford Coppola: *The Godfather*

Orson Welles: *The Magnificent Ambersons*

Jean Luc-Godard: *Breathless*

V. K. Prakash: *Karmayogi* [Malayalam]

Core Text: *Appreciating Films*

MAHATMA GANDHI UNIVERSITY SYLLABI FOR
OPEN COURSES - UG PROGRAMMES
2017 ADMISSIONS ONWARDS
COURSE 2 – Theatre Studies

Course Code	EN5CROP02
Title of the course	Theatre Studies
Semester in which the course is to be taught	5
No. of credits	4
No. of contact hours	72

AIM OF THE COURSE

The students will be introduced to a selection of plays from the West and the East, ranging from the tragic and the comic, the folk and the street, so as to generate interest in theatre and make them aware of the new trends in modern theatre.

OBJECTIVES OF THE COURSE

On completion of the course, the student should be able to imbibe the following:

1. An understanding of a selection of well-discussed plays across the world.
2. The classical and modern theatre in the West and the East.
3. The form and content of various kinds of theatre.
4. Colonial and subversive postcolonial aspects in Indian theatre.
5. Issues of gender, identity, caste, tradition, morality, etc dealt with by modern theatre.

COURSE OUTLINE

Module 1 (Classics) (18 hours)

Kalidasa: *Abhijnanasakunthalam* – Act I

William Shakespeare: *Othello* – Act I, Scene III, 1-295

Module 2 (Tragic Vision) (18 hours)

Eugene O'Neil: *Before Breakfast*

Langston Hughes: *Soul Gone Home*

Module 3 (Comic Vision)

(18 hours)

Bernard Shaw: How He Lied to Her Husband

Anton Chekov: The Proposal

Module 4 (Folk/Street)

(18 hours)

Kavalam Narayana Panicker: Maraattom

Malini Bhattacharya: Giving Away the Girl

Core Text: *Theatre Studies*

MAHATMA GANDHI UNIVERSITY SYLLABI FOR
OPEN COURSES - UG PROGRAMMES
2017 ADMISSIONS ONWARDS
COURSE 3 – English for Careers

Course Code	EN5CROP03
Title of the course	English for Careers
Semester in which the course is to be taught	5
No. of credits	4
No. of contact hours	72

AIM OF THE COURSE

To make the students competent in their job-seeking, job-getting, and job-holding needs. The course shall cater to equipping the students in Comprehensive Language Enhancement.

OBJECTIVES OF THE COURSE

On completion of the course, the students should be able:

1. To develop communicative skills, which will enable them to prepare for a career and function effectively in it.
2. To equip themselves in oral and written communication to enhance their academic and professional use of language.
3. To train themselves in making effective presentations.

COURSE OUTLINE

Module 1[Oral and Written Skills for Jobs and Careers] (18 hours)

- a. Applying for jobs—Preparing Resumes—Writing Cover letters.
- b. Preparing for interviews—Taking Interviews—Post-Interview follow-up-Promotion
- c. Interviews—Group Discussions

Module 2[Correctness of Language Usage] (18 hours)

- a. Common errors in communication and how to avoid them.
- b. Some Notions—Conventional and idiomatic expressions.
- c. Today's Vocabulary
- d. Grammar for Grown-ups

Module 3 [Facing People]**(18 hours)**

- a. Structuring and delivering a presentation.
- b. Communication in the Management context.
- c. Importance of Words/Language.
- d. Horizontal and Democratic Communication.

Module 4 [Keeping the Job]**(18 hours)**

- a. Human relationships in academic and professional life.
- b. Front Office Management and Keeping public relations (Telephone Skills)
- c. Soft Skills for Team Building.
- d. Keeping the Job—Professional Ethics
- e. Managing Multiple Roles- Healthy Balancing of family and career.

Reading List

1. Samson et al. *English for Life - 4*. New Delhi: Cambridge UP.
2. Vasudev, Murthy. *Effective Proposal Writing*. New Delhi: Response, 2006.
3. *Towards Academic English: Developing Effective Writing Skills*. New Delhi: Cambridge UP, 2007.
4. *Oxford Guide to Effective Writing and Speaking*. OUP, 2007.
5. Bhatnagar, R. P. *English for Competitive Examinations*. New Delhi: Macmillan, 2009.
6. *English for Careers*. Pearson.
7. *ABC of Common Grammatical Errors*. Macmillan, 2009
8. Kaul, Asha. *The Effective Presentation*. New Delhi: Response
9. Shepherd, Kerry. *Presentations at Conferences, Seminars and Meetings*. New Delhi: Response.
10. Vilanilam, J. V. *More Effective Communication: a Manual for Professionals*. Response 2008
11. *English for Career Development*. Orient Longman, 2006.

Core Text: *English for Careers*

Choice Based Courses

MAHATMA GANDHI UNIVERSITY

SYLLABI FOR CHOICE BASED COURSES - UG PROGRAMMES

2017 ADMISSIONS ONWARDS

COURSE 1 – Comparative Literature

Course Code	EN6CB01
Title of the course	Comparative Literature
Semester in which the course is to be taught	6
No. of credits	4
No. of contact hours	72

AIM OF THE COURSE

To introduce the student to the various concepts relating to comparative study of literature and to promote an international approach to the study of literature.

OBJECTIVES OF THE COURSE

On completion of the course, the student should be able to:

1. Develop strategies and methodologies in the study of literatures in comparison.
2. Undertake a methodological investigation of problems involving more than one literature so that she/he may acquire a broader sense of literary history and tradition.
3. Critically analyze literary texts in a broader perspective of World Literature.

COURSE OUTLINE

Module 1 [Themes and Contexts] (18 hours)

K. M. Krishnan: 'Introduction' in the anthology *Between the Lines*

Susan Bassnett: 'What is Comparative Literature Today' from *Comparative Literature: An Introduction*

Module 2 [Envisioning] (18 hours)

Part A: Writing

Ted Hughes: The Thought Fox

Seamus Heaney: Personal Helicon

Part B: Death Wish

Sylvia Plath: Tulips

Dorothy Parker: Resume

Part C: Hamlets

Anna Akhmatova: Reading Hamlet

C. P. Cavafy: King Claudius

Salman Rushdie: Yorick

Module 3 [Nuance]

(18 hours)

Part A: Myth

Rabindranath Tagore: Karna Kunti Samvad

G. Sankarapilla: Wings Flapping, Somewhere

Part B: Sleuthing

Arthur Conan Doyle: The Adventure of the Blue Carbuncle

V. K. N.: Sherlock Holmes

Module 4 [Motif]

(18 Hours)

Carlo Collodi: The Adventures of Pinocchio

Nikolai Gogol : The Nose

Vaikom Muhammad Basheer : The World Renowned Nose

Core Text: *Comparative Literature*

MAHATMA GANDHI UNIVERSITY

SYLLABI FOR CHOICE BASED COURSES - UG PROGRAMMES

2017 ADMISSIONS ONWARDS

COURSE 2 – Modern Malayalam Literature in Translation

Course Code	EN6CB02
Title of the course	Modern Malayalam Literature in Translation
Semester in which the course is to be taught	6
No. of credits	4
No. of contact hours	72

AIM OF THE COURSE

The students will be introduced to a selection of literature translated from Malayalam into English. The student will be able to establish an endearing rapport with the cultural aspects of the living environs.

OBJECTIVES OF THE COURSE

On completion of the course, the student should be able to comprehend the following:

1. An understanding of a selection of much discussed writers/literary pieces in Malayalam.
2. The various genres in Malayalam.
3. The modern trends in Malayalam literature.
4. Experiments with form in Malayalam poems and prose.

COURSE OUTLINE

Module 1 (Poetry)

(18 hours)

Balamani Amma: The Pen Ayyappa

Paniker: Theft Kadamanitta: Feline

Fancies Satchidanandan: The Mad

Balachandran Chullikkad: Possessed

V. M. Girija: A Tree I Was Long Back

S. Joseph: Group Photo

Anitha Thampi: Sweeping the Front Yard

Bindu Krishnan: Certain Days, Like This

Module 2 (Short Fiction)**(18 hours)**

M. T. Vasudevan Nair: For You
Madhavikutti: Neypayasam
M. Mukundan: The Eyesight of the Mirror
Paul Zacharia: Last Show
N. S. Madhavan: Afterword
Santhosh Echikkanam: The Hunters in a Picture Story
Subhash Chandran: Bloody Mary
Anvar Abdulla: Sea-Roar

Module 3 (Novel)**(18 hours)**

O. V. Vijayan: *The Legends of Khasak*

Module 4 (Novella/Memoir/Prison Narrative)**(18 hours)**

Vaikom Muhammad Basheer: Walls

Background Reading

1. Sujit Mukherjee, 'Translation as Discovery' (139-150 in *Translation as Discovery*)
2. A K Ramanujan, 'Three Hundred Ramayanas: Five Examples and Three Thoughts on Translation.' (131 – 160 in *The Collected Essays of A K Ramanujan*)
3. Gayatri Chakravorty Spivak, 'The Politics of Translation.' (397- 416 in *The Translation Studies Reader*)
4. G N Devy, "'Translation and Literary History: An Indian View (pp 182 – 88 in *Postcolonial Translation: Theory and Practice*)
5. Walter Benjamin, 'The Task of the Translator.' (15 - 25 in *The Translation Studies Reader*)

Core Text: *Modern Malayalam Literature in Translation*

MAHATMA GANDHI UNIVERSITY

SYLLABI FOR CHOICE BASED COURSES - UG PROGRAMMES

2017 ADMISSIONS ONWARDS COURSE 3 –

Regional Literatures in Translation

Course Code	EN6CB03
Title of the course	Regional Literatures in Translation
Semester in which the course is to be taught	6
No. of credits	4
No. of contact hours	72

AIM OF THE COURSE

The students will be introduced to a selection of regional literatures translated into English.

OBJECTIVES OF THE COURSE

On completion of the course, the student should be able to comprehend the following:

1. An understanding of much discussed writers/literary pieces in the vernaculars.
2. The modern trends in regional literatures.

COURSE OUTLINE

Module 1 [Prose]

(18 hours)

Susan Bassnett: Introduction to *Translation Studies*

Keya Majumdar: Appropriating the Other - Some Challenges of Translation and its Theories”

Romila Thapar: ‘The Abhijnana-Sakuntalam of Kalidasa’ from *Shakuntala: Texts, Readings and History*

Module 2 [Poetry]

(18 hours)

Jibanananda Das: Banalata Sen

Kedarnath Agarwal: Freedom of the Writer

Amin Kamil: Naked Thoughts

P Lankesh: Mother (Avva)

P. P. Ramachandran: Iruppu

S Joseph: Fish Monger

Module 3 [Drama]

(18 hours)

C. J. Thomas: *Crime 27 in 1128*

Vijay Tendulkar: *Kanyadaan*

Module 4 [Short Story]

(18 hours)

Saadat Hasan Manto: Toba Tek Singh

Amrita Pritam: The Weed

Annabhau Sathé: Gold from the Grave

Sujatha: Washing Machine

Devanuru Mahadeva: Tar Arrives

Core Text: *Regional Literatures in Translation*

MAHATMA GANDHI UNIVERSITY

SYLLABI FOR CHOICE BASED COURSES - UG PROGRAMMES

2017 ADMISSIONS ONWARDS

COURSE 4 – Voices from the Margin

Course Code	EN6CB04
Title of the course	Voices from the Margins
Semester in which the course is to be taught	6
No. of credits	4
No. of contact hours	72

AIM OF THE COURSE

To introduce “voices” from the margins to the students, as an attempt to understand suppressed histories and discourses.

OBJECTIVES OF THE COURSE

On completion of the course, the student will have critically encountered subaltern voices, Dalitness and indigeneity.

COURSE OUTLINE

Module 1

(36 Hours)

‘Subaltern’ - Entry in *Routledge Dictionary of Literary Terms* by Peter Childs and Roger Fowler

Poikayil Appachan. “Remembering the Travails.” *Writing in the Dark: A Collection of Malayalam Dalit Poetry*. Eds. M. B. Manoj and George K. Alex. Mumbai: VAK. 2008. 21-25.

Sharankumar Limbale. “Dalit Literature: Form and Purpose.” *Towards an Aesthetics of Dalit Literature*. Hyderabad: Orient Longman. 2004. 23-39.

Kallen Pokkudan. *My Life* (Excerpts). *The Oxford India Anthology of Malayalam Dalit Writing*. New Delhi: OUP. 2012. 185-195.

Hira Bansode. “Yashodhara.” *Posioned Bread*. Ed. Arjun Dangle. Hyderabad: Orient Blackswan. 2009. 36-37.

M. B. Manoj. "Anonymous." *No Alphabet in Sight: New Dalit Writing from South India: Dossier 1: Tamil and Malayalam*. Eds. K. Satyannarayana and Susie Tharu. New Delhi: Penguin. 532-533.

Bama. *Sangati*. New Delhi: OUP. 2005.

Module 2

(36 Hours)

Ramanika Gupta. "Adivasi Literature: An Emerging Consciousness." *Indigeneity: Culture and Representation*. Hyderabad: Orient Blackswan. 2009. 191-202.

G. N. Devy. "Aphasia: The Fate of the Indigenous Languages" Introduction to *The Language Loss of the Indigenous*. Eds. G. N. Devy, Geoffrey V. Davis and K. K. Chakravarty. New Delhi: New York: Routledge. 2016. 1-6.

Dakxin Bajrange. "Budhan" in. *Painted Words: An Anthology of Tribal Literature*. Ed. G. N. Devy. Vadodara: Purva Prakash. 2012. 245-272.

Narayan/Catherine Thankamma. "We want to be understood . . . and allowed to live with dignity." Interview. *Kocharethi: The Araya Woman*. New Delhi: OUP. 2011. 208-216.

Bhaskaran. *Mother Forest: The Unfinished Story of C.K. Janu*. New Delhi: Kali for Women. 2004.

Core Text: *Voices from the Margins*

Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

MASTER OF ARTS - ENGLISH
(MA- ENGLISH)

Course Co-ordinator: Dr. K. M. Krishnan

Academic support by

School of Letters
Mahatma Gandhi University
Kottayam, Kerala

MASTER OF ARTS - ENGLISH

(MA- ENGLISH)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Conventional Graduate and Post Graduate Programmes in addition to Diploma and Certificate Programmes which are very relevant to contemporary society. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University.

1. Programme's Mission & Vision

- To conduct and support undergraduate, postgraduate and research-level/Programmes of quality in different disciplines.
- To foster teaching, research and extension activities for the creation of new knowledge for the development of society. To help in the creation and development of manpower that would provide intellectual leadership to the community.
- To provide skilled manpower to the professional, industrial and service sectors to meet global demands.
- To help promote the cultural heritage of the nation and preserve the /environmental sustainability and quality of life.
- To cater to the holistic development of the region through academic /leadership.

In today's global scenario the significance and role of English goes without saying. While the inevitability of a foundation in the English language does not merit any detailed justification, a Programme that combines the benefits of the English language with the input from the world of literature makes it all the more fascinating as literature is man's highest achievement in terms of creativity and innovativeness, not to speak of its philosophical underpinnings

2. Relevance of the programme with the HEI's Mission and Goals

The vision behind the introduction of the MA Programme in English is that a proper foundation in English, the international lingua franca, ensures a foundation in many other disciplines. The mission is to produce a generation of young minds who can combine linguistic capability with literary creativity in whichever field they engage themselves.

In today's global scenario the significance and role of English goes without saying. While the inevitability of a foundation in the English language does not merit any detailed justification, a Programme that combines the benefits of the English language with the input from the world of literature makes it all the more fascinating as literature is man's highest achievement in terms of creativity and innovativeness, not to speak of its philosophical underpinnings.

3. Nature of Prospective Target Group of Learners:

The Programme is open to students who have taken English as either an elective or common course at the higher secondary level. They will be selected on the basis of their performance in the final examination of higher secondary course. The curriculum is designed in such a way that a good student can comprehend the portions and the requirements of a potential candidate are identified and satisfied.

4. Appropriateness of Programme to be conducted in Open and Distance Learning Mode to acquire specific skills and competence

The Distance Mode suits the MA Programme in English for some important reasons. For one thing, the Programme with no laboratory component can be designed to suit the MA in English. This enables pupils who are unable to pursue university education as full time candidate for various reasons, since the course design, study materials, duration of the Programme and contact classes have been arranged to suit their convenience. A solid foundation in English language and literature helps the candidates progress in their respective careers. Moreover, the syllabus of the Programme covers the whole gamut of concerns in the literary studies. The student undergoing the course is sure to acquire a comprehensive understanding of literary theory, criticism, translation, world literatures and issues of social concern like the environment. In that respect it also enables one to become a conscientious citizen endowed with a sensibility attuned to the concerns of the world

5. Instructional design

The candidates will be supplied with study materials from time to time and will be required to attend the contact classes regularly. A minimum of 75 % attendance is mandatory for one to take the examinations.

5.1 Duration of Programme(s)

The MA in English is a Programme designed to be completed in two years or four semesters. It has been designed in such a way that the pupil becomes acquainted not only with English language and literature but with the institution called literature, not to speak of the methodology of literary studies, current trends in world literature apart from issues of broad

humanistic concern as well. The Programme has fifteen Core Courses, and five Elective Courses. In addition there will also be a comprehensive paper for 100 marks.

5.2 Programme Detail

Sem	Course Code	Papers	Title	Course Type	Credits	Contact Session (Hrs)	Internal	External	Total
I	DME1CRT01	Paper 1	Chaucer and the English Renaissance	Core	4	12	20	80	100
	DME1CRT02	Paper 2	Renaissance English Drama	Core	4	12	20	80	100
	DME1CRT03	Paper 3	Revolution and restoration	Core	4	12	20	80	100
	DME1CRT04	Paper 4	Phonetics and the History of English	Core	4	12	20	80	100
	DME1CRT05	Paper 5	Literary Criticism	Core	4	12	20	80	100
	Total					20	60	100	400
II	DME2CRT06	Paper 6	Literature of the Eighteenth Century	Core	4	12	20	80	100
	DME2CRT07	Paper 7	The Romantic Tradition	Core	4	12	20	80	100
	DME2CRT08	Paper 8	Literature of the Late Nineteenth Century	Core	4	12	20	80	100
	DME2CRT09	Paper 9	Linguistics	Core	4	12	20	80	100
	DME2CRT10	Paper 10	American Literature	Core	4	12	20	80	100
	Total					20	60	100	400
III	DME3CRT11	Paper 11	Modernism in Context	Core	4	12	20	80	100
	DME3CRT12	Paper 12	Post-war literature	Core	4	12	20	80	100
	DME3CRT13	Paper 13	Literary Theory	Core	4	12	20	80	100
	DME3CRT14	Paper 14	Indian English Literature	Core	4	12	20	80	100
	DME3CRT15	Paper 15	Politics of Narration	Core	4	12	20	80	100
	Total					20	60	100	400

Elective Papers									
IV	DME4CBT16	Paper 16	Modern Indian Literature in Translation	Choice Based Core	4	12	20	80	100
	DME4CBT17	Paper 17	World Classics in translation	Choice Based Core	4	12	20	80	100
	DME4CBT18	Paper 18	African Literature	Choice Based Core	4	12	20	80	100
	DME4CBT19	Paper 19	English Language Teaching	Choice Based Core	4	12	20	80	100
	DME4CBT20	Paper 20	Stylistics	Choice Based Core	4	12	20	80	100
	DME4CP21	Paper 21	Comprehensive Paper		2	6	-	100	100
	DME4VV22	Paper 22	Viva Voce		2	6	-	100	100
Total					24	72	100	600	700
Grand Total					84	252	400	1800	2200

The core and elective papers for MA (English) will be as follows:

Core Papers

Comprehensive Paper : Candidates will also have to take a comprehensive paper containing 100 questions and covering the entire syllabus. The paper will be of one and a half hours duration and will carry 100 marks Viva Voce : 100 marks

Faculty and support staff requirements

Course Co-ordinator

Dr. K. M. Krishnan

Associate Professor, School of Letters

Qualifications : M. A. in English, University of Calicut

Ph. D. in English from the University of Calicut on the American Fiction of the Nineteen Sixties (1994)

Teaching faculty

All the courses are to be taught those qualified in English, with the exception of the following.

Instructional Delivery Mechanism

In addition to providing SLMs prepared in line with the UGC guidelines on preparation of SLMs, the students are offered contact classes at the head quarters of the School of Distance Education and at the Learner's Support Centers during the weekend. There shall be at least 60 to 70 instructional hours in a semester. The personal contact Programmes are being taken using audio visual aids, and students are encouraged to use web resources such as books, notes, videos etc.

Student Support Service Systems at SDE

The SDE establishes Learner Support Centres for the students at different locations within the jurisdiction of the University to facilitate contact classes and practical sessions.

6. Procedure for Admission, Curriculum Transaction and Evaluation

Admission

The admission notifications for MA English Programme, among others are being issued in leading national and regional dailies during July-August. The detailed information regarding admission is being given on the SDE website and on the admission website. Students seeking admission shall apply online.

Minimum Eligibility for Admission

Students who have successfully completed their graduation in English or graduation in Arts / Science/ Social Science/ Oriented studies / Fine Arts are eligible to apply for this, provided they have studied a minimum of three papers in English. Eligible concessions in marks will be given to those who submit relevant documents.

Verification of Documents

1. Qualifying certificates ie. SSLC, Plus Two, Degree Certificate & marklists
2. Applicants possessing qualifications from Universities/Institutions other than Universities in Kerala should apply for recognition. Applications for Matriculation/ Recognition are also provided with the Application Form.
3. Candidates possessing qualifications from other Universities should also produce migration certificates / NOC from the Universities or other board of examinations.
4. TC from the educational institution where the candidate last studied.

Fee Structure

MA (English) **Rs.10,000** for full Programme

The transaction will take place using the following methods.

- a) Using notes prepared by experienced faculty
- b) Contact classes
- c) Remedial coaching for the needy

Evaluation of the students' performance will be made using the following methods

- a) Assignments
- b) End semester examination

7. Details of library resources required for the Programme

Mahatma Gandhi University Library and Information System consists of University Library, Libraries of the Schools and Libraries of the 4 Study Centres. The University Library was established in 1989. The University Library which is situated on the main campus and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area and consists of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The Library provides service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. Reading space is provided on all the three floors housing the various sections of the library. The library provides reading facility to visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016. The libraries of teaching departments are open during working hours of the Schools.

The University Library has a Library Advisory Committee. It is an 18 member committee with the Vice Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, Bi-monthly Bibliography compilation and Literature Search Service are also available

The Library is a member of the INFLIBNET Centre, Ahmedabad as well as & DELNET (Developing Library Network). As a member of these networks, the Library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its online thesis digital library. The various department libraries too have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500

Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	School of Letters	7549

8. Cost Estimate of the Programme and the Provisions

Sl.No	Expenditure	Cost estimate for MA Programme
01	Pay and Allowance	24,50,000
02	Contact classes and evaluation	7,00,000
03	Course materials	8,00,000
04	Advertisement charges	1,00,000
05	Postage and telephone	40,000
06	Books and Periodicals	3,00,000
07	Miscellaneous	45,000
	Total	44,35,000
	Provisions (10%)	4,43,500
	Total	48,78,500
		Cost per student= Rs.4878/-

9. Quality assurance mechanism and expected Programme outcomes

The progress and the quality of the Programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

While text books prepared by eminent scholars have been included in the syllabus, notes prepared by equally eminent scholars will be made available to the pupils. The contact classes too will be handled by experienced faculty to ensure quality of instruction. The expected outcome in terms of quality will be a generation of students who would do well even outside the areas of language and literature.

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Syllabus for the MA (English) Programme under the School of Distance education

The core and elective papers for MA (English) will be as follows:

Core Papers

Paper 1 Chaucer and the English Renaissance

Paper 2 Renaissance English Drama

Paper 3 Revolution and restoration

Paper 4 Phonetics and the History of English

Paper 5 Literary Criticism

Paper 6 Literature of the Eighteenth Century

Paper 7 The Romantic Tradition

Paper 8 Literature of the Late Nineteenth Century

Paper 9 Linguistics

Paper 10 American Literature

Paper 11 Modernism in Context

Paper 12 Post-war literature

Paper 13 Literary Theory

Paper 14 Poetics of Narration

Paper 15 Indian English Literature

Elective Papers

Paper 16 Modern Indian Literature in Translation

Paper 17 World Classics in translation

Paper 18 African Literature

Paper 19 English Language Teaching

Paper 20 Stylistics

Comprehensive Paper : Candidates will also have to take a comprehensive paper containing 100 questions and covering the entire syllabus. The paper will be of one and a half hours duration and will carry 100 marks

Viva Voce : 100 marks

Semester-wise distribution of Papers

All papers carry 100 marks

Semester I

1. Chaucer and the English Renaissance
2. Renaissance English Drama
3. Revolution and Restoration
4. Phonetics and the history of English
5. Literary Criticism

Semester II

1. Literature of the Eighteenth Century
2. The Romantic Tradition
3. Literature of the late Nineteenth Century
4. Linguistics
5. American Literature

Total marks for I Year Examination : 1000

Semester III

1. Modernism in Context
2. Post War literature
3. Literary Theory
4. Politics of Narration
5. Indian English Literature

Semester IV

Elective Papers

1. Modern Indian Literature in Translation
2. World Classics in Translation
3. African Literature
4. English Language Teaching
5. Stylistics

Comprehensive Paper : 100 marks

Viva Voce: 100 marks

Total marks for II Year examination : 1200

Paper I

CHAUCER AND THE ENGLISH RENAISSANCE

Objectives:

To provide the student with a knowledge of the social, cultural and intellectual background of the late medieval and renaissance times in English Literature and familiarize him or her with some of the major literary works of the period.

Course Description:

The social and political background of the late medieval and the renaissance times in English- the end of Feudalism and the growth of the nation state – the rise of the gentry- the ideal of the courtier- the position of women – the Renaissance – humanism – individualism – study of the classics- exploration and discovery- continuity with medieval thought.

The literary background – literature of the period other than Drama- Chaucer, More, Sydney, Ballads, Wyatt, Surrey, Spenser, Bacon, Bible, the sonnets of Shakespeare.

Required reading:

1. Chaucer “Prologue” to *The Canterbury Tales*- the following sections.

*Introduction

*The Night

* The Friar

*The Wife of Bath

2. Spenser “ Epithalmion”
3. Shakespeare : Sonnets (18,29,64,78,116,147)
4. Ballads: Sir Patrick Spens, Chevy Chase
5. Bacon. “Of Truth” , Of Parents and Children, Of Love, Of Studies”
6. *Sydney : *An Apology for Poetry*
7. *Sir Thomas More: *Utopia*
(* No annotation questions will be asked from these items)

Background Reading:

1. Chaucer: “ Prologue” to *The Canterbury Tales*(the remaining sections- Nevil Coghill's trans)
2. Ballad: *The Wife of Usher's well*
3. Wyatt : selections from Sukanta Chaudhari. Ed.*An anthology of Elizabethan Poetry*, Chennai, Oxford University Press, 1992.
4. Surrey: Selections from Sukanta Chaudhari. Ed.*An anthology of Elizabethan Poetry*.
5. Shakespeare : *Sonnets and Lyrics*: selections from Sukanta Chaudhari's Anthology.
6. *The book of Job*: (the authorized version)
7. Stephen Greenblatt: *Renaissance of self- Fashioning*, Chicago 1980.

Paper II

RENAISSANCE ENGLISH DRAMA

Objectives:

To familiarize the student with the English Drama of the Renaissance period and to provide him or her with an idea of the cultural and intellectual resonance of the age.

Course Description:

Political and social background to the age- literary background – the Elizabethan theatre- rise of the drama- miracle and morality plays – interloos- classical influences- Senecan tradition and revenge tragedy- romantic comedy – Historical Comedy- tragicomedy- Shakespeare-Shakespeare Criticism.

Required reading:

1. Shakespeare : *Hamlet*
 2. Marlow: *Dr. Faustus*
 3. *Shakespeare : *The Tempest*
 4. *Shakespeare : *Henry IV Part I*
 5. *Webster : *The Duchess of Malfi*
 6. *Johnson : *Everyman in his Humour*
- (* No annotation questions will be asked from these items)

Background Reading:

1. Kyd: *The Spanish Tragedy*
2. Shakespeare: *A midsummer nights dreams*
3. EMW Tilyard: *The Elizabethan Poetry World Picture*
4. John Drakakis, ed. *Alternative Shakespeares.*
5. Ania Loomba : *Gender, Race and renaissance Drama*

Paper III

REVOLUTION AND RESTORATION

Objectives:

To familiarize the student with the English Literature of the Seventeenth Century and provide him/her with analytical/ critical perspectives on the social, cultural and intellectual climate of the period.

Course Description:

The socio-political background – the struggle between king and parliament under the Stuarts – the Civil War – the commonwealth – the restoration of the monarchy – scientific revolution of the seventeenth century – religious and scientific prose in the seventeenth century- Milton – Metaphysical poets- the Restoration Comedy

Required reading:

1. Milton : *Paradise Lost, Book IX*
2. Donne: Canonisation : A valediction Forbidding Mourning
3. Marvell : “ To his Coy Mistress”. “ In the Garden”
4. Herbert : “ The Collar”. “ The Pulley”
5. Congreve : *The way of the world*
6. *Bunyan : *The Pilgrim’s Progress*
7. *Locke: An essay concerning human understanding
(* No annotation questions will be asked from these items)

Background Reading:

1. Herbert: “*The Agony*”, “*Redemption*”, “*Easter Wings*”
2. Vaughan: “*Regeneration*” ; “*The Showre*”, “*The Retreat*”; “*Peace*”, “*The World*”
3. Hobbes: *Leviathan*
4. Milton: *Samson Agonistics*.
5. Middleton : *The Changeling*
6. T.S Eliot: “ The Metaphysical poet”
7. Simon Tsarker, ‘images of the sixteenth and seventeenth centuries as the history of the present.’ In Francis Barker et al, ed. *Literature, Politics and Theory*, London:Methuen, , 1986, pages 173-189
8. Cleanth Brooks, *Historical evidence and the reading of seventeenth Century poetry*. Columbia 1991.

Paper IV

PHONETICS AND THE HISTORY OF ENGLISH

Objectives:

To introduce the student to the major concepts in English phonetics and phonology.

To help the student develop a sophisticated awareness of the structure of English, its history and its role in the world today.

To help him ask questions about the varieties of the English language and their evolution.

Course Description:

Phonetics- Origins of speech- air- stream mechanism- places and manners of articulation- classification of speech sounds- allophonic variance- phoneme theory - the phonemes of English.

Transcription of isolated words and connected speech in RP.

The syllables in English- syllable duration- the notion of the various degree of stress- word stress in English- Stress management in sentences.

The nature of language and linguistic change- language and dialect- descriptive and historical approaches to the study of languages.

Language families- the place of English in the Indo European family of languages- Grimm's Law- Verner's Law- ablaut.

Old English- Middle English- Modern English- major features of each period. Phonology- major sound changes from Old English to Modern English- Umlaut- the great vowel shift- dialectal variations in Old English and Middle English- the evolution of standard English- RP and other varieties of English Pronunciation- GIE Semantics- Different types of Semantic Change.

Varieties of Modern English- British- American- Indian- Canadian- Australian- African.

Background Reading:

1. J D O Conner: *Phonetic*
2. Daniel Jones : *An Introduction to English Phonetics*
3. T Balasubramanyan: *A Textbook of English Phonetics for Indian Students*
4. Daniel Jones: *English Pronouncing Dictionary*
5. Hockett G F: *A Course in Modern Linguistics*
6. Lehmann W P : *Historical Linguistics*
7. Williams, Joseph M: *Origins of the English Language*
8. Jean Aitchison: *Language Change, Progress or decay*

Paper V

LITERARY CRITICISM

Objectives:

To familiarize the student with the work of significant critics from Aristotle and Bharatha to the present times through a close reading of representative works of criticism and to introduce him/her to some of the important critical trends and movements.

Course Description:

Classical Western Criticism from Aristotle, Horace and Longinus- Classical Indian aesthetic theories pertaining to *Rasa*, *Dhwani*, *Vakrokti* and *tinai*- English renaissance and Neo classical Criticism- the Eighteenth century trends – the romantic revolt- the Victorian tradition in criticism- the new critics and the modernist movement – Eliot's critical position- sociological and psycho analytical schools of Criticism.

Required reading:

Section A

1. Aristotle : *Poetics*
 2. Longinus : *On the sublime*
 3. S N Das Gupta: "The theory of Rasa"
 4. K Kunjunni Raja: "The theory of Dhwani"
- (Items 3 & 4 are from V S Seturaman ed. *Indian Aesthetics*)

Section B

1. Coleridge : *Biographia Literaria, Chapter 14*
2. Arnold: *The Function of Criticism*
3. Eliot: *Tradition and the Individual talent*
4. Brooks : *The Language of Paradox*
5. Empson : *The Ambiguity of the first type*
6. Frye: *Archetypes of Literature*

Background Reading:

1. Horace: *Ars Poetica*
2. Dryden : *Preface to the Fables*
3. Kant: From *Critique of Judgement*(Excerpt in *Theory of Criticism*, ed, Raman Selde'en)
4. Johnson: *Life of Milton*
5. Shelley: *A Defence of Poetry*
6. Benedetto Croce : From *Aesthetic*(Excerpt in *Theory of Criticism*, ed, Raman Selde'en)
7. F R Leavis: *Keats*
8. Richards: "The Four kinds of Meaning"
9. Wimsatt and Beardsley: "The Intentional Fallacy"
10. SKDe: Kuntaka's Theory of Poetry (Seturaman ed. *Indian Aesthetics*)
11. A K Ramanujan: "Translator's notes and Afterword" in *Poems of Love and War*

Paper VI

LITERATURE OF THE EIGHTEENTH CENTURY

Objectives:

To familiarize the student with the English literature of the Eighteenth century and to help him/her to formulate a critical perspective on the culture of the period.

Course Description:

The social and political culture of the age- neo classicism and the enlightenment- satire- the periodical essay- women's liberation in the eighteenth century- literary criticism- the art of biography- the rise of the English novel- prose and reason.

Required reading:

Section A

1. Dryden : "Mac Fleknoe"
 2. Pope : " Epistle to Dr. Arbuthnot"
 3. Sheridan: " The School for Scandal"
 4. Johnson: " Preface to Shakespeare"
 5. Swift : " *The battle of the books*"
 6. *Woolstonecraft: " Vindication of the Rights of Women "
 7. *Defoe: *Robinson Crusoe*
 8. *Fielding : *Tom Jones*
- (* No annotation questions will be asked from these items)

Background Reading:

1. Richardson: *Pamela*
2. Goldsmith : *She Stoops to Conquer*
3. Ian Watt: *The Rise of the Novel*
4. Felicity Nussbaum and Laura Brown, eds. *The New Eighteenth Century: Theory, Politics, English Literature, London, 1987*

Paper VII

THE ROMANTIC TRADITION

Objectives:

To familiarize the student with the literature written during the early part of the nineteenth century that carries the imprint of the romantic sensibility. Though the focus will primarily be on the writings in English, an attempt will also be made to introduce the student to specimens of non- British Romantic writing of the period.

Course Description:

The pre- Romantics – the Romantic movement – concepts of nature, reason and imagination- Lyrical Ballads- the context of the French Revolution – the impact of German idealist philosophy – the attitude to science and industrialism – the romantic irony- the machine and the city – the popularity of the lyric, and the ode- the growth of literary criticism- women’s writing.

Required reading:

Section A

1. Blake : “Auguries of Innocence”
2. Thomas Gray : “Elegy written in a Country Churchyard”
3. Wordsworth : “The Immortality Ode”
4. Coleridge : “Dejection : an Ode”
5. Keats : “Ode to the West Wind”
6. Shelley : “Ode on a Grecian Urn”; “To Autumn”
7. Lamb : “Oxford in the Vacation”; “Christ Hospital “
8. Scott : *Kenilworth*
9. Dickens : *Great expectations*

(* No annotation questions will be asked from these items)

Background Reading:

1. Baudelaire: “The Vampire”
2. Henry Derozio : “My country ! In the Day of Glory Past”
3. William Collins: “Ode to Evening”
4. Robert Burns: “A Man Is a man for A ‘That”
5. Byron : “The prisoner of Chillon”
6. Edgar Allan Poe: “Annabel Lee”
7. Mary Shelley : “*Frankenstein*”
8. Manzoni : “*The Betrothed*”
9. Goethe: “The Sorrows of Young Werther”
10. Carlyle: “Hero as poet”
11. Raymond Williams : “The Romantic Artist”(*Chapter II of Culture and Society*)
12. Meena Alexander: *Women in Romanticism*

Paper VIII

LITERATURE OF THE LATE NINETEENTH CENTURY

Objectives:

To familiarize the student with the literature and culture of the late nineteenth century and to help him to formulate a critical perspective of the writing of the period.

Course Description:

The romantic spirit continuing – its new extensions- Victorian and pre- Raphaelite specimens of British Poetry- the tradition of realism in Novel writing – aestheticism- specimens from cultures other than British.

Required reading:

Section A

1. Tennyson : “Ulysses”, “Lotos Eaters”
 2. Elizabeth Barrett : “ How do I Love Thee!”
 3. Browning : “ Andrea del Sarto”
 4. Arnold : “ Dover Beach”
 5. Rossetti : “ The Blessed Damozel”
 6. Oscar Wilde : *The Importance of Being Earnest*
 7. * Omar Khayyam/Edward Fitzgerald : The Rubaiyat
 8. * Arnold : Preface to 1853 Poems
 9. * Jane Austen: Emma
 10. * Hardy: Tess
- (* No annotation questions will be asked from these items)

Background Reading:

1. Rimbaud: “ Deliriums ”
2. Francis Thompson : “ The Hound of Heaven ”
3. Hardy: “ The Darkling Thrush”
4. Walt Whitman: “ O Captain ! My Captain I”
5. Toru Dutt : “ Sita”
6. George Eliot: “ Adam Bede”
7. Barrie : *The Admirable Crichton*
8. Nietzsche : “The Genealogy of Morals”
9. Ibsen : A Doll’s House
10. Isobel Armstrong : Victorian Poetry: Poetry, Poetics, Politics, London, 1993

Paper IX

LINGUISTICS

Objectives:

1. To familiarize the student with the broad areas of linguistics such as phonology, morphology, syntax and semantics.
2. To make him/her aware of the basic concepts of structuralist and transformational linguistics.

Course Description:

Linguistics as the scientific study of language.

Difference between animal communication systems and human language. Basic concepts in linguistics- Phonology- morphology-syntax-semantics. Phonology: classification of speech sounds-vowels and consonants-phoneme- segmental and suprasegmental features-stress-intonation-classification in Panini and modern linguistics-minimal pairs-allophones.

Morphology: affix, prefix, suffix, derivation and inflection

Semantics: Synonymy-antonymy-hyponymy-polysemy-ambiguity- contradiction.

Syntax: the hierarchy in language structure-phoneme-morpheme-word-phrase-clause- sentence-

IC analysis.

Structuralist method of linguistic analysis – syntagmatic and paradigmatic relations-structure and system-complementary and parallel- distribution.

Form classes-contribution of Saussure and Bloomfield-Varieties of languages-style-register-dialect-pidgin-Creole.

The inadequacy of the structuralist method and the argument for transformational analysis-the Chomskyan alternative-generative grammar-surface structure and deep structure-competence and performance-language and mind-the rationalist approach-universal grammar.

Comparative linguistics-historical linguistics-sociolinguistics- psycholinguistics-applied linguistics-schools in modern linguistics- the London school-the Prague school- stratificational grammar-tagmatics- glosses and case grammar.

Background Reading:

1. Frank Palmer: *Grammar*
2. David Crystal: *Linguistics*
3. Noam Chomsky: *Syntactic Structure*
4. Chomsky: *Aspects of the Theory of Syntax*
5. John Lyons: *Language and Linguistics*
6. Lyons: *An Introduction to Theoretical Linguistics*
7. Daniel Jones: *The English Pronouncing Dictionary* (15th edition)
8. NR Catell: *The New English Grammar*

9. Noel Burtron-Roberts: *Analysing Sentences: An Introduction to English Syntax*.

Paper X

AMERICAN LITERATURE

Objectives:

To familiarize the student with some of the important specimens of American Literature and to provide him/her with a critical perspective on the American literary traditions.

Course Description:

The American Renaissance-transcendentalism-romanticism- dark romanticism-the rise of the novel in America- local colour fiction-realism in American literature-literary naturalism-the frontier experience-Modernism-feminism-black literature-post War II literature-metafiction and metatheater.

Required reading:

1. Poe : “*To Helen*”, “*Raven*”
2. Whitman : “*When Lilacs Last in the Dooryard Bloomed*”
3. Emily Dickinson : “*After great pain a formal feeling comes*” ; “*I heard a fly buzz when I died; I died for beauty but was scarce*”.
4. Robert Frost : “*After Apple Picking*” “*Fire and Ice*”; “*Mending Wall*”
5. Wallace Stevens : “*Peter Quince at the Clavier*”
6. Robert Lowell : “*For the Union Dead*” :
7. O’Neill : *The Emperor Jones*
8. * Tennessee Williams : *The Glass menagerie*
9. * Hawthorne : *The Scarlet Letter*
10. * Hemingway : *The Old Man and the Sea*
11. * Ellison : *The Invisible Man*
12. * Alice Walker : *The Colour Purple*

(* No annotation questions will be asked from these items)

Background Reading:

1. Carl Sandburg : “*Chicago*”
2. William Carlos Williams : “*Portrait of a Lady*” \$. Langston Hughes. “*I too am America*”
3. Wallace Stevens: “*The Emperor of Ice Cream*”
4. Sylvia Plath : “*Lady Lazarus*”
5. Emerson: “*Self-Reliance*”
6. Threau: “*Civil Disobedience*”
7. Sam Shepard: *Angel City*
8. Albee : *Who’s Afraid of Virginia Woolf?*
9. Toni Morrison: *Tar Baby*
10. *Lesile Mormon Silko: The Yellow Woman*

11. Douglas Tallack: "Introduction; Modernity", in *Twentieth Century America: The intellectual and Culture Context*, London; longman, 1991.

Paper XI

MODERNISM IN CONTEXT

Objectives:

To familiarize the student with the literature of the early part of the twentieth century in the context of the emerging sensibility of literary modernism.

Course Description:

The turn-of the –century social and political background-imperial expansion-the First World War-attempts at creating a new world order-the Soviet experiment-influence of Marxism on writers-the rise of Fascism and Nazism-reaction against Romanticism and Victorianism –experimental writing in all genres-controversy regarding the form and function of the novel-poetry of the First World War-avant grader literary movements-the Pink decade*

Required reading:

1. Hopkins : " *The Winhover* "
 2. Yeats : " *The Second Comina* " " *Easter 1916* "
 3. Eliot : " *The Waste land* "
 4. Auden : " *In Memory of WB Yeats* "
 5. Dylan Thomas : " *Fern Hill* "
 6. Synge : " *Riders to the sea* "
 7. * Dh Lawrence : " *Morality and the Novel* "
 8. * Joyce : " *The Portrait of the Artist as a Young Man* "
 9. * Virgina Woolf: " *To the Lighthouse* "
- (* No annotation questions from these items)

Background Reading:

1. Mallarme : " *The Swan* "
2. Hopkins : " *The Wreck of the Deutschland* "
3. Ezra Pound : " *Hugh Selwyn Mauberley, section 1-5* "
4. Owen : " *Strange Meeting* "
5. Mac Neice : " *Snow* "
6. Apollinaire : " *Calligrammes* "
7. Mayakovsky : " *Vladimir Ilyich Lenin* "
8. Eliot : " *murder in the Cathedral* "
9. Shaw : " *St. Joan* "
10. DH Lawrence : " *Morality and the Novel* "
11. Orwell : " *1984* "
12. Harry Levin : " *What Was Modernism?* "
13. Spender : " *The Struggle of the Modern* "

Paper XII

POST- WAR LITERATURE

Objectives:

To familiarize the student with the development in literature written in English since the 1940s. The focus will be on British literature, although specimens from other cultures will also be examined.

Course Description:

Cultural Situation-the post-war ennui-disintegration of the Empire-age of disbelief-counter-culture movements-end of modern-ism-new developments-neo-modernism-theatre of protest-anger and after- movement poetry- postmodernism- metafiction- metatheatre- non fictional prose.

Required reading:

1. Philip Larkin : “*Church Going*”, “*Next Please*”
 2. Thorn Gunn : “*In Santa Maria del Popolo*”; “*On the Move*”
 3. Charles Tomlinson: “*Binoculars*”
 4. Ted Hughes : “*The Pike*”
 5. Seamus Heaney : “*Constables Calls*”; “*The Tollund man*”
 6. Elizabeth Jennings: “*The Child Born Dead*”
 7. Octavio Paz : “*For the painter Swaminathan*”
 8. Peter Porter : “*Your Attention Please*”
 9. Beckett : “*Waiting for Godot*”
 10. Edward Bond : “*Lear*”
 11. * Alan Sillitoe : *Loneliness of the Long Distance Runner*
 12. * Golding : *Lord of the Flies*
- (* No annotation questions from these items)

Background Reading:

1. RS Thomas : “*Soil*”; “*Death of a Peasant*”
2. Geoffrey Hill : “*Holy Thursday*”
3. Craig Raine : “*Martain Sends a Postcard Home*”
4. Charles Olson : “*Maximums to Himself (the first three poems)*”
5. Paul Celan : “*The Fugue of Death*”
6. Primo Levi : “*The Girl-child of Pompeii*”
7. Gunnar Ekelof : “*Xoanon*”
8. Osborne : “*Look Back in Anger*”
9. Stoppard : “*Rosencrantz and Guildenstern are Dead*”
10. Angela Carter : “*Nights at the Circus*”

Paper XIII

LITERARY THEORY

Objectives:

To familiarize the student with the major trends in modern literary theory through a reading of selected literary theorists of the contemporary times.

Course Description:

The linguistic background to contemporary theory-from the New Criticism to Structuralism- Structuralism and literary criticism-from structuralism to post structuralism-recent developments-influence of other disciplines-psychoanalysis-feminism-new historicism-new Marxism-political criticism.

Required reading:

1. Saussure : "*Nature of the Linguistic Sign*", *From Course in General Linguistics (Excerpt from Lodge, ed. Modern Criticism and Theory: A Reader)*
2. Jakobson : "*The Metaphoric and Metonymic Poles*"
3. Roland barthes : "*The Death of the Author*"
4. Hillis Miller : "*The Critic as Host*"
5. Elaine Showalten : "*Towards a Feminist Poetics*"
6. Jacques Derrida : "*Structure, Sign and Play in the Discourse of the Human Sciences*"
7. Michel Foucault : "*Nietzsche, Genealogy, History*" (*Excerpt from Raman Selden, ed, Theory of Criticism*)

Background Reading:

1. Sigmund Freud: "*Creative Writers and Day-dreaming*"
2. Shkhlovsky : "*Art as Technique*"
3. Levi-Strauss : "*Incest and Myth*"
4. Mikhail Bakhtin: "*From the Prehistory of Novelistic Discourse*"
5. Jacques Lacan : "*The Insistence of the Letter in the Unconscious*"
6. Eagleton : "*Political Criticism*"
7. Peter Barry : "*Beginning Theory*"
8. Catherine Belsey: "*Critical Practice*"
9. Terry Eagleton : "*Literary Theory*"
10. Fredric Jameson: "*Marxism and Form*"
11. Terence Hawkes: "*Structuralism and Semiotics*"
12. Frank Lentricchia: "*After the New Criticism*"

Paper XIV

INDIAN ENGLISH LITERATURE

Objectives:

To familiarize the student with some of the important specimens of Indian English literature and to provide him/her with a critical perspective on this genre of writing.

Course Description:

Indian English literature-nineteenth century attempts-poetry, fiction and drama in English by Indians in the twentieth century- post- independence generation-Rushdie's generation-the postcolonial question in Indian English literature.

Required reading:

1. Toru Dutt: *"Our Casuarina Tree"*; *"Lakshman"*
 2. Sarojini Naidu : *" Indian Dancers "*; *"The Pardah Nashin "*
 3. Tagore : *"The Child"*; *"Gitanjali", Section XXXV and XXXVI*
 4. Nissim Ezekiel : *" A Time to Change; "Poet, Lover, Birdwatcher"*
 5. AK Ramanujan : *"Looking for a Cousin on a Swing", "Ecology"*
 6. Kamala Das : *"An Introduction"; "My Grandmother House"*
 7. Jayanta Mahapatra *"Dawn at Puri"; "Hunger"*
 8. Girish Karnad : *"Hayavadana 9* Mulk Raj Anand: Coolie*
 9. *Salman Rushdie : *Midnight Children*
 10. * Shashi Deshpande: *That Long Silence*
 11. *Gauri Viswanathan : *Masks of Conquest (Introduction)*
- (* No annotation questions from these items)

Background Reading:

1. Dom Moraes : *" Landscape painter"; "Letter to My Mother"*
2. A K Mehrotra : *" Continuities"; "A Letter to a Friend"*
3. Vijay Tendulkar: *" Silence, the Court in Session*
4. Amitav Ghosh : *" Shadow Lines*
5. Arundhati Roy : *The God of Small Things*
6. Meenakshi Mukherjee: *The Perishable Empire*
7. Salman Rushdie : *Invisible Homelands*

Paper XV

POLTIICS OF NARRATION

Objectives:

1. To Introduce the student to the generic/formal aspects of narrative both in its fictional and non-fictional expression, (through the focus will primarily be on modern narrative, an attempt will also be made to trace it to its pre-history).
2. To familiarize the student with the ideology of form/genre by exposing him/her to specimens of narrative that both conform to and deviate from received assumptions about literary/non-literary writing.

Course Description:

Conventional theories of the novel-the prehistory of the novel-the rise of the novel and its relation to the emergence of modernity-the formal aspects of the novel- the ideology of realism-realism's relation to the world view of capitalism-flights from realism-flights from the literary-non fiction writing-post-modern writing.

Required reading:

The texts listed under Part A are theoretical/critical works and those under part B are non-theoretical writings. The student ie. Expected to make an intensive study of the non- theoretical works in the light of the insights derived from the theoretical works.

Part A

1. EM Forster: *Aspects of the Novel*
2. Henry James : “*The Art of Fiction*”
3. Ian Watt : *The Rise of the Novel (Chapters 1 and 2)*
4. Raymond Williams : “Forms of Fiction in 1848” in *Writing in Society*
5. Joseph Frank: “ Spatial Form in Modern Literature” , in *Twentieth Century Criticism: Major Statements*, ed. Handy and Westbrook.
6. Gayatri Chakrsvarti Spivak: “ Literary Representation of the Subaltern” , in *Subaltern Studies*, Vol.5

Part B

1. Sterne, *Tristram Shandy*
2. Jane Austen, *Mansfield Park*
3. Donald Barthelme, *Snow White*
4. Michael Ondaatjee, *The English patient*
5. Amitav Ghosh, *In an Antique Land*

Background Reading:

1. Luckacs: *Theory of the Novel*
2. Wayne C Booth: *The Rhetoric of Fiction*
3. Shlomith Rimmon-ICenan: *Mirrorive Fiction: Contemporary Poetics*
4. Shivarama Padikkal, 'Inventing Modernity: The emergence of the Novel in India', in *Interrogating Modernit*, ed. Niranjana et.al.

Paper XVI

MODERN INDIAN LITERATURE IN TRANSLATION

Objectives:

To familiarize the student with some of the important writings from modern Indian languages in English translation.

Course Description:

Issues in contemporary Indian literature-themes and trends-reform movements-nationalism-the range of forms-audience response-romanticism-symbolism- surrealism-modernism-experimental styles-progressive movement-the social problem play-the growth of prose literature-an integrated Indian literature-a plan Indian sensibility.

Required reading:

1. Mahadevi Varma : "No matter the Way"
 2. BS Mardhekar : " Water of the Ganges"
 3. M Gopalakrishna Adiga : " Do Something Brother"
 4. Gulam Muhamad Sheikh: " Jaisalmar I"
 5. Sarveswar Dayal Saxena: " Red Bicycle"
 6. Kedarath Singh : " What We Believe"
- (The above two poems are from *Another india*, ed. Nissim Ezekiel and meenakshi Mukherjee, Penguin, India, 1990)
7. Balamani Amma : " The Pen"
 8. Ayyappa paniker : " The lay of the Anklet"
- (The Above two poems are from *Our English, Our Literature: Gleanings from Haritham*, School of Letters, 2000)
9. Badal Sircar : *Evam Indrajit*
 10. * Rabindranath Tagore: *Gora*
 11. *Akilon : *Chittira Pavai*
 12. * OV Vijayan : *Legends of Khasak*
 13. * Bankim Chandra Chatterjee : *Anandamath*
- (* No annotation questions from these items)

Background Reading:

1. CJ Thomas : “Behold He Comes Again”
2. Vijay Tendulkar : *Ghasiram Kotwal*
3. Premchand : *Godan*
4. UR Anantha Murthy : *Samskara*
5. Meenakshi Mukherjee : *Realism and Reality*
6. GN Devy : *After Ammesia*

Paper XVII

WORLD CLASSICS IN TRANSLATION

Objectives:

To introduce the student to some of the classics of the literatures across the globe.

Course Description:

Selected epic and dramatic and fictional classics from ancient and modern Indian, Greek, Latin, Russian, German, Spanish and French literatures.

Required reading:

1. Sophocles : *Oedipus Rex*
2. Euripedes : *Medea*
3. Kalidasa : *Sakuntala*
4. Vyasa : *Mahabharata, the Drona Parva*
5. Homer : *The Odyssey*
6. Flaubert : *Madame Bovary*
7. Mann : *Buddenbrooks*
8. IChekhov : *The Cherry Orchard*

(No annotation question will be asked in the end-semester examination)

Background Reading:

1. Dante : “The Inferno”
2. Valmiki : *Ramayana*
3. Tasso : *Jerusalem Delivered, Book I*
4. Moliere : *The Misanthrope*
5. Brecht : *Mother Courage*
6. Marquez : *One Hundred Years of Solitude*

Paper XVIII

AFRICAN LITERATURE

Objectives:

To introduce the student to some of the major works in African literature written in English and to provide him/her with a critical Perspective on them.

Course Description:

Historical and social aspects of African literature-the symbolic importance of African writing-South African literature-writers from different parts of Africa.

Required reading:

1. Gabriel Okara : “The Snowflakes Sail Gently Down”; Once Upon a Time”
2. Okot P Bitek : “Song of Malaya”
3. Arthur Nortje : “ Letter from Pretoria Central Prison”; “Immigrant”
4. Ama Ata Aidoo : “The Messenger”; “motherhood and the Numbers Game”
5. Athol Fugard : “ Hello and Goodbye
6. Wole Soyinka : “ The Lion and the Jewel
7. Chinua Achebe : “ The Anthills of Savannah
8. JM Coetzee : Waiting for the Barbarians
9. Fanon : On National Culture (from *The Wretched of the Earth*)

Background Reading:

1. Christopher Okigbo : “The Passage”
2. John Pepper Clark : “ The Casualties”
3. David Diop : “ Africa”
4. Nelson Mandela : “ No Easy Walk to Freedom”
5. Ngugi Wa thiong O : *The River Between*

Paper XIX

ENGLISH LANGUAGE TEACHING

Objectives:

To introduce the student to the basic principles of English Language Teaching (ELT) and to familiarize him/her with the practical problems involved in the teaching of language and literature.

Course Description:

- a. Introduction to ELX-language learning-as first language and as second language-target language-difference between acquisition and learning-teaching of English as a foreign language-TEFL-TESOL.
- b. Theory, Method and Approach- the difference between theory, method and approach-behaviourist and cognitive theories- methods-grammar translation, audio-lingual, direct method-situational and communicative approaches-attitudes to error in language learning- notions of correctness and standards of usage.
- c. The four Skills in language learning-LSRW-receptive and productive skills-developing reading comprehension- intensive and extensive reading –developing listening comprehension-word stress and sentence stress in speaking- spelling and punctuation in writing.
- d. Teaching of grammar- structure of the English sentence-inflection-word order-tense-articles-prepositions and sentence-inflection-word order-tense-articles-prepositions and sentence patterns.
- e. Teaching of Vocabulary- active and passive vocabulary- vocabulary and structure control-structural and content words-procedures for teaching vocabulary items-use of dictionary.
- f. The teaching of literary texts-aims and objectives-use of literature for language teaching-teaching of prose, poetry, drama and fiction.
- g. Topics for practical work:
 1. Preparation of model lesson plan for teaching each of the four skills.
 2. Practice teaching-teaching of grammatical items-articles-prepositions-tense-sentence analysis
 3. Teaching of literary texts-prose, poetry, drama and fiction
 4. Testing and evaluation-setting model question papers-evaluating the performance of the students.

Background Reading:

1. Alien, HB; *Teaching English as a Second Language*
2. Alien and Campbell; *Problems and Principles In Language Teaching*
3. Tom McArthur: *A Foundation Course for Language Teachers*”
4. RB Lado: *Language Teaching: A Scientific Approach*
5. Jeremy Harmer: *The Practice of ELT*
6. Earl Stevick : *Teaching and Learning Languages*
7. Harold Palmer : *The Scientific Study and Teaching of Language*
8. Mary Finocchiaro: *English as a Second Language: From Theory to Practice*

9. Widdowson HG; *Teaching Language as Communication*
10. Ghosh, Sasikumar and Das; *Introduction to English Language Teaching, Volume 3 Methods at the College Level.*

Paper XX

STYLISTICS

Objectives:

To familiarize the student with Western and Indian theories of style and to enable him/her to analyse texts objectively, using the principles of stylistics.

Course Description:

1. The concept of style-definitions of style-Western and Indian.
2. Antecedents to stylistics-the influence of Saussure- practical criticism –New Criticism
3. Difference models of Stylistics- Bally and Saussurian Origins of structural stylistics-Jakobson and the poetic function of language-Riffaterre, Fish and affective stylistics.
4. Foregrounding as a stylistic device-style as convergence of features (Roger Fowler)-Halliday's functional stylistics-lexical sets-chain and choice relations and cohesion-levin's coupling transformational approach to style as worked out by Ohmann and Thorne
5. Stylistics-speaker-oriented (Spitzer), Hearer-oriented (Bally), objective and functional (Halliday), Generative (Taylor)
6. Stylistics and the teaching of literature-linguistics and styles-stylistics as providing an answer to the problems in the teaching of foreign languages-how linguistic features are to be presented in the class room-model analysis of literary texts and the use of stylistics in teaching literary pieces.
7. Indian approaches to stylistics- Bhamaha's Kavayalankara- Dandin's Kavyadarsa- Vamana's theory of Riti (Kavayalankara Sutravritti)

Background Reading:

1. Turner GW, Stylistics
2. J Talbot Taylor, *Linguistic Theory and structural Stylistics.*
3. Widdowson HG, *Stylistics and Teaching of Literature*
4. GN Leech, *A Linguistic Guide to English Poetry.*
5. Enkvist et al, *Language and Style*
6. Kate Wales, *A Dictionary of Stylistics.*
7. Raghavan and Nagendra, *An Introduction to Indian Poetics.*

Comprehensive Paper

Viva Voce

Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

MASTER OF BUSINESS ADMINISTRATION (MBA)

Course Co-ordinator: Dr. Johney Johnson

Academic support by
School of Management and Business Studies
Mahatma Gandhi University
Kottayam, Kerala

MASTER OF BUSINESS ADMINISTRATION (MBA)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Conventional Graduate and Post Graduate Programmes in addition to Diploma and Certificate Programmes which are very relevant to contemporary society. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University.

1. Programme's Mission & objectives :

Mahatma Gandhi University's MBA Programme under School of Distance Education produces capable business leaders who are prepared with the necessary management and research skills to make high-quality business decisions in either an entrepreneurial or staff capacity.

While we provide our MBA students with a solid foundation of human and technical management knowledge and skills. A hallmark of our Programme is the opportunity for students to pursue projects and mentored study on issues of their own interest. Our commitment to this process of active learning is driven by our desire to produce confident leaders who can think critically, engage in a process of discovery, and implement appropriate policies.

The MBA further supports the vision and mission of the School of Distance Education of the University by increasing the level of academic opportunity for the region, while enhancing the visibility and reputation of the School and University.

The Mahatma Gandhi University MBA program is designed with the following objectives:

1. To develop young men and women into professional managers to manage all sectors of the organized economic activity.

2. To equip the youngsters with conceptual and interpersonal skills and social purpose for managerial decision-making and its execution in real situations.
3. To develop and encourage the entrepreneurial capabilities of young generation to make them effective change agents.
4. To meet the demand for trained and professional people in the country at the top level management of business and industrial organizations in the light of the new economic and industrial policy of the country.

2. Relevance of the programme with HEI's Mission and Goals :

There is a great demand for quality MBA professionals in a growing economy like India. Also MBA is seen as an essential qualification for employed professionals for their career growth. In tune with the University's vision of making education accessible to the section of society who are deprived of time and money, this Programme offers an opportunity for everyone who are desirous of advancing their career path and knowledge.

3. Nature of prospective target group of learners:

The MBA Programme of Mahatma Gandhi University is aimed at working professional who wants to take their career to the next level and wants to pursue an MBA Degree Course but do not have time to attend the regular classes because he is doing a full time job.

or

A housewife who wants to continue their study but cannot go to college to attend the lectures.

or

A fresh graduate who wants to join a job but also wants to continue their higher studies.

4. Appropriateness of Programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence

An MBA is the most demanded Post Graduate Degree Programme in India. More than 5,00,000 students complete an MBA Degree Programme each year and this number is increasing each passing year. MBA is the only Degree Programme which popularity is increasing year by year.

An MBA degree from a reputed university can open up several doors for your career.

You can pick a specialization of your choice out of the tens of the specializations available.

5. Instructional Design

5.1 Curriculum Design

As part of curriculum design, the curriculum and syllabus revision workshop considered curriculum analysis of social needs, translating the needs into course, splitting the objectives into specific objectives, grouping the specific objectives into subjects, deriving the subjects from the

classification, specifying enabling objectives, unitizing each subject matter, specification of required time and syllabus formulation.

There are 28 courses along with a organization study (minor project) in the third semester and a major project in the final semester. Each course is of 3 credits. The minor project is also of 3 credits but the major project is of 6 credits. Altogether the total credit for the MBA Programme is 93 credits.

5.2. Program details

FIRST SEMESTER

Course No.	Title	Course Type	Credit	Contact Session (Hrs)	Internal Evaluation Marks	External Evaluation Marks	Total Marks
DMB1CRT01	Principles of Management	Core	3	9	20	80	100
DMB1CRT02	Managerial Communication	Core	3	9	20	80	100
DMB1CRT03	Managerial Economics	Core	3	9	20	80	100
DMB1CRT04	Accounting for Management	Core	3	9	20	80	100
DMB1CRT05	Quantitative Methods for Management	Core	3	9	20	80	100
DMB1CRT06	Legal Environment of Business	Core	3	9	20	80	100
DMB1CRT07	Computer Application in Business	Core	3	9	20	80	100
DMB1CRT08	Organisational Behavior	Core	3	9	20	80	100
	Total		24	72	160	640	800

SECOND SEMESTER

Course No.	Title	Course Type	Credit	Contact Session (Hrs)	Internal Evaluation Marks	External Evaluation Marks	Total Marks
DMB2CRT09	Financial Management	Core	3	9	20	80	100
DMB2CRT10	Marketing Management	Core	3	9	20	80	100
DMB2CRT11	Human Resource Management	Core	3	9	20	80	100
DMB2CRT12	Operations Management	Core	3	9	20	80	100
DMB2CRT13	Environment Management	Core	3	9	20	80	100
DMB2CRT14	Operations Research	Core	3	9	20	80	100
DMB2CRT15	Research Methodology	Core	3	9	20	80	100
DMB2CRT16	Management Information Systems	Core	3	9	20	80	100
	Total		24	72	160	640	800

THIRD SEMESTER

Course No.	Title	Credits	Contact Session (Hrs)	Internal Evaluation Marks	External Evaluation Marks	Total Marks
DMB3CRT17	International Business	3	9	20	80	100
DMB3CRT18	Business Ethics & Corporate Governance	3	9	20	80	100
DMB3EC1	ELECTIVE 1 (Major Specialization)	3	9	20	80	100
DMB3EC2	ELECTIVE 2 (Major Specialization)	3	9	20	80	100
DMB3EC3	ELECTIVE 3 (Major Specialization)	3	9	20	80	100
DMB3EC4	ELECTIVE 4 (Major Specialization)	3	9	20	80	100
DMB3EC5	ELECTIVE 5 (Minor Specialization)	3	9	20	80	100
DMB3EC6	ELECTIVE 6 (Minor Specialization)	3	9	20	80	100
DMB3PR19	Organization Study (Minor project)	3	9	20	80	100
	Total	27	82	180	720	900

FOURTH SEMESTER

Course No.	Title	Credits	Contact session (Hrs)	Internal Evaluation Marks	External Evaluation Marks	Total Marks
DMB4CR20	Strategic Management	3	9	20	80	100
DMB4EC7	ELECTIVE 7	3	9	20	80	100
DMB4EC8	ELECTIVE 8	3	9	20	80	100
DMB4EC9	ELECTIVE 9	3	9	20	80	100
DMB3PR21	Major Project & Comprehensive Viva Voce	6			200	100
	Total	18	36	80	520	600
	Grand Total	93	260	580	2520	3100

LIST OF ELECTIVES

1. Marketing Management
2. Financial Management
3. Human Resource Management

5.3 Duration of the Programme

The Programme shall have four semesters. Each semester shall consist of 16 weeks. Instruction and University examinations in each course in a semester shall be completed within 90 days in a semester.

Contact Lecture Hours

Each course shall have a minimum of 60 contact hours per semester. University shall arrange contact classes at notified centres on week end holidays and other public holidays.

5.4 Faculty and Support staff Requirement

Course Co-ordinator

Dr Jhoney Johnson

Ass. Professor, School of Management and Business Studies, Mahatma Gandhi University

Qualification: MBA, M Phil, Ph D (Management), PGDOR

Teaching faculty

The teaching faculty shall be drawn from university departments offering MBA Programme.

Instructional delivery Mechanism

In addition to provide SLMs prepared in line with the UGC guidelines on preparation of SLMs, the students are offered contact classes at the head quarters of the School of Distance Education and at the Learner's Support Centers during the weekend. The duration of the MBA Programme of study is two years with four semesters.

Student Support Service Systems at SDE

The SDE establishes Learner Support Centres for the students at different locations within the jurisdiction of the University to facilitate contact classes and practical sessions.

In addition to this, the university has centralized resources to enable the student support activities in respect of Information Centre, Library with good collection of books and journals, Wi-Fi connectivity, Counselling, Students Grievance Redressal Cell, Post Office , Snack bar and Refreshment Centre, Reprographic centre, Drinking water etc.

6. Procedure for admissions, curriculum transaction and evaluation :

6.1 Eligibility for admission

Any student who has passed any degree of the University of Mahatma Gandhi University (including degree Programmes of SDE, Mahatma Gandhi University) or that of any other University or institute or institution recognized by the UGC or AICTE. Programmes of other Universities or

institutions shall be in 10+ 2+ 3 pattern (or 10+ 2+ 4) under regular stream. In all the cases, the student should have passed the bachelor degree examination with not less than 50 % marks in aggregate including the marks of languages if any (without approximation, that is, 49.9999 % is not eligible since it is less than 50%), is eligible for admission. However, SC/ST, OBC, and other eligible communities shall be given relaxation as per University rules.

6.2 Admission Procedure

Admission to MBA Degree Programme of the study shall be on the basis of merit as determined by KMAT/CMAT/CAT/XAT /MGU-MAT Entrance Examination and the marks obtained by the candidates in the bachelor degree examination put together in the following order.

6.2.1 The rank score shall be based on:

Entrance examination carrying 120 marks

Plus Two / PDC marks 30 marks

Total 150 marks

A minimum of 30 marks should be scored for a pass in the entrance examination.

6.2.2 The weightage for Plus Two / PDC shall be based on total marks obtained by the students in all parts, (that is, languages and subjects or Part I, Part II and Part III) as follows:

Up to 50% aggregate marks obtained in the plus two examination: No weightage.

For every one percent additional marks obtained for the Plus two/ Higher secondary/ PDC examination over and above 50% marks, one mark weightage will be given subject to a maximum of 30 marks for up to 80 % of marks obtained for the Plus two/ Higher secondary/ PDC examination. For calculating this academic weightage, marks obtained in the Plus two/ Higher Secondary /PDC up to 0.49% will be rounded to lower full digit marks and 0.5 and above will be rounded to next full digit marks.

6.2.3 A rank list shall be prepared by the University based on the final rank score computed as above and a counseling session shall be conducted for admission to the MBA Programme. While preparing the rank list, if there is same index mark for more than one candidate, they will be ranked on the basis of the actual marks obtained in the written test. Even after this, if there is a tie they will be ranked on the basis of actual marks obtained for Plus Two examination. If tie exists even after with this, the date of birth is to be considered and the elder person is to be given preference in the admission.

6.2.4 The university reserves the right to attach any candidate to any centres for academic administration, contact classes and other related activities. The maximum number of students attached to any of the University centres will be students.

6.2.5 The candidates admitted to MBA course must produce the qualifying Degree Certificate/Provisional Certificate/Confidential mark list, latest at the last date of closing PG admission by the University. If he/she fails to produce the same, his or her admission will be cancelled on the next working day. The University will not be liable for the loss caused to the student.

Fees:- **Rs.29000/-** for Full Programme

6.3 Attendance

A student shall attend at least a minimum of 50 % of the number of contact classes actually conducted in a semester to be eligible for appearing for university examination of that semester. Course wise minimum attendance for the contact classes will not be insisted. If the student has shortage of attendance in a semester, he or she shall not be allowed to appear for examination of that semester. However, the University may condone shortage up to 10 % of the maximum number of contact hours per semester. If the candidate has shortage more than this limit he/she has to compensate the shortage of attendance of that semester along with the next batch and appear for the university examination of that semester.

6.4 External Examination

6.4.1 The University shall conduct semester end examinations, carrying 4credits for full course and 2 credits for half course, for each of the courses in the first, second, third and fourth semesters.

6.4.2 The duration of examination shall be three hours for full courses and 1½ hours for half courses.

6.4.3 A student shall register for all the courses in a semester to appear for examination in the respective semester itself. Part appearance shall not be allowed for first appearance.

6.5 Project Report Minor

6.5.1 During the third semester the student shall do a minor project in a business organization under a faculty guide.

6.5.2 The faculty guide must have either

- (a) M. Phil or Ph.D. in Management
- (b) two years teaching experience in MBA.

6.5.3 The student shall prepare and submit a project report to the university through the centre to which the student is attached.

6.5.4 The report shall be printed and bound (preferably Hard bound) with not less than 50 A4 size pages.

6.5.5 The student shall prepare at least two copies of the report: one copy for submission to the university and one copy for the student. More copies may be prepared If the organization or the guide or both ask for one copy each.

6.5.6 The project report should be submitted to the centre two weeks before the date of commencement of University examinations in the third semester MBA courses.

6.5.7 If the student fails in submitting the project on or before the above date, an application for late submission along with the necessary fee for late submission as fixed by the University shall be forwarded to the Controller of Examinations along with the project report.

6.5.8 However such submission shall not be accepted after the end of University Examinations of the third semester MBA.

6.5.9 Project work shall have the following stages

- Project proposal presentation
- Field work and data analysis
- Report writing
- Draft project report presentation
- Final project report submission

6.5.10 The project is done individually.

6.5.11 Resubmission of such project reports shall be done within a month from the date of returning them to the students with necessary instruction for redoing or modification.

6.5.12 The duration for minor project work is two weeks for data collection and field work.

6.5.13 A certificate showing the duration of the project work shall be obtained from the organization for which the project work was done and it shall be included in the project report.

6.5.14 Structure of the report (Common for minor and major projects)

Title page

Certificate, in original, from the organization (for having done the project work)

Certificate from faculty guide

Acknowledgements

Contents

Chapter I : Introduction (Organization profile, Research problem, objectives of the study, Research methodology etc.)

Chapter II : Review of literature / Theoretical profile

Chapters III and IV: Data Analysis (Can be 3 or more chapters)

Chapter V : Summary, Findings and Recommendations.

Appendix (Questionnaire, specimen copies of forms, other exhibits etc.)

Bibliography (books, journal articles etc. used for the project work).

6.6 Major Project

6.6.1 The students shall do a major project during their final semester of MBA under a faculty guide, preferably in their area of specialization.

6.6.2 For guide, the qualification is the same as for minor project.

6.6.3 The duration of fieldwork for major project is six weeks.

6.6.4 This project work is to be done individually by the students.

6.6.5 The student shall prepare and submit a project report, printed and bound (preferably hard bound) with a minimum of 100 A4 pages of text, to the Head of the Department or Centre or Institute before the last working day of the final semester.

6.6.6 The Director SDE shall send the projects of all the students together to the Controller of Examinations well in time so that they are received in the Pareeksha Bhavan within two weeks from the last date for project submission to the Director.

6.6.7 Projects received late shall be forwarded to the Controller of Examinations along with a request for late submission supported by necessary fee for late submission as fixed by the University.

6.6.8 However, such late submission shall be done within one month of the last date for final semester project submission.

6.6.9 All other regulations for MBA minor project are applicable to major project.

6.7 Evaluation of Minor and major Project Report

The minor and major project done during the third and fourth semester shall be evaluated by one examiner appointed by the controller of examinations.

6.8 Minimum credits for Project Report

6.8.1 The student should get a minimum of 50% marks (GPA of 2) for project report for a pass in both minor and major projects.

6.8.2 If the student fails to get 50 % marks (GPA of 2) for any project report, he or she shall resubmit the project report after modifying it on the basis of the recommendations of the examiners. This can be done immediately after publication of results.

6.9 Viva Voce Examination

6.9.1 At the end of fourth semester, each student shall attend a comprehensive viva voce examination.

6.9.2 The Viva Board shall have at least two members. The University shall appoint the examiners.

6.9.3 The viva voce will be about all the courses of the four- semester Programme, including project reports.

6.9.4 The student should get 50% marks(GPA of 2) in the viva voce for a pass in viva voce.

6.10 Scheme of Instruction and Examination : Explained above

6.11 Time Limit for Completion and Validity of Registration

The registration for MBA shall be valid for five academic years including the academic year of registration. A student is expected to complete all the MBA courses within these five years.

6.12 Failed students

6.12.1 If a student fails in any course or courses, he or she shall reappear in that course or courses in the regular examinations of the respective semester of any of the successive batches of MBA students.

6.12.2 If they fail to pass in any course or courses within the five years, then they shall be required to reregister for the course they did not complete by paying the fees fixed by the university and appear for the university examination.

6.13 Change in curriculum and Chances to students

If MBA curriculum change is implemented in any year, the students who registered under the old scheme shall be allowed to appear in those courses in which they failed, subject to a total of three chances and a time limit of five academic years including the academic year of registration for MBA.

6.14 Discontinuation and Readmission

If a student wants to discontinue from MBA Programme, he or she can do it provided the student pays the fee as is required by the general regulations of the University. But readmission may be allowed only if the student has completed at least the first semester with a minimum of 75% attendance and has registered for University examinations in the first semester courses, provided the Department, Centre or Institute agrees to readmit him or her to the next semester of the MBA Programme.

6.15 Pass minimum

6.15.1 Each student shall secure a minimum of 50% marks (GPA of 4 for project, 2 for full course or 1 for half course) in university examination for each course for a pass in that course. The classification of results may be as follows:

Letter grade Grade point range Performance level

A	= 3.5 to 4.0	=Excellent
B	= 2.5 to 3.49	=Very good
C	= 2.2 to 2.49	= Good
D	= 2.0 to 2.19	= Average
E	= 0.5 to 1.99	= Poor
F	= Below 0.5	= Very poor

6.15.2 A candidate who passed the courses in the first two semesters in regular sitting or supplementary sittings before the completion of the course and any of the third and fourth semester papers by taking one supplementary chance after the completion of the course (one chance for third semester papers and one for fourth semester papers) shall also be given class/grade, based on the percentage of marks obtained by him or her.

6.16 Option to switch over from MBA Programme to Diploma in Management (DIM) / Post Graduate Diploma Programme in Management:

On completing successfully the First Semester candidates are awarded with the Diploma in Management (DIM). Candidates who have registered for MBA Program but could not successfully complete all the courses necessary for the award of MBA degree, but completed some courses successfully can switch over from MBA Program to the following PG Diploma programs after the second semester MBA examination. In such case his/her MBA registration will be cancelled and fresh registration for PG diploma will be given on the basis of the request from the candidate. The courses already completed successfully in the MBA program which are necessary for PG Diploma program will be retained. Remaining courses required as per this regulation for PG Diploma program need only to be completed for the award of PG Diploma.

PG Diploma in Financial Management (PGDFM)

S No.	Course code	Title of the course	Maximum credits	Minimum GPA for a pass	
1	CC01	Principles of Management	40	60	100
2	CC 09	Financial Management	4	2	
3	MBA FIN	Any four functional electives Functional Elective 1	4	2	
4	MBA FIN	Functional Elective 2	4	2	
5	MBA FIN	Functional Elective 3	4	2	
6	MBA FIN	Functional Elective 4	4	2	
7	MBA 3.8	Minor Project	4	2	
		TOTAL	28	14	

PG Diploma in Marketing Management (PGDMM)

S No.	Course code	Title of the course	Maximum credits	Minimum GPA for a pass
1	CC01	Principles of Management	4	2
2	CC10	Marketing Management	4	2
3	MBA MAR	Any four functional electives in Marketing Functional Elective 1	4	2
4	MBA MAR	Functional Elective 2	4	2
5	MBA MAR	Functional Elective 3	4	2
6	MBA MAR	Functional Elective 4	4	2
7	MBA 3.8	Minor Project	4	2
8		TOTAL	28	14

PG Diploma in Human Resource Management (PGHRM)

S No.	Course code	Title of the course	Maximum credits	Minimum GPA for a pass
1	CC01	Principles of Management	4	2
2	CC11	Human ResourceManagement	4	2
3	MBA HRM	Any four functional electives in Human Resource Management Functional Elective 1	4	2
4	MBA HRM	Functional Elective 2	4	2
5	MBA HRM	Functional Elective 3	4	2
6	MBA HRM	Functional Elective 4	4	2
7	MBA 3.8	Minor Project	4	2
8		TOTAL	28	14

6.17 Specialization

6.17.1 There shall be two categories of specialization: full specialization (five courses) and dual specialization with three courses from one area and two courses from another area).

6.17.2 If the student opts for and passes in a minimum of five courses in any elective area, he or she may be issued mark lists showing full specialization as Marketing Management, Financial Management etc.

6.17.3 If the student chooses three courses in one specialization area and two courses from another specialization area, he or she may be issued mark lists with dual specialization as Marketing Management and Financial Management etc

6.18 Specialization Areas:

6.18.1 Marketing

MBA MAR 1 Marketing Research (3rd semester)

MBA MAR 2 Consumer Behavior (3rd semester)

MBA MAR 3 Advertising and Sales Promotion (3rdsemester)

MBA MAR 4 International Marketing (4th semester)

MBA MAR 5 Service Marketing (4th semester)

MBA MAR 6 Retail Management (4th semester)

6.18.2 Finance

MBA FIN 1 Strategic Financial Management (3rd semester)

MBA FIN 2 International Finance (3rd semester)

MBA FIN 3 Forex Management (3rd semester)

MBA FIN 4 Financial Services (4th semester)

MBA FIN 5 Working capital Management (4th Semester)

MBA FIN 6 Treasury Management(4th semester)

6.18.3 Human Resource Management

MBA HRM 1 Human Resource Planning and Development (3rd semester)

MBA HRM 2 Management of Industrial Relations (3rd semester)

MBA HRM 3 Organizational Development and Change (3rd semester)

MBA HRM 4 Global Human Resource management (4th semester)

MBA HRM 5 Management Training and Development (4th semester)

MBA HRM 6 Performance Management (4th semester)

7.19 For all other matters which are not specified in this regulation the common regulation for PG Programme under CBCSS for affiliated colleges will be applicable.

7. Requirement of the library resources:

The library and infrastructure support of the Centre will be extended to learners as per requirement.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and Libraries of the 4 study centres. The University Library was established in 1989. The University Library which is situated on the main campus and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area and consists of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library provides service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. Reading space is provided on all the three floors housing the various sections of the library. The library provides reading facility to visually impaired users too. For this, an electronic lab custom

made for visually and physically challenged users has been set up during 2016. The libraries of teaching departments are open during working hours of the Schools.

The University Library has a Library Advisory Committee. It is an 18 member committee with the Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, Bi-monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as & DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its online thesis digital library. The various department libraries too have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	School of Management and Business Studies	7549

8. Cost Estimate of the Programme and Provisions

Sl.No	Expenditure	Cost estimate for MBA Programme (100 students)
01	Pay and Allowance	6,50,000
02	Contact classes and evaluation	2,30,000
03	Course materials	2,20,000
04	Advertisement charges	35,000
05	Postage and telephone	10,000
06	Books and Periodicals	80,000
07	Miscellaneous	20,000
	Total	12,45,000
	Provisions (10%)	1,24,500
	Total	Rs. 13,69,500/- Cost per student per year=Rs.13,695/-

9. Quality assurance mechanism and expected Programme outcomes

The SDE has devised the following mechanism for monitoring the effectiveness of the MBA Programme to enhance its standards of curriculum, instructional design etc.

(a) Established a monitoring Committee at the University level to develop and put in place a comprehensive and dynamic internal quality assurance system to enhance the quality of the Programmes offered through distance mode as per the norms and guidelines of the University Grants Commission (Open and Distance Learning) Regulations, 2017.

(b) The SDE has an approved panel of experts for preparing SLM. The SLM prepared is being edited by the board of subject expert. The SLMs are developed with the approach of self explanatory, self-contained, self-directed, self-motivating and self-evaluating.

(c) The SDE of the University has full time faculty members exclusively for coordinating the Programme and also has a panel of qualified guest teachers for counselling students and engaging in personal contact Programmes.

MAHATMA GANDHI UNIVERSITY KOTTAYAM

REGULATION

1. COURSE OBJECTIVES

The MG University MBA program is designed with the following objectives:

1. To develop young men and women in to professional managers to manage all sectors of the organized economic activity.
2. To equip the youngsters with conceptual and interpersonal skills and social purpose for managerial decision-making and its execution in real situations.
3. To develop and encourage the entrepreneurial capabilities of young generation to make them effective change agents.
4. To meet the demand for trained and professional people in the country at the top level management of business and industrial organizations in the light of the new economic and industrial policy of the country.

2. COURSE DURATION

The MBA (Full Time) programme of Mahatma Gandhi University shall be spread in two years duration with 4 Semesters. Each semester shall comprise of a minimum of 16 instructional weeks of 5 days each of 5 hours a day (total contact hours 400). Continuous Internal Evaluation during the course period and University examination at the end of each semester shall be conducted. There shall be a semester break of 15 days each in addition to the usual Onam, Christmas and summer holidays.

3. ELIGIBILITY FOR ADMISSION

1. A pass in any Bachelor's Degree Examination of Mahatma Gandhi University or an equivalent degree of any other universities duly recognized by M.G.University with not less than 50% marks in the aggregate for all parts of examination or a Master's Degree examination with 50% marks in aggregate.
2. SC/ST students

A pass in any Bachelor's Degree examination is needed for SC/ST candidates

4. ADMISSION PROCEDURE

Admission to MBA Degree programme of the study shall be on the basis of merit as determined by MAT/CAT/XAT /MGU-MAT and Group discussion & interview conducted by Mahatma Gandhi University. A five member committee will be constituted

by Hon. Vice Chancellor for conducting the admission procedure for MBA Programme including MGU – MAT, Dean Faculty of management will be the Chairman of the Committee and Director, School of Management and Business Studies shall be the member secretary. Among the five members, two members will be from the affiliated colleges of MG University where MBA programme is going on, one member will be a university professor in management school outside Mahatma Gandhi University. MGU-MAT will be conducted by School of Management and Business Studies, monitored by the above mentioned committee.

A rank-list shall be prepared on the basis of the sum of the following three components.

- a) Test Score 80%
- b) Group Discussion 10%
- c) Interview 10%

Candidates will be called for the interview on 1:3 basis.

Based on the score in the test candidate shall be short-listed for Group Discussion and Personal Interview. While preparing the rank list, if there is same index marks for more than one candidate, he/she will be ranked on the basis of actual marks obtained in the qualifying exam. Even after this, there is a tie; they will be ranked on the basis of date of birth that is the elder person is to be ranked higher. Based on the performance on the written test, Group Discussion and interview, merit list will be prepared and published by the committee.

Out of the total sanctioned seats, 50% shall be merit quota (govt. quota) and 50% shall be management quota. Merit quota shall be filled strictly in accordance of the institutional preference opted by the student. Allotment will be done by the admission committee.

Options will be collected by the University from the candidates during counseling and will make allotment of candidate to different institutes on the basis of merit. Reservations applicable as per govt. rule. Based on this, allotment letter will be given by the university to the candidates and the college shall give admission to the candidates in the merit quota (govt. quota).

If sufficient candidates are not joining in the merit quota seats, the college shall report the matter to the university and with the written permission of the university the college management may fill the seats from the merit list.

5. FEE STRUCTURE

For affiliated aided institutions govt. fee structure is applicable to both merit and management seats. For unaided affiliated institutions the fee structure will be decided by fee fixation committee nominated by govt. of Kerala from time to time.

Any form of capitation is strictly prohibited.

6. LIST OF COURSES OF MBA PROGRAMME

FIRST SEMESTER

Course No	Title	Internal Evaluation Marks	External Evaluation Marks	Total Marks
CC01	Principles of Management	40	60	100
CC02	Managerial Communication	40	60	100
CC03	Managerial Economics	40	60	100
CC04	Accounting for Management	40	60	100
CC05	Quantitative Methods for Management	40	60	100
CC06	Legal Environment of Business	40	60	100
CC07	Computer Application in Business	40	60	100
CC08	Organisational Behavior	40	60	100
	Total	320	480	800

SECOND SEMESTER

Course No	Title	Internal Evaluation Marks	External Evaluation Marks	Total Marks
CC09	Financial Management	40	60	100
CC10	Marketing Management	40	60	100
CC11	Human Resource Management	40	60	100
CC12	Operations Management	40	60	100
CC13	Environment Management	40	60	100
CC14	Operations Research	40	60	100
CC15	Research Methodology	40	60	100
CC16	Management Information Systems	40	60	100
CC17	Viva-Voce		100	100
	Total	320	580	900

THIRD SEMESTER

Course No	Title	Internal Evaluation Marks	External Evaluation Marks	Total Marks
CC18	International Business	40	60	100
CC19	Business Ethics & Corporate Governance	40	60	100
EC 1	ELECTIVE 1 (Major Specialization)	40	60	100
EC 2	ELECTIVE 2 (Major Specialization)	40	60	100
EC 3	ELECTIVE 3 (Major Specialization)	40	60	100
EC 4	ELECTIVE 4 (Major Specialization)	40	60	100
EC 5	ELECTIVE 5 (Minor Specialization)	40	60	100
EC 6	ELECTIVE 6 (Minor Specialization)	40	60	100
CC 20	Organization Study	40	60	100
	Total	360	540	900

FOURTH SEMESTER

Course No	Title	Internal Evaluation Marks	External Evaluation Marks	Total Marks
CC21	Strategic Management	40	60	100
EC 1	ELECTIVE 7 (Major Specialization)	40	60	100
EC 2	ELECTIVE 8 (Major Specialization)	40	60	100
EC 3	ELECTIVE 9 (Minor Specialization)	40	60	100
CC22	Project & Comprehensive Viva Voce	-	200	200
	Total	160	440	600

TOTAL MARKS	3200
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7. LIST OF ELECTIVES

1. Marketing Management
2. Financial Management
3. Human Resource Management

8. COURSE CALENDER

Date of announcement of the course will be done by the university. In order to streamline the MBA programme, colleges are permitted to make their individual announcement of the course only after the course announcement of the university. The course calendar published by the university should be strictly followed for ensuring timely conduct of the course, examinations and publication of results. The course calendar should be prepared by convening a meeting of Principals / Directors of all affiliated management colleges / institutes. This meeting should be convened before the announcement of MBA programme, each year. Semester classes should be started and completed on the stipulated dates at all affiliated colleges / institutes as notified by the university.

With in a week after the commencement of classes of the first semester MBA, Head of each institution should forward the list of faculty members working in the college / institutes along with their qualifications and years of teaching experience, specialization and other relevant details to the university in a format given by the University. Affiliated aided colleges are exempted from this provision. Head of each

institution shall ensure the availability of sufficient number of regular faculty members having experience and qualifications as per AICTE / UGC guidelines in the institution.

9. SCHEME OF THE COURSE

1. The Full time Two-year MBA programme will have four semesters each having 18 work weeks.

2. The First and Second semesters each will have 8 full Courses with 75 contact hours each. All these courses are core courses. Each course carries 100 marks (Internal 40 and External 60). In addition, an External Viva-Voce examination will also be conducted at the end of the Second Semester. There will be a total of 1700 marks for First and Second Semesters (800+900).

3. The Third Semester will have 8 courses with 75 contact hours each and a placement in connection with an organization centered study. Out of the 8 courses two are compulsory and other 6 are electives. Of the six electives 4 courses from one major functional area opted by the student and remaining 2 in another minor functional area opted by the student. Every student has to undergo a placement work and produce a report on an organization centered study based on the organization to which he/ she is deputed. This study and the report will be treated as full course carrying 100 marks. The internal marks for the organization study will be awarded by means of seminar presentation cum viva-voce conducted by a board appointed for this purpose by the Faculty Council of the Institute. Students are permitted to do their organization study only in a nationally or internationally reputed business organization for a period not less than 4 weeks. While selecting the organization students should make sure those four functional areas such as Production, Marketing, Finance and HR Departments are available in those organisations. There will be a total of 900 marks in the third semester.

4. For the Forth Semester, there are 4 full courses of which one is compulsory. Of the remaining 3, two subjects will be from the major functional area opted by the student and one form the minor area opted by the student. In addition the students are required to do a project Work of a problem centered nature and the Dissertation is to be submitted before the commencement of Fourth semester examination. Total duration of this project study is 8 weeks and total marks for the dissertation is 200. Project work should be done in a nationally or internationally reputed organization. Students are expected to select the project study from any one functional area that they have opted as their major functional area. Training should be done strictly under the supervision of an executive allotted by the organization. An attendance certificate should be obtained from the organization as a proof of the successful completion of the training and the same should be incorporated in their project report. For the preparation of the Project report the Head of the Department will entrust one Faculty Member to supervise the student. There will be comprehensive viva at the end of the fourth semester along with the evaluation of the project report.

5. The electives offered in the third and fourth semesters will be depending on the preference, aptitude of the students, availability of the Faculty and other facilities in the institution.

6. Total marks for third and fourth semester will be 1500 (900+600).
7. All clauses of MBA Regulation (Full Time) 2010, except which are under the consideration of Hon. High Court of Kerala are applicable along with these scheme and syllabus.
8. List of courses mentioned in the MBA Regulation (Full Time) 2011 is replaced and modified by the list of courses appended in the new scheme and syllabus.

10. SCHEME OF EXAMINATION AND RESULTS

Assessment of students:

Assessment of students for each course / subject will be done by internal continuous assessments and end semester examinations. Internal assessment shall be conducted throughout the semester. It shall be based on internal examinations and assignments as decided by the faculty handling the course. Assignments includes homework, problem solving, group discussions, quiz, term project, spot test, software exercises etc. Details of assignments of every semester shall be submitted by the faculty members in an assignment book to the principal / director of the institution. This is to facilitate uniformity in the internal evaluation process.

End semester examinations of all subjects will be conducted by the university.

1. There shall be four sets of examinations to be conducted at the end of each semester of 3 hours duration for each course.
2. The marks required for a pass is 50%. There is separate minimum for all courses and for internal and external (University) examinations.
3. No student shall be permitted to appear for the university (external) examinations unless he/she secures at least 50% marks in the internal evaluation in each course

The distribution of internal assessment marks will be as follows:

- | | |
|---|----------------|
| 1.Periodical tests (subject to a minimum
of 3 tests for each course) | 60% (15 marks) |
| 2.Assignments, Seminars, group discussions
term projects etc. | 30%(15 marks) |
| 3.Classroom participation, attendance
punctuality and discipline | 10%(10 marks) |

4. Candidates who have secured not less than 60% marks in the aggregate of total marks for all papers in four semesters (both internal and external together) in the examination shall be declared to have passed the MBA degree examination in first class.

5. Candidates who obtain an average of not less than 75%of the total marks (as explained in clause 4 above) shall be declared to have passed the MBA degree examination with Distinction.

6. The internal assessment marks shall be awarded by the concerned faculty member in charge of the course based on the guidelines stipulated in clause 3 above. A

systematic record for the award of internal assessment marks shall be maintained in the department duly signed by the concerned faculty members and counter signed by the Head of the Department. It should be placed in the notice board two weeks before finalising the marks.

7. In case a candidate fails to secure the required minimum of 50% marks in internal assessment, he may secure it by repeating the course altogether in a regular class or by taking the course with a faculty member assigned by the Head of the Department in a subsequent semester provided that the candidate has failed to obtain the 50% marks in the first instance, but such improvement in sessionals in the same paper can not be attended more than once.

8. Candidates for the MBA degree shall be eligible to undergo the course of study in the next semester and take the examination of that semester, irrespective of the results of the examinations of the previous semester provided they have completed all the formalities of attendance, payment of all fees due to the university and registration for the examinations in the earlier semesters.

11. REGISTRATION FOR EACH SEMESTER

Every candidate should register for all subjects of the end semester examinations of each semester. A candidate who does not register will not be permitted to attend the end semester examinations. He shall not be permitted to attend the next semester.

1. No student shall be allowed to appear for the university examinations (written and viva-voce), if he/she has not secured 75 % attendance for each course.

2. For a student to claim specialization in any functional area he/she must have taken a minimum of 6 courses in that area of specialization.

12. IMPROVEMENT

Candidates shall be allowed to improve the result of any subject along with the examination of their immediate junior batch. There will be no supplementary examination.

13. EXAMINATION MONITORING CELL

Head of each institution should constitute an examination-monitoring cell at the institution for supervising all examinations especially the internal examinations. This cell with a senior faculty member as convener shall consist of minimum three faculty members (one shall be a lady). A clerical staff having computer skill shall be assigned for assisting the examination monitoring cell.

13. (a) The following are the collective responsibilities of the examination-monitoring cell.

1. Schedule and conduct all internal examinations
2. Act as the examination squad to keep a vigil on all internal and university examinations.
3. To receive any complaints from students regarding issues like out of syllabus questions, printing mistakes etc. of end semester examinations. The cell shall investigate these complaints and if necessary forward to university with specific commends.
4. To receive any complaints from students regarding internal examinations, award of marks and any allegation of victimization. Enquire such incidents and give a report to the head of institution for necessary action.
5. To function as a wing of the office of the Controller of the Examinations of the university at institution level.

14. CLASS COMMITTEE

Head of institution shall take necessary steps to form a class committee for each class at the beginning of classes of each semester. This committee shall be in existence for the concerned semester. The class committee shall consist of Head of Department as Chairman of the committee, Faculty advisor of the class, a senior faculty member of the department and three student representatives (one of them should be a girl). There should be at least two meeting of the class committee every semester. It shall be the responsibility of the Head of Department to convene meetings.

14. (a) Responsibilities of Class Committee

1. To review periodically the progress and conduct of students in the class.
2. To discuss any problems concerning any subject in the concerned semester.
3. Maintain strict vigil against ragging.
4. Any other relevant issues.

15. MBA Degree Programme Syllabus appended

SYLLABUS – MBA

(EFFECTIVE FROM 2012 ACADEMIC YEAR ONWARDS)

CC 01- PRINCIPLES OF MANAGEMENT

Module I

Management- Definitions- Nature and significance- Management as a Profession - Evolution of management and major schools of thought- Early management thoughts – Modern management thoughts.

Module II

Managerial functions, Planning – steps – types of plans, basics of strategies and policies – Formulation – Evaluation – Correction.

Module III

Organizing – basic concepts - Centralization and Decentralization,- Other elements of Organizing Staffing, Directing, Controlling – process & basic methods, Coordinating. Management by Objectives -- Organisational Structure: Departmentation -Line/Staff Authority and Decentralization.

Module IV

Co-ordination functions in Organisation - Human Factors and Motivation, Committees and group decision making - Communication - Decision making in organizations: Influences-Individual differences and organizational constraints. Leadership- Styles, Behavioral and Situational approaches. Leadership effectiveness, Stress- sources, consequences, Managing Stress.

Module V

The System and Process of Controlling - Control Techniques and Information Technology - Overall Control and toward the Future through Preventive Control - management of conflicts, Negotiation – Process, Bargaining Strategies. Power – bases of power. Organisational politics. Organisational Culture and climate, Organisational Change and Development- Basic concepts.

References

1. Koontz Harold, and O'Donnel, *Principles of Management*, Mc Graw Hill, India
2. George R. Terry and Stephen G. Franklin, *Principles of Management*, All India Book Seller, New Delhi.
3. Stone, Wankai, *Management*, PHI, New Delhi.
4. Weirich, Koontz, *Management - A Global perspective*, McGraw Hill. India.
5. Dr. K.Sreeranganadhan and G.G.Mathews, *Styles of Management in the Industries in Kerala*, Serals Publications, New Delhi.

CC 02 - MANAGERIAL COMMUNICATION

Module 1

Principles of communication – Types of communication – Methods and media of communication – Process of communication – Barriers to communication – Strategies for improving communication effectiveness.

Module II

Organizational Communication – Principles of effective organisational communication – Causes of poor organizational communication – Types of organisational communication – Grapevine communication – Communication for inter personal influences – Effective leadership communication – Cross culture communication, Crisis Communication.

Module III

Verbal and non verbal communication in business – Public speaking skills – Business presentations – Role of audio visual aids and computers in oral presentations – Interviewing – art of negotiation – Listening skills – Mannerisms – Body language.

Technology and communication- Video conferencing

Module IV

Written Communication – Structures and methods of written communication – writing process –letter for different kinds of situations – Enquiries – Customers' complaints – Collection letters – Sales promotion letters – Memoranda – Directives and instructions – Notices – Reports – Memos – Agendas – Proposals – Minutes – Professional papers – Agreement documents – Press releases – Preparation of resumes.

Module V

Conducting meetings – Procedure – Preparing agenda , minutes and resolutions – Conducting seminars and conferences – Group discussion – Drafting speech – Report writing – Structure of reports – Long and short reports – Formal and informal reports – Technical reports – Norms for including Exhibits and Appendices.

References

1. Raymond V Lesikar et. Al., *Business Communication – Marketing connections in a digital world*, TMH, New Delhi.
2. Herta A Murphy & Charles E Pick , *Effective Business Communication*, TMH, New Delhi.

CC 03- MANAGERIAL ECONOMICS

Module I

Introduction: Basic economic problems – Economic System – Micro and Macro economics – Managerial economics – Nature and scope – Fundamental concepts of Managerial economics – Incremental concept, Discounting concept, Opportunity cost concept, Time concept, Equi-marginal concept – Business Decision making – Certainty, Risk and Uncertainty – Applications of economics in managerial decision making.

Module II

Demand Analysis: Demand – Demand function – Demand distinctions – Elasticity of Demand – Different types of elasticity – Applications – Measurement of Elasticity. Demand forecasting – Techniques. Utility – Equilibrium of the consumer using cardinal and ordinal utility (Indifference curves) – Income effect and substitution effect.

Module III

Supply: Theory of Production – Production function – Laws of Returns – Economies of scale and Economies of scope – Isoquants – Best Production possibility – Cost Analysis – Cost concepts – Short run and long run cost curves – Managerial uses of Long run cost curves – Revenue Analysis – Revenue curves.

Module IV

Market: Definition – Classification of Markets – Importance of understanding market structure – Different types of market based on competition – Perfect and Imperfect competition – Monopoly – Price and output determination under perfect competition, monopoly, monopolistic competition and oligopoly – Kinked Demand curve – Monopoly price discrimination and its conditions – Non Price competition.

Module V

Instruments of Macro Economic Policy: Circular Flow of Income – National Income – Concepts of National Income – Methods of measuring National Income – Product Approach, Income Approach and Expenditure Approach – Business Cycle – Inflation and Deflation – Fiscal Policy – Budget Deficit and Debt – Government Budgetary Policy – Monetary Policy – Instruments of Monetary Policy – Balance of Payment.

References

1. P.L. Mehta – *Managerial Economics Analysis, Problems and Cases* – Sultan Chand & Sons, New Delhi.
2. V.L. Mote – *Managerial Economics* – Tata McGraw Hill, India, New Delhi.
3. K.K. Dewett – *Modern Economic Theory: Micro and Macro Analysis* – Orient Book Distributors, New Delhi.

CC 04- ACCOUNTING FOR MANAGEMENT

Module I

Meaning , Definition and needs of accounting business decisions : Forms of accounting and users of accounting information - Framework of accounting postulates - principles - conventions -concepts -procedures methods etc. accounting equations and types of accounts -rule of recording business transactions.

Module II

Preparation of basic accounts – journal to trial balance, income statement- position statements- (P&L A/C and Balance Sheet) and adjustment entries.

Module III

Ratio Analysis -its meaning and uses - study of liquidity ratios and leverage ratios - Study of profitability ratios and activity ratios -Meaning - uses and preparation of functions flow statements -meaning, uses and preparation of cash flow statements.

Module IV

Costing as an aid to management- presentation of various costs in proper format - marginal costing and absorption costing- cost volume profit analysis- its assumption and calculation- managerial uses of break even analysis; activity based costing- Budgetary control.

Module V

Meaning and uses of standard costing-procedure of setting standards- variance analysis- one way and two way analysis of variance- overall cost variance- material variance- labour variance and overhead variance- material price variance- material usage variance- material yield variance- material mix variance-labour cost and time variance- labour mix and yield variance - overhead volume and expenditure variance -responsibility accounting and report writing.

References

1. M.N.Arora, *Accounting for Management*, Himalaya Publishing House, New Delhi.
2. Colin Drury, *Management and Cost accounting*, Cengage Learning , New Delhi.
3. S N Maheswari, and S K Maheswari, *Advanced Accountancy*, Vikas Publishing House, New Delhi.
4. Dearden J and Bhattacharya S K , *Accounting for Management – Text and cases* , Vikas Publishing House, New Delhi.

CC 05 -QUANTITATIVE METHODS FOR MANAGEMENT

Module I

Vectors and Matrices – Multiplication, Inverse and solving systems of equations –Sets, Relations and functions - Arithmetical operations involving matrices. Determinants, Inverse of a matrix. Solution of simultaneous equations using matrices.

Module II

Introduction to Calculus – Basic concepts of Differentiation- Derivatives – Equations of Standard derivatives- Rules of differentiation – Derivative of Composite function - Derivative of Exponential functions - Derivative of Logarithmic functions - Derivative of Inverse functions - Derivative of Parametric functions- Derivative of Implicit function- Successive Differentiation – Applications of Differentiation –Maxima & Minima.

Basic concepts of Integration – Indefinite Integral – Fundamental Formulae- Different methods of Integration- Definite Integral- Application of Integration in Business.

Module III

Basic Probability concepts – Addition and multiplication theorems of Probability, Marginal, Joint and Conditional Probability - Baye's theorem and its business applications. Probability distributions – Binomial, Poisson, Normal, Exponential distributions- Business applications.

Module IV

Correlation and Regression analysis: Correlation: Different types of correlation –Karl Pearson's correlation coefficient - Spearman's Rank correlation coefficient – Concurrent deviation method – Coefficient of Determination. Regression analysis: Line of best fit- Least square method- Business applications.

Module V

Time Series analysis – Different components of time series- Application of Time series in Business forecasting. Index Numbers – Different types of Index Numbers. Business applications of Index Numbers.

References

1. Levin, Richard I, Rubin David S, *Statistics for Management* , Prentice Hall India.
2. Naval Bajpai, *Business Statistics* Darling Kindersley (I) Pvt Ltd.
3. Sanchetti, D.C, Kapur, V.K , *Business Mathematics* : Sultan Chand & Sons, New Delhi.

CC06- LEGAL ENVIRONMENT OF BUSINESS

Module I

Introduction – Sources of law and interpretation of law – Classification of Law-Principles of natural justice – History of Indian judicial system.

Module II

Law of contract – Essential features of contract-offer-acceptance-consideration --- Different types contract - Performance of contract- Discharge of contract – Breach of contract, Damages-Indemnity and Guarantee.

Module III

- Negotiable Instruments Act- 1881-cheques – Bills of Exchange – Promissory Notes - Definitions and Characteristics of Negotiable Instruments – Dishonor and Discharge of Negotiable Instruments- Latest laws relating to Negotiable Instruments.
- Sale of goods Act-1930-Conditions , Warranty, Agreement to sell.

Module IV

Company Law –Types of companies – Incorporation – Memorandum - Articles of Association – Prospectus . Winding up of companies – Types.

Module V

Consumer Protection Act 1986 – Consumer Redressal Mechanisms- Foreign Exchange Management Act -1999- Objectives and Features - Cyber laws –Intellectual Property Rights. Patents, Trademarks, Designs, - implications on business.

References

1. Dr.Avathar Sing, *Company law*, Eastern book Company, New Delhi.
2. A.K. Majundar and Dr. G.K.Kapoor, *Company Law & Practice,s* Sultan Chand & Sons, New Delhi.
3. B.S.Moshal, *Mercantile Law*, Ane Books, New Delhi.

CC07- COMPUTER APPLICATION IN BUSINESS

Module I

Introduction to Computers: Hardware - Software - Systems Software, Application. Software and Packages - Introduction to Embedded Software– Computer Architecture . Fundamentals of Operating Systems- Windows & Linux.

Module II

Operating systems- Windows – MS Office- Text processing using word- Functions. MS-Excel - , Graphs, Basic statistical formulae using MS Excel , MS-Power Point -Creating Effective Presentations.

Module III

Microsoft Access - Introduction to DBMS concepts, Creating a Database. Database functions – Database creation – Sorting, Indexing and report- Programming using software. Applications of computers in documentation, Preparation and making reports, Preparation of questionnaires, presentations, Tables Charts and graphs.

Module IV

Data Communication and Computer networks. LAN and WAN- Communication through computer networks- Security, Analog & Digital Signals, Bandwidth, Network Topology, Packet Transmission.

Module V

World Wide Web and Business Community, Internet, E- Mail with TCP/IP. ERP fundamentals- Introduction to SAP.

References

1. Leon & Leon *Introduction to Computers*, Vikas publishing House, New Delhi.
2. June Jamrich Parsons, *Computer Concepts*, Thomson Learning, New Delhi.
3. Comer , *Computer networks and Internet*, Pearson Education, New Delhi.
4. White, *Data Communications & Computers Network*, Thomson Learning, New Delhi.

CC08- ORGANISATIONAL BEHAVIOUR

Module I

Introduction to the concept and relevance of Organisational Behaviour in Modern Management- Individual Behaviour- Personality- Values, Attitudes, Perception, Theories of Personality, Learning.

Module 11

Motivation: Theories of Motivation- Application of Motivation in work place- QWL-Job Enlargement- Job Enrichment-Job rotation-Job satisfaction and morale .

Module III

Leadership; Leader v/s manager- Leadership styles- Concepts and theories – Trait, Behavioral and situational- Transactional and Transformational Leaderships- Leadership effectiveness- Power, sources of Power.

Module IV

Group Behaviour- Group Formation and development- Group Dynamics- Team Building structure of groups- Group Efficiency - Group Norms – Cohesiveness- Group effectiveness- Group Decision Techniques- Application of Fundamental Interpersonal Orientation- Kinesics- Body Language.

Module V

Organizational Culture- Concept- Creating and Sustaining Culture - Organizational Change - Resistance to Change- Managing Change - Work Stress- Sources and consequences - Organizational Role Stress- Emotional Intelligence & Emotional Quotient- Conflict – Transactional Analysis & Johary Window - Organizational Development.

References

1. Fred Luthans, *Organisational Behaviour*, New York, McGraw Hill.
2. A.F.Stoner and Charles Wenkel, *Management* New Delhi, Prentice Hall of India.
3. Stephen P Robins, *Organisational Behaviour*, Pearson Education.

CC09 -FINANCIAL MANAGEMENT

Module I

Financial Management - Scope - Role of Financial Management in Business-Time value of money-Risk and Return- Risk diversification.

Module II

Long-term investment decisions – Capital budgeting, Different techniques –Traditional and modern methods (DCF method) – Capital Rationing – Risk Analysis in Capital budgeting – An overview of Cost of Capital.

Module III

Financing decisions – Operating, Financial and combined leverage – Capital Structure – Meaning and importance- Theories of capital structure – Net income, Net operating income and MM approach (Hypothesis).

Module IV

Dividend decisions – Dividend policy (Walter Gordon and MM approach) – Types of Dividend- Legal and Procedural aspects of payment of Dividend.

Module V

An overview of Working Capital Management – Inventory, Cash and Receivable management and Management of surplus – Working Capital Financing and Long term Financing, Current Liabilities Management – size and sources- Money Market – Banks – Regulation of Working Capital Finance in India.

References

1. Van Horne James, *Financial Management Policy*, Prentice Hall India
2. I M Panday, *Financial Management*, Vikas Publications, New Delhi.
3. Prasanna Chandra, *Financial Management*, Tata Mc Graw Hill, New Delhi.
4. Khan M Y& Jain P K, *Financial Management*, Tata Mc Graw Hill, New Delhi.
5. Lawrence J Gitman, *Principles of Managerial Finance*, Pearson Education limited. New Delhi.
6. James C Vanhorne, John M Wachowicz Jr, *Fundamentals of Financial Management*, Pearson Education Limited, New Delhi.

CC10- MARKETING MANAGEMENT

Module I

Marketing – Nature and scope- Marketing as the central function of an organization- Evolution of Marketing- Marketing as Creating, Communicating and Delivering –Value- Value chain – Customer satisfaction as the end of the value chain- Marketing Environment – Internal and External environment- Marketing Research- Marketing Information System.

Module II

Strategic Marketing Planning-Elements of Marketing Plan- Buyer Behavior – Consumer buying decision process- Consumer adoption process- Organizational Buying – Process, Market segmentation- Targeting- Positioning- Identifying and analyzing competitors- Designing competitive strategies -for leaders, challengers, followers.

Module III

Concept of Product- Classification of products- Goods Vs Services- Major product decisions-Product line and Product mix- An overview of Brand Management- Packaging and Labeling- Product life cycle- New product development- Pricing- Factors affecting Price Determination- Pricing Policies and Strategies.

Module IV

Marketing Channels – Functions and Flows- Channel Design, Channel Management- Selection- Training- Motivation and Evaluation of channel members- Retailing and Wholesaling-Teleshopping – Shopping through Internet.

Integrated Marketing Communication Process and Mix-Advertising- Personal selling- Direct Marketing- Sales Promotion, Publicity and Public Relations – Comparative advantages and disadvantages-Managing the Sales Force .

Module V

Marketing Controls – Tools and Techniques of Marketing Control- Marketing of Services-Industrial Marketing- Marketing Challenges in the Globalized era- Green Marketing- Consumerism- Rural Marketing in India- Recent trends – Mobile Marketing and other Digital forms like Video platforms, Review sites in Internet.

References

1. Kotler Philip & Keller Kevin, *Marketing Management*, Pearson Education, India
2. Czinkota Micheal. R & Ronkainen Iikka. *International Marketing*, Cengage Learning.
3. Ramaswamy V.S & Namakumari. S *Marketing Management – Global Perspective, Indian Context*, , MacMillan.
4. Kotler Philip, Keller Kevin, Koshy Abraham & Jha Mithileshwar *Marketing Management – A South Asian Perspective*, Pearson Education.

CC11- HUMAN RESOURCE MANAGEMENT

Module I

Introduction to Human Resource Management-Importance-Scope and Objectives. Evolution. Line and Staff aspects of HRM, Line managers Human Resource duties. New approaches to organising HR. Strategic Human Resources Management, Strategic HRM tools.

Module II

Job analysis: Methods for collecting Job Analysis Information, Writing Job Description & Job Specification. Human Resource Planning and Recruiting: The Recruitment and Selection process- Planning and Forecasting, Internal and External sources of candidates, Managing HR in challenging times

Employee Testing and Selection: Basic testing concepts, Types of Tests. Interview: Process and Types, Guidelines for Interviews

Module III

Orientation, The Training Process, Training Needs Analysis, Training Techniques- On -the-Job & Off-the -Job Training Methods, OJT Process , Training Evaluation.

Management Development Programs : Case Study and other Modern Training Method . Performance Management & Appraisal: Process and Techniques. Career Planning and Management Concepts.

Module IV

Establishing Pay Rates: Steps, Job Evaluation. Wage and Salary administration- Steps and factors affecting, Incentives

Benefits and services: Statutory Benefits - Non-statutory Benefits - Insurance Benefits - Retirement Benefits, Flexible Benefits Programs. QWL

Module IV

Industrial relations: Significance, Objectives, Approaches. Industrial Disputes- Causes, Forms, Preventive Machinery.

Collective Bargaining: Basic Concepts . Trade unions: Definition, Objectives, Functions

Social Security in India, Employee welfare, Grievance Handling and Discipline-Sources and forms of Grievances -Grievance Procedure, Disciplinary Procedure.

References

1. Gary Dessler & Biju Varkkey, *Human Resource Management*, Pearson.
2. VSP Rao, *Human Resource Management: Text and cases*, , Excel Books, New Delhi.
3. Mizra S. Saiyadain, *Human Resources Management*, 4th Ed, Tata McGraw Hill.
4. Raymond Noe, *Employee Training and Development*, Tata McGraw Hill.
5. K . Aswathappa, *Human Resource Management- Text & Cases*, Tata McGraw Hill.
6. Wayne Mondy, *Human Resource Management*, Pearson, India.
7. Joe Martocchio, *Strategic Compensation: A Human Resource Management Approach*, Pearson, India.

CC12- OPERATIONS MANAGEMENT

Module I

Introduction to Production and Operations Functions, Interaction of Operations Management with other functional areas of Management – Manufacturing and Non Manufacturing operations and their Classifications – Operations Strategy as a part of Corporate Strategy – Operations Planning and Control – Operations Forecasting: Forecasting methods.

Module II

Facility Locations – Cost competition and Hidden factors – Steps in location selection – Types of Manufacturing Systems and Layout – Facility Layouts – Layouts by Products and Process – Life balancing – Design of Operations Systems : Aggregate planning and Master Scheduling, MRP, CRP. Material Handling: Principles, Equipments for Materials Handling.

Module III

Work study, Time and Method study: Definition – Importance – Aims and Procedures – Implications on Productivity – Work measurement – Work sampling – Work environment – Industrial safety – Value analysis.

Module IV

Materials Management – Functions – Material planning and Budgeting – Value Analysis - Purchase functions and Procedure - Inventory control – Types of Inventory – Safety stock – Inventory Control Systems – Perpetual – Periodic – JIT – KANBAN.

Managing Vendors; Vendor Analysis, Rating and Selection – Procedure and Criterions.

Module V

Maintenance Management Function – Types of Maintenance – Total Productive Maintenance (TPM). Statistical Quality Control (SQC). Cost of Quality (COQ). ISO 9000 certification. Total Quality Management.

References

1. Everest E Adam, Ebert – *Production and Operations Management* – PHI – publication, India
2. Joseph G Monks – *Operations Management (Theory and Problems)* – McGraw Hill Intl.
3. Chase, Aquilano, Jacobs *Production and Operations Management*, Tata McGraw Hill.

CC13- ENVIRONMENTAL MANAGEMNT

Module I

Environment: Components of environment: Lithosphere, Hydrosphere, Atmosphere, Biosphere, Ecology, Eco- system : Components – Biotic and abiotic components, Bio-diversity : Definition, Principles, Bio-diversity in India.

Module II

Natural resources and Energy management: Depletion of natural resources, Fossil fuels, Energy sources: Conventional sources, Renewable sources, Energy Management: Definition, Energy management techniques, Energy Audit, Population growth, Global Warming, Ozone depletion, Carbon credit, Climate change.

Module III

Implementation Impact of Industrial and Business activities on the Environment, Environmental Degradation, Industrial Pollution – Types and Impacts, Managing Industrial Pollution, Waste Management, Developing Recycling Technologies.

Module IV

Sustainable Development: Definition, Elements, Indicators, Principles, Guidelines for sustainable development, Concern for environment: Eco-friendly manufacturing, Packaging , Green marketing, Green funding , Institutional support for establishing and maintaining Environment Friendly Business.

Module V

Environment Impact Assessment, Environmental Audit, Environment Management System, Environmental Legislations, ISO 14000, Governmental Institutions for Environmental Management.

References

1. Bala Krishnamurthy, *Environmental Management: Text and Cases*, PHI.
2. Arindita Basak, *Environmental Studies*, Pearson Education.
3. Kaushik, Anubha, *Environmental Studies*, New Age International.
4. Betz, Fredrick, *Managing Technology*, Prentice Hall, Englewood cliffs, New Jersey.
5. Rohatgi, P.K, Rohatgi K and Bowonder. B , , *Technological Forecasting*, Tata Mc Graw Hill

CC14- OPERATIONS RESEARCH

Module I

Introduction to Operations Research, Evolution of the field , Scope, Merits and Limitations – Concept of Optimization – Decision making through Operation Research – Nature and significance of operations research – Models and Modeling in OR – General methods for solving OR models – Methodology of OR, Application and Scope of OR – Basic OR models.

Module II

Programming techniques – Linear programming and applications – Linear programming Graphical methods- Simplex methods , Maximization problems – Minimization problems and Problems involving Artificial Variables – Concepts of Duality – Sensitivity analysis.

Module III

Transportation problem – Transportation algorithms – North West corner method (NWCM) – Least Cost Method (LCM) – Vogels Approximation Method (VAM) – Modi method – Degeneracy in transportation problem.

Module IV

Assignment problem – Solution methods of assignment problem - Network Analysis, PERT and CPM, Time estimation, Critical Path , Basic Concepts of Crashing , Resource leveling, Resource Smoothing, Familiarization with Project Management Software Packages.

Module V

Inventory and waiting line models – Inventory control – Deterministic models – Queuing models – Simulation – Monte – Carlo simulation.

References

1. Hamdy A Taha, *An Introduction to Operations Research*, Prentice Hall, ,
2. Ronald L. Rardin, *Optimization in Operations Research*, Pearson Education, India
3. Dr. J.K. Sharma, *Operations Research* –Macmillan India Ltd.

CC15- RESEARCH METHODOLOGY

Module I

Nature and scope of Research-Role of research in decision-making - Values and Cost of Information - Research process.

Module II

Research design (exploratory, descriptive, experimental)- Population, Sample, and Sampling design-Probability sampling- Non-probability sampling-Techniques- Sampling error and Non-sampling error.

Module III

Data collection - Primary data & Secondary data -Methods & Instruments of data collection – Reliability & Validity, Questionnaire design- Attitude measurement and scaling- Administration of Surveys.

Module IV

Tabulation and analysis of data - Use of Statistical Software Packages , Hypothesis testing – Confidence level & Significance level- Parametric & Non Parametric tests- Tests involving one population mean and two population means , z – test, t – test, chi – square test , F test. ANOVA – one way and two way ANOVA. Basic concepts of Multivariate statistical techniques- Multiple regressions- Discriminant analysis, Factor analysis- Cluster analysis.

Module V

Qualitative research methods - Case study method – Content analysis - Focus group – Projective Techniques – In-depth interview. Research reports - Different types of reports – Different formats of research reports- oral presentations of reports. Research applications in functional areas of management.

References

1. Kothari, C. R, *Research methodology: methods and techniques*, New Age Publications, New Delhi.
2. Donald R.Cooper and Pamela S.Schindler - *Business Research Methods* - Tata McGraw Hill, India
3. Naresh K Malhotra – *Marketing Research: An Applied Orientation*, Pearson Education, New Delhi.

CC16 - MANAGEMENT INFORMATION SYSTEMS

Module I

Foundations of information systems: frame work for business users – Roles of information systems – system concept – Organization as a system – components of information systems – IS activities – Types of IS.

Module II

Business Information systems – Marketing Information Systems – Manufacturing – Information Systems – Human Resource Information Systems , Financial Information Systems – Transaction Processing System.

Module III

Management and Information & Decision Support Systems – Management Information Systems – Expert systems – Examples, Executive Information Systems, Artificial Intelligence Technologies .

Module IV

Strategic roles of IS – Breaking Business Barriers –Business Processes Reengineering – Improving Business Quality – Creating Virtual Company – Using Internet Strategically – Building knowledge Creating Company – Challenges of Strategic of IS – Enterprise – wide systems and E- Business Applications.

Module V

Managing information systems – Enterprise Management – Information Resource Management – Technology Management – IS planning methodologies – Critical Success factors – Business Systems Planning – Computer Aided Planning Tools. Security & Ethical Challenges _ IS controls – Facility Controls – Procedural Controls – Computer Crime – Privacy issues.

References

1. O'Brien, James A *Management Information Systems*, Tata McGraw Hill, New Delhi,
2. Marvin Gore, *Elements of Systems Analysis & Design*, , Galgota Publications.

CC18- INTERNATIONAL BUSINESS

Module I

Introduction to International Business – Nature & Dimension of International business – Environment of International Business – Economical, Political, Demographical, Global, Social, Cultural, Technological, Legal – Entry strategies for International Business.

Module II

Process of Globalization – Globalizations of Indian Business – WTO, Regional block – International commodity agreement – Global Trade – Global Supply Chain and Logistics Management – Investment Environment.

Module III

International Economic Institutions – IMF, World Bank, UNCTD, UNIDO – Asian Development Bank, - International Trade centre – Foreign Exchange Market Mechanism – Determinants of Exchange rate.

Module IV

Export and Import Procedure – Licensing & Joint ventures - International Investment – FDI – Production linkages, Foreign – Investment in India, Cross Border – Forex reserve – Over view of Currency Exchange and Risk Management.

Module V

Social responsibility of business,.Country Evaluation & Selection – International Asset Protection, Foreign Trade Policy, Social issues in International Business, Labour issues, Environmental issues .

References

1. Dr.Francis Cherrunilam, *International Business Environment*, Himalaya Publishing House
2. Shyam Shukla, *International Business*, Excel Book, New Delhi
3. Rakesh Mohan Joshi, *International Business*, Oxford University Press, New Delhi.

CC19- BUSINESS ETHICS & CORPORATE GOVERNANCE

Module I

Introduction – Ethics and morality, Ethics and law, Ethics and ethos, Business Ethics, Concepts, Importance and benefits, Ethical theories, Values and its relevance in Management, Values for Managers, Ethics in Business and Indian Value system, Various approaches to ethics-Indian examples.

Module II

Ethical Corporate Behavior, its Development, Ethical leadership with examples, Ethical Decision Making, Work ethics: nature and scope, Ethical issues at workplace, Ethics and cultural issues, Environmental Ethics, Ethical dilemma, ethical displacement.

Module III

Ethics in Functional Areas: Operations, Marketing, Finance, HR & I. Technology, Recent challenges in ethics, Ethics in different countries.

Module IV

Corporate Governance, Corporate Governance initiatives in India and abroad. Corporate Governance failures with examples, General ethical issues and the court verdicts in the domain of business ethics, obligation to stakeholders.

Module V

CSR and its significance in Business, social audit – Ethical Issues-Corruption, - whistle blowing-competition-privacy-trade secrets, IP rights, Harassment & Discrimination.

References

1. Manisha Paliwal, . *Business Ethics* Newage International press. New Delhi.
2. Patyrick J. A. & Quinn J. F. *Management Ethics*, Response Publishing, New Delhi.
3. Sherlekar, *Ethics in Management*, Himalaya Publishing, New Delhi.

CC21-STRATEGIC MANAGEMENT

Module I

Introduction to Strategic Management – Concept of Strategy, Process of Strategy, Strategic Framework; Vision, Mission, Objectives and Goals. Strategic Analysis – Environmental Analysis, Competitive forces, Internal analysis SWOT Analysis.

Module II

Business level strategies – Cost leadership, Differentiation, Focus. Corporate level strategies- Stability strategies, Expansion strategies – Intensification, Integration,

International expansion, Diversification strategies, Merger, Acquisitions, Strategic alliance, Turnaround strategies.

Module III

Implementation and Control –Leadership in Strategic Management; Portfolio Analysis, BCG Matrix, GEC Model, etc, Control Process Analysis and Follow-up Action for Control, Evaluation Strategy.

Module IV

Corporate Management; Corporate Policy, Corporate Governance, Top Management, Code and Laws of Corporate Management, Corporate Scenarios and Strategy; Strategies for Stable and Dynamic markets, Strategies for Global Markets.

Module V

IT and Strategy, R&D and Strategy, Knowledge Management – Knowledge Sources, Knowledge Creation, KM framework, Trends and Challenges in KM. Innovation and creativity, Innovation Culture. Building Creative Organization. Corporate Social Responsibility, Ethics and Values, Philanthropy.

References

1. Glueck,W F and Lavch, L. R *Business policy and Strategic Management*, McGraw Hill, New Delhi.
2. Porter, E, Michael *Competitive Advantage – Creating and sustaining Superior Performance*. Free press London.
3. Shrivastava, R.M.(1999) *Management Policy and Strategic Management* Himalaya Publishing House, Mumbai.
4. A.C.Hax and NS, *Strategic Management: An Integrative Perspective*, Prentice Hall, India.
5. Gregory G.Dess and Alex Miller, *Strategic Management*, McGraw Hill. India

MARKETING MANAGEMENT ELECTIVES

MM 01 - AGRI BUSINESS AND RURAL MARKETING

Module 1: Agricultural Marketing: Nature and Scope, Objectives of Agriculture Marketing, Challenges in Agricultural Marketing, Marketing of Agricultural Inputs – Features – Seeds - Fertilizers – Pesticides – Tractors - Challenges and Opportunities. An Overview of Indian Agro-chemical Market. Marketing of Agricultural Products – Definition and Scope - Features of Agricultural Products, Classification of Agricultural Markets - Methods of Sale - Channels of Distribution.

Module II: Introduction to Rural Marketing: Definition and Scope of Rural Marketing, Components of Rural Markets, Classification of Rural Markets, Rural vs. Urban Markets. Population, Occupation Pattern, Income Generation, Location of Rural Population, Expenditure Pattern, Literacy Level, Land Distribution, Land Use Pattern, Irrigation, Rural Development Programs, Infrastructure Facilities, Rural Credit Institutions, Rural Retail Outlets.

Module III: Rural Marketing Mix Strategies: Rural Product Strategies and Brand Management –Rural Pricing Strategies – Rural Distribution Strategies – Rural Promotional Strategies, Challenges in Rural Communication, Target Audience.

Module IV: Rural Media- Mass Media, Non-Conventional Media, Personalized Media, Importance of the two-step flow of Communication, Media Typology, Media Model, Media Innovation, Influence of Consumer Behaviour on Communication.

Module V: The Future of Rural Marketing: Focused Marketing Strategies, Market Research, Consumer Finance, Rural Vertical, Retail and IT Models, Public-Private Partnership, E-Rural Marketing, Role of Government and NGOs in Rural Marketing.

References:

1. Badi & Badi *Rural Marketing*, Himalaya Publishing New Delhi.
2. Mamoria, C.B., Badri Vishal *Agriculture problems in India*, McGraw Hill, New Delhi.
3. Arora, R.C. *Integrated Rural Development*, McGraw Hill, New Delhi.

MM 02 - BUSINESS TO BUSINESS MARKETING

- Module 1:** Introduction to Business Marketing: Meaning and Scope, Differences between Industrial and Consumer Goods – Types of Organizational Customers - Demand for Industrial Goods - Business Market Segmentation, Targeting and Positioning - Role of CRM.
- Module II:** Organizational Buying: Factors Influencing Organizational Buying - Models of Buyer Behavior - Buying Centre Roles - Organizational Buying Process Stages – Buy Classes - Organizational Buying Practices - Enquiries and Tenders - Supplier Evaluation - Buyer Seller Relationship.
- Module III:** Role of Marketing in Product Development Process - Managing Industrial Product Lines - Managing Across Product Life Cycle - Product Revitalization/Elimination Decisions – Characteristics of Pricing in B to B Market- Factors influencing Pricing - Pricing Methods and Strategies – Leasing.
- Module IV:** Industrial Channels of Distribution: Types of Distribution Systems - Choice of Channel Systems - Channel Partners - Managing Channel Conflicts - Distribution Logistics - Personal Selling - Sales Force Management - Post Sales Service - Customer Satisfaction and Evaluation.
- Module V:** Industrial Goods Promotion - Branding of Industrial Products - Creating Corporate Image - Industrial Advertising - Role of Internet in Business Market - Industrial Marketing Control.

References

1. Vitale & Giglierano, *Business to Business Marketing* Thomson South-Western
2. U C Mathur, *Business to Business Marketing*, New Age International Publishers
3. Robert R Reeder, Edward G. et al, *Industrial Marketing*, Prentice Hall of India

MM 03 - CONSUMER BEHAVIOUR

- Module 1:** Introduction to Consumer Behaviour: Nature and Importance of Consumer Behaviour, Application of Consumer Behaviour in Marketing - Factors influencing Consumer Behaviour - Consumer Research Process - Models of CB - Nicosia, Howard & Sheth, Engel-Kollat Blackwell Models - Levels of Consumer Decision Making - EPS,LPS,RRB.
- Module II:** Individual Determinants of Consumer Behaviour: Motivation: Needs/Motives & Goals, Dynamic Nature of Motivation, Arousal of Motives. Personality: Nature, Theories, Self concept, Psychographic and Life Style - Perception: Process, Consumer Imagery, Perceived Risk-

Learning: Principles, Theories - Attitude: Structural Model of Attitude, Attitude formation & Change.

Module III: Group Determinants of CB: Reference Group Influence: Types of Consumer Relevant Groups, Factors affecting Group Influence, Application of Reference Group Concept - Family: Functions of Family, Family Decision Making, Family Life Cycle - Opinion Leadership and Personal Influence - Diffusion of Innovation: Adoption process, Diffusion process.

Module IV: Environmental Influences on CB: Social Class, Life Style Profile of Social Class Application to CB, Social Class Mobility - Culture: Meaning, Characteristics, Factors affecting Culture, Role of Customs, Values and Beliefs in Consumer Behaviour, Sub-culture: Meaning, Sub-culture Division and Consumption Pattern in India, Types of Sub-cultures, Cross-cultural Consumer Analysis: Similarities and Differences among People, Cross-cultural Marketing Problems in India, Strategies to Overcome Cross-cultural Problems.

Module V: Organisation and Consumers: Factors Influencing Organisational Buying Behaviour – Consumer and Marketer - Marketing Communication and Persuasion, Developing Persuasive Communication – Market Regulation – Customer Dissatisfactions – Consumer Protection Act.

References

1. David L. Loudon and Albert J Della Bitta, *Consumer Behaviour*, Tata McGraw Hill.
2. Leon G.Schiffman and Leslie Lasar Kanuk, *Consumer Behaviour*, Pearson Education, India.

MM 04 - DIGITAL MARKETING

Module 1: Principles and Drivers of New Marketing Environment - Digital Media Industry - Reaching Audience Through Digital Channels- Traditional and Digital Marketing - Introduction to Online Marketing Environment - Dotcom Evolution - Internet Relationships - Business in Modern Economy - Integrating E-Business to an Existing Business Model - Online Marketing Mix - Mobile Marketing - Digital Signage.

Module II: Purchase Behavior of Consumers in Digital Marketing Format - Online Customer Expectations - Online B2C Buying Process - Online B2B Buying Behavior -Website Designing - Website Content - Forms of Search Engines – Working of Search Engines - Revenue Models in Search Engine Positioning – SEO - Display Advertising - Trends.

Module III: Product Attributes and Web Marketing Implications - Augmented Product Concept - Customizing the Offering - Dimensions of Branding Online - Internet Pricing Influences - Price and Customer Value - Online Pricing Strategies and Tactics – Time-based Online Pricing - Personalized Pricing - Bundle Pricing.

Module IV: Internet Enabled Retailing - Turning Experience Goods into Search Goods -Personalization through Mass Customization - Choice Assistance - Personalized Messaging - Selling through Online Intermediaries - Direct to Customer Interaction - Online Channel Design for B2C and B2B Marketing.

Module V: Integrating Online Communication into IMC Process - Online Advertising – Email Marketing - Viral Marketing - Affiliate Marketing - Participatory Communication Networks - Social Media Communities - Consumer Engagement - Co-Created Content Management-Interactive Digital Networks - Customer – Led Marketing Campaigns- Legal and Ethical aspects related to Digital Marketing.

References:

1. Smith P R Chaffey Dave, *E-Marketing Excellence: The Heart of E-Business*, Butterworth Heinemann, USA
2. Strauss Judy, *E-Marketing*, Prentice Hall, India

MM 05 - INTEGRATED MARKETING COMMUNICATION

Module 1: Introduction to Integrated Marketing Communication (IMC) - IMC as an Integral Part of Marketing – Buying Decision Process - Communication Response Hierarchy – Setting Communication Objectives: DAGMAR Approach -Budgeting for Marketing Communication.

Module II: Fundamentals of Advertising Campaigns - Brand Positioning through Advertising- Planning Process - The Creative Brief - Creating an Appeal - Strategic Approaches: Generic Approach – USP - Brand Image – Positioning - Public Service Advertising - Celebrity Endorsement - Elements of Print Advertisement - Scriptwriting for Radio and Television - Legal and Ethical aspects of Advertising- Kids Advertising.

Module III: Advertising Agencies – Roles – Types - In House Agencies - Direct Response Agencies - Sales Promotion Agencies - PR Firms - Interactive Agencies –Advertising Agency Structure - Client Agency Relationship - Agency Selection - Agency Compensation.

Module IV: Promotion Tools: Sales Promotion - Trade Oriented Sales Promotion - Direct Marketing – PR – Publicity – Sponsorships – Merchandising - Van

Promotions -Mobile Advertising – Word-of-Mouth -Village Fairs - Trade Shows - Exhibitions and Event Management – OOH - Transit Advertising - Personal Selling - World Wide Web Communications - Strategies for combining Advertisements and Promotional Tools for IMC.

Module V: Online Marketing Communication Process - Setting Online Communication Objectives - Online Advertising - Online Sales Promotion - Online PR - Direct Marketing through Internet. - Impact of Consumer Generated Communication - Virtual Community Influence on IMC.

References:

1. George E Belch & Michel E Belch, *Advertising & Promotion and Integrating Marketing Communication Perspective* Tata McGraw Hill.
2. Clow, Baach, *Integrated Advertising Promotion and Marketing Communication*, Pearson Education. India.

MM 06 - MARKETING RESEARCH

Module I: Introduction, Definition, Need, Relevance and Scope of Marketing Research, Types of Research - Qualitative and Quantitative Research, Steps in Research Proposal, Limitations – Cost & Time Constraints, Industrial Versus Consumer Marketing Research, Ethical Issues in Marketing Research. Marketing Research Organizations in India, Role of Information in Marketing Research, Use of Internet in Marketing Research.

Module II: Marketing Research Process, Research Problem Identification, Research Objectives, Literature Review, Identification of Variables, Hypothesis Formulation, Research Design.

Module III: Sources of Data, Population and Sampling Frame, Sampling Concepts and Methods, Units of Study, Measurement Scales, Methods of Data Collection, Data Collection Tools, Questionnaire Design, Interview Techniques, Survey Methods.

Module IV: Coding and Tabulation of Data, Data Presentation, Data Analysis Techniques, Hypothesis Testing, Application of Software Packages for Data Analysis, Report Writing and Report Presentation: Steps in Report Writing, Documentation and Referencing, Interpretation of MR Reports. Case Studies in Marketing Research.

Module V: Applications of Marketing Research in Business: Market Segmentation Studies, Market Potential Studies, New Product Research, Brand Positioning Research, Brand Perception Research, Brand Equity Research, Advertising Research, Consumer Behaviour Research, Pricing Research,

Distribution Effectiveness Studies, Effectiveness of Promotions, Customer Satisfaction and Perception Studies.

References

1. G.C.Beri, *Market Research*, Pearson Education, New Delhi.
2. Naresh K. Malhotra, *Marketing Research: An Applied Orientation*, TMH, New Delhi.
4. Cooper & Schindler, *Marketing Research, Concept & Cases*. Tata McGraw Hill, India

MM 07 - PRODUCT AND BRAND MANAGEMENT

Module 1: Introduction to Product- Meaning & Classification, Product Management – Definition, Scope and Importance, Role of Product Manager, Challenges affecting Product Management, Product Mix and Line Decisions – Managing Line Extensions.

Module II: Marketing Planning Process: Category Attractiveness Analysis, Competitor Analysis, Consumer Analysis and Sales Forecasting, Developing Product Strategy - Setting Objectives, Selection of Strategic Alternatives, Differentiation and Positioning.

Module III: New Product Planning: New Product Development – Process and Challenges, New Product Launches; New Product Failure and Revitalization of New Products.

Module IV: Understanding the role of branding: Concept of Brand - Types of Brand, Brand and Life Cycle, Brand Equity, Brand Loyalty, Brand Awareness, and Brand Evaluation, Perceived Quality, Brand Associations, Brand Personality and Brand Image, Role of Brand Ambassadors.

Module V: Brand Identity, Launching New Brands, Developing and Managing Brands, Sustaining a Brand, Handling Name Changes and Brand Transfers, Brand Extension and Strategies, Globalizing Brands, Decline, Ageing and Revitalization of Brands.

References

1. Kevin Lane Keller, *Strategic Brand Management*, Pearson Education, India.
2. U.C. Mathur, *Product management – Excel Books*, New Delhi, India.

MM 08 - RETAIL BUSINESS MANAGEMENT

- Module 1:** Retailing - Definition, Functions, Importance, Types of Retailing, Organized & Unorganized, Store and Non-store; Retailing in India - Current Scenario, Retailing from International Perspectives; Consumer Buying Decision Process, Influencing Factors, Consumer Shopping Behaviour.
- Module II:** Retail Planning - Purpose, Method, Structure and Monitoring the Plan; Retail Marketing mix - Strategies; Retail Brand Management - Positioning, Personality, Merchandise Management, Meaning, Methods, Assortment and Inventory; Purchase Negotiation, Supply Channel and Relationship, SCM Principles, and Retail Logistics.
- Module III:** Retail Location Decisions - Trading Area Analysis; Types of Locations; Site Evaluation; Store Design - Layout and Space Management; Visual Merchandising and Displays; Retail Pricing - Approaches, Influencing Factors, Price Sensitivity and Mark down Policy – EDLP.
- Module IV:** Retail Promotion - Setting Objectives, Role of Advertising, Sales Promotion, Personal Selling, Public Relations and Relationship Marketing in Retailing; Human Resource Issues and Considerations, Customer Service Management.
- Module V:** Impact of Information Technology in Retailing, Integrated Systems and Networking, EDI, Bar Coding, RFID, Customer Database Management. Electronic Retailing - Role of Web, Online Retailing, Factors to be considered in having a Website, Limitations of Web and Future Trends, Consumerism and Ethics in Retailing, Social and Green issues. Retail Audit.

References:

1. Michael Levy, Barton Weitz, *Retail management*, McGraw Hill
2. Chetan Bajaj, Rajnish Arya, Nidhi Varma Srivatava, *Retail Management*, Oxford Publishing, India

MM 09 - SALES AND DISTRIBUTION MANAGEMENT

- Module 1:** Introduction to Sales Management: Definition and Meaning – Sales Vs Marketing, Scope of Sales Management – Objectives & Functions of Sales Department – Theories of Sales - Buyer Seller Dyads – Aidas Theory – ‘Right Set of Circumstances’ Theory – Buying Formula Theory – Behavioural Equations Theory, Sales Forecasting Methods – Sales Planning and Control: Goal Setting, Performance Measurement, Diagnosis and Corrective Actions.

Module II: Sales Organization and Developing the Sales Force: Sales Department Organization – Sales Management Structure – Sales Management Positions – Role and Functions of Sales Manager – Inter Department Relations – Characteristics of a Successful Salesman. Recruiting, Selection and Training of Sales Force - Work Assignment to Sales Personnel – Routing and Scheduling of Sales Force – Objectives of Sales Quotas – Types of Quotas – Quota Setting and Administration – Concept, Objectives and Procedure of Setting Sales Territories.

Module III: Motivation, Compensation to Sales Force and Controlling – Personal Selling: Motivating the Sales Team: Motivation Programs, Monetary and Non-monetary Compensation, Evaluation of Sales Force - Controlling of Sales Force – Sales Records and Reporting Systems – Controlling of Expenses – Sales Budget – Sales Audit. Personal Selling – Salesmanship – Process - Preparation, Prospecting, Pre-Approach, Sales Presentation, Closing of Sales – Modes of Sales Presentation – Sales Resistance – Objections and Obstacles – Buyer Dissonance – Reducing Buyer Dissonance.

Module IV: Distribution Channels: Physical Distribution - Definition, Importance – Participants in Physical Distribution Process - Marketing Channels – Definition and Importance - Different Forms of Channels - Functions of Marketing Channels - Unconventional Channels - Channels for Consumer Goods, Industrial Goods and Services – Integrated Marketing Channels – Horizontal, Vertical, Multi Channel Marketing Systems - Channel Selection Process and Criteria, Channel Conflicts and Resolution - Channel Effectiveness Evaluation - International Marketing Channels.

Module V: Supply Chain Management: Supply Chain Management – Concept – Significance – Components - Logistics Planning, Order Processing – Material Handling – Transportation – Insurance - Warehousing – Inventory Management – Reverse Logistics.

References:

1. Tapan K. Panda, Sunil Sahadev – *Sales And Distribution Management* – Oxford Publishing, India
2. Still, Cundiff, Govoni – *Sales Management: Decisions, Strategies & Cases* – Prentice Hall, India.
3. Anderson R, *Professional Sales Management* – Englewood Cliff, New Jersey, Prentice Hall, India.

MM 10 - SERVICES MARKETING

Module 1: Introduction to Services Marketing: Services Marketing – Characteristics – Classification of services – Role of services in economy – Factors

stimulating the transformation of service economy – Growth of services in Indian economy – Differences between Goods and Services Marketing.

Module II: Customer Behaviour & Strategic Issues: Customer decision making – Customer expectations and perceptions – Components of customer expectations – Service encounters – High contact services and Low contact services – Market segmentation and Targeting – Positioning and differentiation of services – Managing demand and capacity.

Module III: Services and the Marketing Mix: Traditional marketing mix applied to services – Inadequacy of 4Ps – Developing service concepts – Service Product Development – Branding of services – Pricing of services – Educating customers and Promoting services – Managing People for service advantage - Difference between mediocrity and success – Process in services, Service Blueprinting – Crafting the service environment – Servicescape – Physical Evidence.

Module IV: Managing Relationships and Service Quality: Relationship Marketing and Building loyalty – Achieving Service Recovery – Service quality and its significance – Measuring service quality – Service quality gap model SERVQUAL – Strategies for improving service quality – Monitoring service quality.

Module V: Marketing Services – Specific Industries: Tourism, Travel & Transportation Services Marketing – Marketing of Financial Services: Banking, Insurance, Mutual Funds – Communication and Information Services: Telecom, Courier – Media Services – Professional Services Marketing: Healthcare, Consultancy, Information Technology, Advertising – Marketing of Educational Services – Charities Marketing.

References:

1. Christopher Lovelock, Jochen Wirtz, Jayanta Chatterjee – *Services Marketing: People, Technology, Strategy*, Pearson, New Delhi.
2. Helen Woodruff, *Services Marketing*, Longmen Group, New Delhi.
3. Adrian Payne, *The Essence of Services Marketing*, Prentice Hall, India

FINANCIAL MANAGEMENT ELECTIVES

FM 01 - BANK MANAGEMENT

- Module 1** Evolution of Commercial Banks-Banking System-Structure of Commercial Bank-RBI Role & functions- Method of Credit Control--Banking Regulation ACT –Recent trends in Indian Banking Sector.
- Module II** Functions of Commercial Banks- Agency Services –General utility services-Credit Creation- Banker–Customer Relationship-Bankers as a trustee & an Agent-Appropriation of Payment- Right of Lien &Set off–Garnishee Order-Law of Limitation.
- Module III** Banking Technology; Electronic Banking-Core Banking –Distribution Channels- Remittance Facilities &Clearing System-Online Banking-Electronic Fund Transfer System- RTGS, SWIFT.
- Module IV** Evaluating Banking Performance –ROE Model- CAMEL Rating-GAAP Probability Analysis- Balance Score Card-Asset Liability Management-NPA- BASEL Norms.
- Module V** International Banking- Types-Offshore Banking- Bank for International Settlement (BIS)-London Inter Bank Offered Rate (LIBOR) -Bank Accounts- NOSTRO,VOSTRO,LORO, Indian Rupee & Foreign Currency Accounts- EXIM Bank – Facilities to Exporters & Importers.

References:

1. IIB& F, *Central Bank Management*, McMillan Publishers.
2. Institute of Banking & Finance, *Principles and Practice of Banking*, McMillan publishers, New Delhi.
3. Muraleedharan D, *Modern Banking-Theory and Practice*, PHI Learning Pvt. Ltd.
4. Shekhar K C & Lekshmy Shekar, *Banking Theory and Practice*, Vikas Publication House, New Delhi.

FM 02- FINANCIAL DERIVATIVES AND RISK MANAGEMENT

- Module 1** Sources and Types of business risk –Implications of business risk-risk perception of individuals and institutions-Alternatives for managing financial risk –diversification –reinsurance –contingency contracts-Derivatives in the Indian Context – Trading infrastructure.
- Module II** Risk Management using derivatives- Forwards and Futures –Commodity Futures- Financial Derivatives- Stock Futures and Index Futures – Interest Rate Futures – Currency Futures –Designing Futures Contracts – Hedging Positions in Futures.

Module III Stock options – Basic Properties of Options –Stock and Index Options Valuation–Sensitivity of Option Prices - Binomial Option Pricing – Black and Scholes Option Pricing using Black and Scholes Formula-Trading strategies using options –Hedging Positions in Options - Synthetic options and portfolio insurance.

Module IV Interest rate swaps; forward rate agreements and interest rate futures.

Module V Accounting and Administration of Derivatives - Regulation of derivatives activity.

References:

1. John C Hull “*Fundamentals of Futures and Options Markets,*” Pearson, seventh edition.
2. Elton Edwin J and Gruber Martin J, *Modern Portfolio Theory and Investment Analysis*, John Wiley & Sons,
3. Russel Fuller , *Modern Investments and Security Analysis*, McGraw Hill.

FM 03- INSURANCE SERVICES

Module 1 Concept of risk- risk identification and evaluation- risk management techniques- risk avoidance- loss control- risk retention-risk transfer, the nature of insurance- principle of insurance contract- requirements of an insurance contract.

Module II Life, health and income insurance - types of life insurance- life insurance contract provisions- loss of health – health insurance policies- disability income insurance- annuity scheme- pension schemes- structure and characteristics.

Module III Property and liability loss exposure – types of loss exposure- direct and indirect losses- liability damages- civil and criminal law provisions.

Module IV Accounts of insurance companies- Valuation balance sheet- Insurance claims- Fire- consequential loss (fire).

Module V Market structure of insurance services- functions of insurers-reinsurance – types of insures- channels of distribution of insurance services- regulation of insurance services-IRDA – Role, duties and powers- liberalisation of insurance services in India.

References:

1. George E. Rejda, *Principles of Risk Management and Insurance*, Pearson Education.
2. Harold D Skipper, W. Jean Kwon- *Risk Management and Insurance- Perspectives in a Global Economy*, Blackwell Publishing.
3. M N Mishra, S B Mishra- *Insurance Principles and Practice- S Chand*. Publishing, New Delhi.

FM 04- INTERNATIONAL FINANCIAL MANAGEMENT

- Module 1** Introduction – Significance of Foreign Exchange Rate- Growing importance of International Finance – Introduction to foreign exchange markets – Exchange rate determinants – Supply and Demand Factors.
- Module II** International Financial System - Exchange rate systems in the world – Role of IMF and World Bank – Impact of regional economic integrations– Global integration of economic systems and exchange rate issues relating to Developing countries.
- Module III** International Financial Markets- Major international financial markets – Euro banking and Euro currency market – American and Japanese capital markets.
- Module IV** International Financing- Modes of International equity financing – Depository receipts – Issue Mechanisms – International credit instruments – Euro bonds and Notes – International credit syndication mechanism – Recent developments in the Euro Market – Risk factors in International finance.
- Module V** International Investing-Capital budgeting for international investment – FDI – International portfolio investing – Opportunities and challenges.

References:

1. Levi Maurice D, *International Finance*, McGraw Hill, India.
2. Apte P.G., *International Financial Management*, Tata McGraw Hill, New Delhi.
3. Pilbeam Keith, *International Finance*, McMillan Press, India.
4. Madura Jeff , *International Financial Management*, Thompson, India

FM 05- MANAGEMENT OF FINANCIAL SERVICES

- Module 1** Overview of Financial services sector – Characteristics of Financial services – role of financial services sector in the Economy – Institutional Framework of Indian financial system- Role and Functions of NBFCs, RBI guidelines on NBFCs.

- Module II** Merchant banking: functions of merchant bankers – SEBI guidelines on merchant bankers. Leasing-Types: Hire purchase.
- Module III** Factoring: concept, mechanism, types of factoring, benefits and functions of factoring – factoring Vs Forfeiting, Factoring Vs Bills Discounting – Factoring; International and Indian scenario. Depositories – mechanism and functions – credit cards and retail financing.
- Module IV** Mutual funds: concept – functions – types of funds – constitution of mutual funds – SEBI regulation of AMC's – Evaluating mutual fund performance. Asset securitisation.
- Module V** Credit rating: features and advantages – credit rating process. Venture capital: meaning – origin and growth of venture capital – stages of venture capital financing – venture capital industry in India.

References:

1. Shanmugham R, *Financial Services*, Wiley India Pvt. Ltd., New Delhi, 2010.
2. Khan M.Y., *Financial Service*, Tata McGraw Hill Publication Limited, New Delhi.
3. Bhole L.M and Jitendra Mahakud,, *Financial Institutions and Markets: Structure, Growth and Innovations*, Tata McGraw Hill Publication Limited, New Delhi.
4. Dr. Roshna Varghese & Dr. K. Sreeranganadhan, *Corporate Disclosure by Indian Companies*, Serals Publications, New Delhi.

FM 06- MANAGEMENT ACCOUNTING AND CONTROL SYSTEMS

- Module 1** Relationship between Strategy and Management Accounting – Role of cost and management accounting in strategy formulation and performance measurement –Management accounting and strategic cost management: Indian perspective – Application of new management accounting techniques in the current business environment –Techniques for profit improvement and cost reduction.

- Module II** Activity Based Costing – Implementing ABC – Activity Based Budgeting – Customer Profitability Analysis.
- Module III** Target Costing –JIT — Quality Costing - Life Cycle costing -Total Cost Maturity Model of Confederation of Indian Industry for improving cost competitiveness of Indian industry.
- Module IV** Pricing Strategies - Product pricing and Transfer Pricing – Methods of Transfer pricing -Value Chain Analysis.
- Module V** Performance Measurement Systems – The Balanced Score Card – Key Performance Indices and Critical Success Factors.

References:

1. Robert Anthony and Vijay Govindarajan, *Management Control System*, Tata McGraw Hill Publishing, India
2. Norman .B Macintosh,Paolo Quattrone, *Management Accounting and Control Systems*, John Wiley and Sons, New Delhi.
3. John K Shank & Vijay Govindarajan, *Strategic Cost Management - The new Tool for Competitive Advantage*, Free Press
4. Robert S Kaplan and David P Norton, “*Balance Score Card – Translating Strategy into Action*”, Harvard Business Press, New Delhi.

FM 07- PROJECT MANAGEMENT

Module1

Project management and project selection: Project selection models, Project portfolio process, Analysis under uncertainty, Project organization, Matrix organization.

Module II

Work breakdown structure, Systems integration, Interface coordination, Project life cycle, Conflict and negotiation. Project Evaluation and Selection-Project cash flow – Project appraisal – Analysis of risk – SCBA (Social Cost Benefit Analysis).

Module III

Project implementation: Estimating Project Budgets, Process of cost estimation, Scheduling: Network Techniques PERT and CPM, Risk analysis using simulation, CPM - crashing a project, Resource loading, leveling, and allocation.

Module IV

Monitoring and information systems: Information needs and the reporting process, computerized PMIS, Earned value analysis, Planning - Monitoring - Controlling cycle, Project control: types of control processes, design of control systems, control of change and scope.

Module V

Project auditing: Construction and use of audit report, Project audit life cycle, Essentials of audit and evaluation, Varieties of project termination, the termination process. Project financing in India – Financial assistance for projects – Sources and schemes and various incentives for new projects.

References

1. Chandra Prasanna, *Projects Planning: Analysis, selection, implementation and review*, Tata McGraw Hill.
2. Larson Erik W. & Gray Clifford F, *Project Management: The Managerial Process*, McGraw Hill.
3. Jack R. Meredith, and Samuel J. Mantel Jr., *Project Management – A Managerial Approach*, John Wiley and Sons.
4. Harold Kerzner, *Project Management – A Systems Approach to Planning”, Scheduling and Controlling*, John Wiley and Sons.
5. Larry Richman, “*Project Management: Step-by-Step*” PHI Learning Private Limited.

FM 08 - SECURITY ANALYSIS & PORTFOLIO MANAGEMENT

Module 1 Concept of Investment-Investment Instruments- Introduction to the financial system, Financial Markets- Primary and Secondary Market, Stock Exchanges-Depository System- Indices- SEBI and Regulations.

Module II Investment Alternatives – Risk –Return Analysis –Systematic and Unsystematic Risk- Bond Valuation – YTC/YTM/Bond duration. Bond Returns &Prices. Bond Rating-Bond Management Strategies.

Module III Share Valuation-Factors influencing Share Price Movements-Share Valuation Models-Cash Flow Valuation Models-Earnings Valuation Models-Fundamental Analysis-E.I.C.

Module IV Technical Analysis –Chart patterns/Moving Average/RSI/ROC/MACD-Efficient Market Hypothesis-Random walk theory.

Module V Portfolio Management –Portfolio Analysis, Portfolio Selection- Markowitz Model-CAPM, Portfolio Revision &Portfolio Evaluation.

References:

1. Fisher Donald and Jordan Ronald, *Security Analysis & Portfolio Management* Prentice Hall of India.
2. Francis Jack Clark, *Investment Analysis and Management*, McGraw Hill.
3. Chandra Prasanna, *Investment Management*, Tata McGraw Hill.

FM 09 - TAX MANAGEMENT

- Module 1** Tax- meaning-Direct Tax- Indirect Tax-History of Income Tax in India-Basic Terms- Capital and Revenue-Residential status-tax incidences-exemptions.
- Module II** Heads of Incomes, - Income from salary - Income from house property-Income from other source.
- Module III** Income from business and profession and capital gain.
- Module IV** Carry forward and set off-clubbing –Deductions-Income tax Authorities –Assessment procedures.
- Module V** Taxation of companies-M A T-Tax planning-tax evasion-tax planning-tax management.

Reference:

1. Dr. H.C.Mehrotra & S.P.Goyal, *Income Tax Law and Practice*, New Age Publication, India
2. Singhanian V.K., *Corporate Tax Planning*, TMH.
3. Gupta and Gupta, *Corporate Taxation in India*, Himalya Publishing House, New Delhi.
4. Singhanian, Vinod, “*Direct Taxes – Law and Practice*”, Taxmann Publications.

FM 10 -WORKING CAPITAL MANAGEMENT

- Module I** Concept and meaning of working capital – Liquidity and profitability – identification of factors affecting working capital requirements – theories of working capital- Approaches to estimation of working capital – operating cycle approach.

- Module II** Management of inventories – determination of optimum inventory – Inventory management techniques – Levels of inventory.
- Module III** Overview of management of receivables – credit and Collection policy – Credit standards – Credit terms – Credit analysis – management of payables – Maturity matching.
- Module IV** Management of cash – Accelerating cash inflows – Managing collections – Concentration banking –Control of disbursements – models for determining optimum level of cash – inventory model, stochastic – Cash budgeting.
- Module V** Sources of working capital finance – Long term – Short term.

References:

1. I M Pandey, *Working Capital Management*, Vikas Publication, India
2. V K Bhalla, *Working Capital Management*, Vikas Publication, India
3. Krish Rangarajan, Anil Mishra, *Working Capital Management* –Excel Publication, New Delhi.
4. Satish P Mathur, *Working Capital Management & Control*- New Age Publication, New Delhi.

HUMAN RESOURCE MANAGEMENT ELECTIVES

HRM 01 - COMPENSATION MANAGEMENT

- Module I** Compensation: Concept, factors, Base and Supplementary Compensation, Wage and Salary, Wage Components - minimum wage, Fair wage, living wage, Wage Policy in India, Wage differentials, Wage Theories- Market Theories, Human Capital Theories, Bargaining Theories – Social Theories. Economic and Behavioural theories.
- Module II** Job Evaluation-nature and importance- methods, Computer aided job evaluation, Internal and external equity- Pay surveys.
- Module III** Pay structure-Types, Broad Banding, Performance Linked Compensation - Types of Incentives , Bonus, Profit sharing ,Gain Sharing , stock options, Benefits and allowances-types, Executive and shop floor level rewards, Compensating Expatriates and knowledge workers.

Module IV Legal framework of Wage determination Welfare Legislations, Tax Planning, Down sizing, VRS, gratuity, commutation, pension plans, Machinery for wage fixation – Wage Boards – Pay Commissions – Statutory Wage Fixation.

Module V Total Reward System, Components of pay, Pay structure for startup organisations Pay restructuring in Mergers and Acquisitions, alliances and turnarounds, Board room pay, Compensation management in public, private and emerging sectors, Emerging Issues in Compensation management-Future trends.

References:

1. Michael A. Armstrong and Helen Murlis, *Reward Management: A Handbook of Remuneration Strategy and Practice*, London Kogan Page.
2. B D Singh, *Compensation and Reward Management* Excel Books. New Delhi.
3. Henderson, *Compensation Management in a Knowledge Based World* New Pearson Education, New Delhi.
4. Bhattacharya, *Compensation Management*, Oxford Press.
5. Milkowich, Newman, *Compensation*, Tata Mcgraw Hill, New Delhi.

HRM 02 - COUNSELLING SKILLS FOR MANAGERS

Module I Introduction: Meaning, Functions and Type of Counselling, Goals of Counseling Emergence and Growth of Counseling Services; Approaches to counseling; Counseling Skills, Verbal & Non- Verbal communication, Listening Barriers, Counselor Qualities.

Module II Counseling process - Beginning, Developing and terminating a counseling relationship and follow up. Counseling Procedures, The Counseling Environment, Intake, Referral procedures, Guidelines for effective counseling.

Module III Counselor's Attitude and Skills of Counseling; Counselors - Client Relationship, Understanding Client's Behavior. Assessing Clients problems. Counseling Therapies- Insight Oriented Therapy. Behavior Therapy.

Module IV Selecting Counseling Strategies and Interventions – Changing Behaviour through Counseling In the Educational Settings, Special Areas in Counseling, Handling Situations of Strikes, Disputes Through Counseling.

Module V Special problems in counseling: Need of Counseling Cell in the Organization. Application of Counseling to Organizational situations with a

focus on Performance counseling. Organizational Application of Counseling Skills in Change management, Downsizing, Mentoring and Team Management / Conflict Resolution.

References

1. S Narayan Rao, *Counseling & guidance*, Tata Mcgraw Hill, New Delhi.
2. Jeffrey A Kotter, *Counseling theories and practices*, Cengage Publishing, New Delhi.
3. Robert C Carson, *Abnormal psychology*, Tata Mcgraw Hill, New Delhi.

HRM 03- HUMAN RESOURCE PLANNING

- Module I** Human Resource Planning ; Concept and Objectives - HRP at Micro and Macro levels ; HRP and Business plans - Different Approaches - Human Resource Planning Process; Demand and Supply Forecasting ; Different tools and techniques ; Labor wastage – Absenteeism and labor turn over .
- Module II** Job Analysis; Job Descriptions, Job Specification - Human Resource Inventory - Career Management; Career Planning, Career Paths, Career Anchors, Career Development.
- Module III** Recruitment: Recruitment Policy, Approaches, Sources of Recruitment, Advertisements, Web Recruitment, The Employment Exchange (Compulsory Notification of Vacancies) Act, 1959. Selection: Concept and Process of Selection; Application blank, Weighted Application Blank, Resume, Resume Scanning Psychological Tests – definition ,Purpose, Characteristics and Developing Psychological Tests, Different Types of Tests – Attitude, Aptitude, Traits, Interpreting Test Results, Reliability and Validity.
- Module IV** Selection, Interviewing ; Purpose; Types of Interviews ; Interview Techniques; Interviewing skills ; Advantages and Limitations of Interviews; Do's and don'ts of selection Interviewing, Medical Checkups, Reference and back ground check, Choice of selection methods, assessment Centers, Reliability and validity of selection tools.
- Module V** Employment offers; service conditions, contract of employment, Psychological contract - Induction. Importance, Socializing the new employee, Different types of Socialization. Placement, Probation and Confirmation, Promotion and Transfer; Policies and Procedures, Retraining, Out placements, HR out Sourcing.

Reference

1. Gary Desler ,*Human resource management* , PHI.
2. D K Bhattacharya, *Human Resource Planning* –Excel Books.
3. Anne Anastasi,Susan Urbina ,*Psychological testing* , PHI
4. Michael Armstrong ,Ann Cummins ,Sue Hastings, Willie Wood, *Job Evaluation ;A guide to achieving equal pay*, Kogan page, New Delhi.

HRM 04 - INDUSTRIAL RELATIONS

- Module I** Evolution Of Industrial Relations: Introduction-definition-nature-evolution of industrial relations-Evolution of IR in India-origin and development of IR-context and environment of IR.-concept and organization: aspects of IR-Three actors and their roles in IR: Approaches to IR-HR Relations approach-Gandhian approach-Marxian approach and Dunlop's Systems approach. Social security and welfare legislations-concepts of social security-social security measures in India.
- Module II** The state and IR policies-evolution of IR policies-National Commission on Labour & IR policy(1969)-Grievance procedure-discipline- Labour courts-Collective bargaining: concept and development-future of IR in India. Industrial unrest in India-Industrial Disputes Act 1947-objects of the Act-Important definitions: Authorities under the Act-reference of disputes-settlement-strike and lock-outs-Lay off-retrenchment-unfair labour practices-standing orders-service rules-misconduct-principles of natural justice-domestic enquiry-remedial counseling.
- Module III** Trade Unions; concept and objectives-Indian Trade Unions Act 1926-participative management-forms and levels of participation-Process of negotiation-prerequisites of a collective bargaining-employee empowerment. Tripartite and bipartite bodies-Joint management council-Conciliation machinery: -mediation-arbitration-adjudication.
- Module IV** Evolutions of Labour legislation in India- Social security and welfare legislations. Concept of social security: ILO and social security-social security measures in India; Workmen's Compensation Act-1923, Employees State Insurance Act 1948, Employees Provident Fund and (Miscellaneous Provisions) Act 1952 Maternity benefit Act 1961, Payment of Gratuity Act 1972, Payment Bonus Act 1965.
- Module V** Welfare legislations: The Factories Act 1948-Plantation Labour Act 1951-Contract Labour (Regulations and Abolitions Act-1970,Kerala Shops and Commercial Establishment Act 1960, Kerala Labour welfare fund Act 1975. Latest rules regarding Industrial relations in IT and ITes industries. Functions of Labour department in Kerala officers under the Department and their duties and responsibilities.

References

1. C B Marmoria, *Dynamics of Industrial Relations in India*, Vikas Publishing, New Delhi.
2. P C Tripathi, *Personnel management and Industrial Relations*, S Chand, New Delhi.
3. P Subba Rao, *Human Resources Management & I R*, S Chand, New Delhi.

HRM 05- MANAGING OF INTERPERSONAL AND GROUP PROCESS

- Module I** Intrapersonal process- Understanding human behaviour, Self concept, Perception, Attention, Distraction, Attitude, Occupational stress, Spill over and coping, Impression management.
- Module II** Memory process and types- Intelligence, Intelligence quotient – Emotions; Emotional intelligence, Emotional quotient.
- Module III** Interpersonal process – Transactional analysis & Johari window helping process, Practical applications, Interpersonal Communication and feedback, Interpersonal styles.
- Module IV** Group and intergroup process- Group formation and group process, Group Dynamics, Group cohesiveness - Team development and team functioning, Conflict collaboration and competition, Sensitivity training.
- Module V** Organizational process- An overview of major concepts on emerging trends-power, politics, authority, Integration and control, Organizational climate and culture, Organizational effectiveness.

Reference

1. VSP Rao, *Organizational Behaviour*: Excel Books.
2. Stephen.P.Robbins, *Organizational Behaviour*: Prentice Hall.
3. P.G. Aquinas, *Organizational Behaviour: Concepts, Realities, Applications and Challenges*, Excel Books.
4. Clifford T Morgan, Richard A King, John R Weiz, John Schopler, *Introduction to Psychology*; Tata McGraw Hill.

HRM 06 - MANAGING ORGANIZATIONAL CHANGE AND DEVELOPMENT

- Module I** Organizational Change: Meaning- Necessity for Change- Classification of change-factors affecting change-Model of Organizational change- Kurt Lewin Three Stage Model and Force Field Analysis- Systems theory, 7 Stage models, Burke-Litwin model, Porras and Robbortson. Change Agent-Role and Skills of a change Agent.HR Role as change agent,

Resistance to Change and minimizing the resistance: Impact of change on Human Resources Planning; quality consciousness as an emerging catalyst for change.

Module II Organizational development –Concept and evolution-nature and characteristics- First order and second order Change -Foundations of Organizational Development: Conceptual frame work of OD -Action Research Model-Positive Model-John Kotter’s eight-stage process Model, Parralel learning structures- Process of organizational development - Org.Diganosis .

Module III Human Process Interventions-T-group, process consultation, third party interventions, team building; organizational confrontation meeting, coaching and mentoring, role focused interventions. HRM Interventions- Performance Management & HRD.

Module IV Structural Interventions -Restructuring organization, BPR Vs TQM, employee involvement, work design. Strategic Interventions – Organisation and environment relationships, competitive and collaborative strategies, organization transformational strategies.

Module V Contemporary issues and applications – Organizational development in global context, organizational development in service sector, OD Practioners – role, competencies requirement, professional ethics and value and experiences; Trends in OD.

References

1. Cummings, Thomas G. and Christopher G. Worley, *Organisation Development and Change*, Thomson Learning.
2. W Warner Bruke, *Organizational Change:Theory and Practice*, Sage
3. Ramnarayan S., T.V. Rao and Kuldeep Singh, *Organisation Development Interventions and Strategies*, response Books, New Delhi.
4. French, Wendell L. and Lecil H. Bell, *Organisation Development*, PHI, New Delhi

HRM 07 - PERFORMANCE MANAGEMENT

Module I Performance Management-objectives, scope and benefits, Job role and competency analysis, Goal setting process, Organizational, functional and individual Key result areas, Key performance indicators.

Module II Performance appraisal methods : traditional & modern - MBO,BSC,BOS, assessment centers, Multirater assessment , Potential appraisal, , Documentation and appraisal communication, appraisal interview, feedback , Performance coaching.

- Module III** Measuring performance – objectives, measurement approaches – traits, behaviour, results based, types, measurement issues, Performance communication – formal & informal methods.
- Module IV** Developing, implementing and maintaining PMS, Performance improvement and performance management discipline, PMS in public and private organizations.
- Module V** Competency mapping – concept, competency mapping process & models, competency assessment personal competency framework, Core competencies PCMM – concept, benefits, HR score card.

References

1. G K Suri, C S Venkataraman, N K Gupta, *Performance measurement and management*, Excel Books Pvt Ltd.
2. R K Sahu, *Performance Management System*, Excel Books Pvt Ltd.
3. Udai Perekh & T V Rao, *Designing and managing Human Resource Systems*, oxford publications.
4. T V Rao, *HRD Score card*, Sage Publications.
5. Herman Aguinis, *Performance measurement*, Pearson education .
6. Seema Sanghvi , *Competency mapping* , Response books, New Delhi.

HRM 08 - HUMAN RESOURCE INFORMATION SYSTEMS

- Module I** Introduction: Data & Information needs for HR Manager; Sources of Data; Role of IT in HRM; IT for HR Managers; Concept, Structure, & Mechanics of HRIS; Standard Software and Customized Software; HRIS – An Investment; Survey of software packages for Human Resource Information System including ERP Software such as SAP, Oracles Financials and Ramco’s Marshal (only data input, output & screens).
- Module II** HR Management Process & HRIS: Modules on MPP, Recruitment, Selection, Placement; Module on PA System; T & D Module; Module on Pay & related dimensions; Planning & Control; Information System’s support for Planning & Control.
- Module III** Human Resource Accounting – Concept, Objectives , Converting Human data in to money value- Different methods of HRA, Limitations of Human Resource Accounting – Investment Approach, Investment in human resources , Recruiting Costs, Depreciation, Rates of Return, Measuring return of human assets, Prevention of Human Resource Wastage.
- Module IV** Organization Climate Approach – Improvement and deterioration of organizational climate, Responsibility accounting and Management control

Behavioural aspects of Management Control; Human resources as social capital, Mentoring and development of social capital, Social control, HR accounting and bench-marking.

Module V Personnel costs, Audit Techniques, HR Audit, HRD Audit, HRD Score Card – Accounting and Financial Statements.

References

1. Michael Armstrong, *A Handbook of Human Resource Management Practice*, Kogan Page.
2. Jac Fitz-enz, et al, *How to Measure Human Resource Management*, McGraw Hill.
3. M. Saeed, D.K. Kulshreshtha, *Human Resource Accounting* Anmol Publications.
4. Prabakara Rao, *Human Resource Accounting*, Inter India Publications, New Delhi.

HRM 09 - STRATEGIC HUMAN RESOURCE MANAGEMENT

Module I Business Strategy and Organizational Capability-SHRM overview-Linking HR strategy with Business Strategy-Steps in SHRM - Role of HR during Organizational Growth, Turn around, Retrenchment -Mergers and Acquisitions.

Module II Strategic HR Planning and Acquisition-Business Strategy and HRP-Job Analysis and SHRM -HRP Process-HRP and Outsourcing-Strategic Recruitment and Selection-IT enabled acquisition -Alternatives to hiring.

Module III Strategic Human Resources Development -Corporate Strategy and Career Systems-The Need for Training and Development-HRM approaches to Training and Development-Linkage between Business Strategy and Training -New Developments in Training and development.

Module IV Strategic Performance Management, Compensation and Employee Relations-Performance Measurement approaches-Effective performance Measurement-Compensation Reward Approaches-Trends in Top level Executive Compensation-Strategic Linkage of Performance Management and Compensation-Managing Employee Relations: Unions and Strategic Collective Bargaining.

Module V Global Environment of HR-Change & Diversity-Difference between Global HRM and Domestic HRM-Cross Cultural context-Strategic HR Issues in Global Assignments-Competencies of HR Professional in a SHRM Scenario.

References

1. Tanuja Agrawal, *Strategic Human Resource Management*, Oxford Publishers.
2. Rajib Lochan, *Strategic Human Resource Management*, Excel Books.

3. Jeffery .A. Mello, *Strategic Human Resource Management*, Cengage Learning.
4. Richard Greer, *Strategic Human Resource Management*, Pearson.

HRM 10 - TRAINING AND DEVELOPMENT

- Module 1** Introduction to training: need for Training and Development- importance of Training and development in organization. A Systematic Approach to Training & Development-Assessment phase, Training and Development phase, Evaluation Phase, Training administrations, effective usage of instructions in training.
- Module II** Needs Assessment and Analysis:, Organizational Support for need assessment , operational analysis / Organizational analysis, requirement analysis, individual analysis. Motivational aspects of HRD : Development cycle; Reinforcement for behaviour modification- Learning theories, stages of learning, learning principles, challenges to become learning organization, trainee readiness, trainee motivation to learn, motivational theories.
- Module III** Instructional Approaches: An Overview, Traditional Instructional Approaches, modern Instructional Approaches, Internal Training Vs External Training. Training Methods- On the job- Apprenticeship., working, mentoring .Off the job- Case studies, lectures, vestibule, sensitivity, in-basket, role plays, audiovisual & other contemporary methods. Role of Trainers, Qualities of a Good Trainers, Internal Trainer Vs External Training.
- Module IV** Training Evaluation and Measurement: Introduction to evaluation process, Introduction to criteria development, choosing criteria measures, The Evaluation of Criteria, Evaluation, Experimental Designs, quasi experimental design, Other methods of evaluation External Training Validity, Models of Evaluation., ROI on Training.
- Module V** Human resource development concept - HRD at micro and macro levels - Sub - systems of HRD - role of HRD function - concept of career – career Stages - career planning and development - need - steps in career Planning - methods of career planning and development - career development Actions and programs - career problems and solutions - guidelines for Career management. Concept of management development - need and importance of Management development - management development process- Leader centered techniques of management development.

References

1. Goldstein Irwin L, *Training In Organizations - Needs Assessment*,

- Development & Evaluation*, Wordsworth Publication
2. Lynton & Parekh, *Training for Development*, Sage Publication
 3. Robert L. Craig, *ASTD Training and Development*, McGraw Hill Publication
 4. Dugan laird- *Approaches to Training and Development*, Perseus Publishing 2003
 5. Rao TV , *Readings in HRD*, Oxford & IBH

INFORMATION SYSTEM ELECTIVES

IS 01-SYSTEM ANALYSIS & DESIGN

- Module I** Overview of System Analysis and Business modeling; System components, Business profile, business process models, Business Systems Concept; Systems Development Life Cycle; Project Selection; feasibility Study. Impact of internet, web based system development, Guidelines for System development, Roles and responsibilities of a Business Analyst.
- Module II** System analysis: Systems documentation consideration: Principles of Systems Documentation, Types of documentation, Requirement gathering techniques: Interviews, Group, Communication Questionnaires, Presentations & Site Visits, SRS documentation. Tools for Analysis and Design of Business System: modelling, prototyping, CASE tools; Methodologies: Structured analysis, Object oriented analysis, agile methods. System analysis activities, techniques: JAD, RAD, Agile methods. Modelling tools: DFDs, Functional decomposition diagrams, CASE tools, UML; Data and process modelling: DFDs, Data Dictionaries; Process description tools: Decision Analysis; Decision Trees and Tables.
- Module III** Business Modelling with UML, Components of UML used in Business Modelling, RUP, IDEF, and BPMN 2.0 basics. Object modelling: Object oriented analysis, Object modelling with UML: Class diagram, Object diagram, State chart diagram, Activity diagram, Sequence diagram, Collaboration diagram, Use case diagram, Component diagram, Deployment diagram
- Module IV** Output and User interface design: Output design, input design, user interface design, File Design , Data design concepts, DBMS components, ER diagrams, Documentation Tools ; Testing Techniques Available ; Systems control and Audit trails ; Systems Administration and Training ; Conversion and Operations Plan.

Module V Systems Control and Quality Assurance: Hardware and Software Selection , Hardware Acquisition ; Bench marking , Vendor Selection , Operating System Selection , Language Processors. Performance and Acceptance Testing Criteria, Preparing User Manual. Maintenance Activities and Issues.

References

1. Elias M. Awad, *System Analysis & Design*, Galgotia Publications. India
2. Senn, *Analysis & Design of Information Systems*, McGraw Hill International.
3. Shelly,Rosenblatt, *System Analysis & Design*, Cengage Learning, Eighth edition.
4. Hoffer, *Modern System Analysis & Design*, Pearson Education.
5. Rambaugh, Jacobson, Booch, *UML- Reference Manual*, Pearson.

IS 02- ELECTRONIC COMMERCE & INTERNET MARKETING

Module I Introduction to E-Business: Fundamentals of Information Technology, Emergence of Internet & WWW, Digital economy, Emergence of E-Commerce-commerce vs. E-business ,trends driving E-business , E-business framework, Business models, Revenue models, Value chain, E-business technology, software, Indian Scenario.

Module II Launching online business: Business plan, Funding, Web hosting, content creation management, Website design and construction, Strategies for web development, 7 Cs framework, web technologies: website and page development tools, Open source tools.

Module III E-Payment system: Traditional vs. Digital payment systems, Digital Payment requirements, Merchant account, Payment gateway, E-payment methods: Credit cards, E-wallet, Digital Token based E-payment systems, E-Cash, Innovative payment methods, E-loyalty and Reward programmes ,E-payment system Design, E-Banking, Main Concerns in Banking.

Module IV E-Security: Network and website security, Security Technologies, Internet Security Holes, Cryptography, Codes and Cipher, Data Encryption standard, Authentication, PKI, Digital signature, SSL, Firewalls, VPN, Cryptographic applications .E-Commerce Risk Management, Information Security in India, NASSCOM's Flagship Initiatives, Cyber laws in various countries.

Module V E-Business Application Areas (CRM,ERP,SCM and Selling), Mobile Commerce: Introduction to mobile commerce, Wireless applications, Hand Held Devices, Mobile Computing, Wireless Web, Concepts of WAP.E-Marketing: Browsing behavior model, Internet Marketing Trends, E-Advertising, E-branding, Marketing Strategies, SEO, Location based commerce, Emergence of Web 2.0, Social Media Strategies.

References

1. Dave Chaffey, *E-Business and E-Commerce Management*, Pearson Education, 2012.
2. Kalakota Ravi and M.Robinson, *E-Business 2.0: Roadmap for Success*, Pearson Education.
3. Efraim Turban et al., *E-Commerce*, Pearson Education.
4. Joseph P.T., *E-commerce An Indian Perspective*, PHI

IS 03- ENTERPRISE RESOURCE PLANNING

Module I ERP: An Overview, Enterprise – An Overview, Benefits of ERP, ERP and Related Technologies, Business Process Reengineering (BPR), Data Warehousing, Data Mining, OLAP, SCM.

Module II ERP Implementation-ERP Implementation Lifecycle, Implementation Methodology, Hidden Costs, Organizing the Implementation, Vendors, Consultants and Users, Contracts with Vendors, Consultants and Employees, Project Management and Monitoring.

Module III The Business Modules-Business modules in an ERP Package, Finance, Manufacturing, Human Resources, Plant Maintenance, Materials Management, Quality Management, Sales and Distribution.

Module IV ERP Market - Market Place, SAP AG, Peoplesoft, Baan, JD Edwards, Oracle, QAD, SSA.

Module V ERP – Present and Future - Turbo Charge the ERP System, EIA, ERP and e-Commerce, ERP and Internet, Future Directions.

References

1. Alexis Leon, *ERP Demystified*, Tata McGraw Hill, New Delhi.
2. Joseph A Brady, Ellen F Monk, Bret Wagner, *Concepts in Enterprise Resource Planning*, Thompson Course Technology, USA.
3. Vinod Kumar Garg and Venkitakrishnan N K, *Enterprise Resource Planning – Concepts and Practice*, PHI, New Delhi.

IS 04- BUSINESS PROCESS REENGINEERING

Module I Conceptual Foundation of Business Process Re-engineering; Role of information Technology in BPR; Nature, significance and rationale of business process reengineering (BPR).

Module II Major Issues in process redesign: Business vision and process objectives, Processes to be redesigned, Measuring existing processes; Process Improvement and Process Redesign; BPR Experiences in Indian Industry.

- Module III** Process identification and Mapping; Role/Activity Diagrams; Process Visioning and Benchmarking: Business Process Improvement. Designing and building a prototype of the new process: BPR phases, Relationship between BPR phases.
- Module IV** Typical BPR activities within phases: Change management, Performance management, and programme management.
- Module V** BPR and continuous improvement: Co-ordination and complementary efforts, IT capabilities and their organizational impacts, Implementation of BPR, Stages of implementation and critical aspects, Case studies on BPR. Man Management for BPR Implementation; Re-organizing People and Managing Change.

References

1. R.Radhakrishnan and S.Balasubramanian *Buisness Process Reengineering: Text Case*, PHI.
2. Jayaraman,M.S., *Business Process Re-engineering*, Tata Mcgraw Hill,
3. Michael Hammer, James Champy, *Reengineering the Corporation: A Manifesto For Business Revolution*, Harper Collins Publishers.
4. Carr, D. K. and Johanson, H. J., *Best Practices in Re-engineering*, New York, McGraw Hill.
5. Coulson Thomas, C., *Business Process Re-engineering: Myth & Reality*, London, Kogan Page.

IS 05-SOFTWARE QUALITY MANAGEMENT

- Module I** Software Quality: Meaning and definition of Software Quality. Quality control v/s Quality Assurance, Quality Assurance in Software at each Phase of SDLC. QMS in an organization. Need for SQA group. Software CMM and other Process improvement Models.
- Module II** Software Quality Measurement and Metrics: Product Quality Metrics: Defect Density, Customer Problems Metric, Customer Satisfaction Metrics, In-Process Quality Metrics: Defect Arrival Pattern, Phase-Based Defect Removal Pattern, Defect Removal Effectiveness, Metrics for Software Maintenance: Backlog Management Index, Fix Response Time, Fix Quality.
- Module III** Basic Quality Tools : Ishikawa's Diagram, Pareto Diagram, Histogram, Run Charts, Scatter Diagram, Control Charts, Cause & Effect Diagram, Relations Diagram,

Module IV Six Sigma Methodology: Define Six sigma. Tracking Xs and Ys. Six ingredients of Six Sigma. Three ways to Six Sigma – Process Improvement, Process Design/Redesign, Process Management. Organizing for six sigma – Leadership Group, Project Sponsors & Champions, Implementation leader, Master Black Belt, Black Belt, Team, Process owners. DMAIC Vs DMADV process.

Module V Software Verification, Validation & Testing: Objectives and Limits of Testing, Value Vs Cost of testing, Test Planning, Static Testing, Functional Testing, Structural Testing, Performance Testing, Testing Environment, Automated Testing Tool, Analysing and Interpreting Test Results.

References

1. Nina S Godbole, *Software Quality Assurance*: Narosa Publishing House Pvt. Ltd
2. Stephen H. Kan, Kan, *Metrics and Models in Software Quality Engineering* Second Edition, Pearson Education, Inc.
3. Gerald D. Everett, Raymond McLeod, *Software Testing- Testing Across the Entire Software Development Life Cycle*, John Wiley & Sons, Inc Publication.
4. Pankaj Jalote, *CMM in Practice. Processes for Executing Software Projects at Infosys*, Pearson Education

IS 06- MULTIMEDIA MANAGEMENT

Module I Introduction to multimedia- Stages in multimedia project- Multimedia Team

Module II Multimedia hardware- Multimedia software- Basic Tools- Authoring Tools- Multimedia building blocks.

Module III Text- Sound- Images- Animation- Video- Multimedia and Internet- Tools for the World Wide Web.

Module IV Designing for World Wide Web- Planning and costing –Designing and producing -Assembling and delivering a project.

Module V Uses of Multimedia–Multimedia in Business – Multimedia in public places- Multimedia in schools and home.

References

1. Tay Vaughan, *Multimedia: Making it Work*, Tata Mcgraw Hill, New Delhi.

2. Anurag Sethi , *Multimedia Education: Theory and Practice*, Tata Mcgraw Hill, New Delhi.

IS 07- MANAGEMENT SUPPORT SYSTEM

- Module I** Overview of CBIS Applications : Decision Making Concepts – A Need for Computerized Decision Support; Role of Decision Support Systems in Business; A Framework for Decision Support. Modeling in Decision Support; Microsoft Excel DSS Tool – What-if Analysis, Scenario Manager, Goal Seek, Sensitivity Analysis.
- Module II** Group Decision Support Systems; Multi participant decision maker structures (MDM).MDM Support technologies. Enterprise Decision Support System: Concepts and definitions. Evolution and future of Executive and Enterprise Information System.
- Module III** Use of DSS Technology for Marketing, Finance, Production and HRM. Modeling of Multi-Objective and Analytic Hierarchy Process. Artificial Intelligence, Need and Application. AI based systems
- Module IV** Expert system: concepts & structure. Human element of expert system. Expert system consultation- illustration. Problems, benefits, limitations of Expert system Development of a Expert system; Expert System Shells; Working on an expert system Shell;
- Module V** Executive Information Systems definition; their Applications. EIS components. Making EIS work. Future of EIS

References:

1. Turban, McLean, Wetherber, *Information Technology for Management*, Tata Mcgraw Hill, New Delhi
2. Gerald V Post, David L Anderson, *Management Information System*, PHI
3. George M Marakas, *Decision Support System in 21st century* , Tata Mcgraw Hill, New Delhi,
4. Gordon B Davis, *Management Information System*, Tata McGraw Hill, New Delhi

IS 08- SOFTWARE PROJECT MANAGEMENT

- Module I** Software engineering and management: Functions of management, Need for software management, Conventional software management,

Evolution of software Economics .Improving software Economics, conventional and modern software engineering.

Module II Software development as a process: Building the software development team - Team building as a process, The Apollo syndrome, Management Styles, A maturity model for software project management, Process of team building ,Developing and maintaining project plan – Software development plan, using the work break down structure, optimizing the project plan using the design structure matrix, risk management.

Module III Management Methods and Technology: Selecting a software development life cycle model – the software quality life cycle, modeling process, life cycle models, selecting a software development life cycle , Modeling the target system – requirements modeling methods, requirements analysis using self interaction matrices, real-time systems. Estimating project size, cost and schedule – costing and sizing software projects, software lifecycle management, 3D function point method, cost variance method ,Tracking the software project plan – tracking schemes, Earned Value Management (EVM), precedence diagramming for cost and schedule control, tracking remedial action.

Module IV Managing software professionals: Improving team performance – basics, relative importance of workplace, models of motivation, managing high performance teams-Evaluating software development team – classic techniques for valuating individuals, Strategy Based Evaluation methods (SEM), the SEM process, traditional performance evaluation methods, evaluating the software development team.

Module V Future of software management: Modern project profiles, Next generation software economics, Modern process transitions Agile, SCRUM approaches of project management.

References:

1. Lawrence J Peters . *Getting results from software development teams*, Microsoft Press
2. Walker Royce *Software project Management*, Addison-Wesley

IS 09- DATABASE MANAGEMENT SYSTEM

Module I Overview of DBMS : Database Management in organisations ; Objectives of DBMS ; Evolution ; data structures ; DBMS Architecture ; User interface, data languages, DBMS modes of operation.

- Module II** DBMS functions: Design ; retrieval ; creation and updating; backup and recovery.
- Module III** Study of Relational Data Base Management System for successful implementation of Distributed systems; RDBMS concepts, structure and ER models ; Normalisation and Logical design Query Language for RDBMS.
- Module IV** Structured Query Language – basic structure of SQL queries, DML, DDL, DCL statements ; Distributed database systems - data fragmentation, replication and allocation techniques ; object oriented databases ; online database ; database administration ; trends to the future in database management.
- Module V** Applications ; Advanced transaction processing – transaction processing monitors, transactional workflows, Real- time transaction systems, Long duration transactions, transaction management in multi-databases; Evaluation of commercially available software systems

References:

1. C.J Date, A. Kannan, S.Swamynathan, *Introduction to Database system*, Pearson education.
2. Gorden.C. everest, *Database management*, Tata McGraw Hill.
3. Abraham silbershatz, Henry F. Korth, S. sudarshan, *Database system concepts*, McGraw Hill International Edition.
4. Elmasti, Navathi, Somayajulu, Gupta, *Fundamentals of database systems*, Pearson education.

IS 10 -PLANNING AND IMPLEMENTING IT STRATEGIES

- Module I** Technology Transforms IT Organizations – Why IT Strategy is required? What are the various dimensions of IT Strategy - Value propositions – Managerial decisions – Transforming organization - Aligning Business Objectives with IT Strategy – Six important trends – Value chains – Five forces model – Dynamic model – New business models – analyzing business models – Transformation with IT – IT variables for designing organizations – T-Form organization – New management challenges.
- Module II** Globalization and international business – International business strategies – Key issues – Virtual firms and IT – Business models and IT management – IT investment opportunities matrix – IT and investment equation – Investment decision – guidelines for IT investment – Choosing technology – Outsourcing – Pros and Cons, Objectives.

Module III Implementing IT – Research implementation – Implementation strategy – Implementing IT based transformations – Disaster recovery and Business continuity – managing IT function – Management control of IT – Control theory – Failure control – information control – Technology, Process and People dimension of IT Strategy - group decision making.

Module IV Impact of the components – First component Computer systems – Second component Database – Third component Powerful networks – Neural networks – Cloud – grid computing - Future technology – IT Strategy focus points for 2011 and 2012 and beyond.

Module V Decision and intelligent systems – Expert systems and AI – (SCM) Supply Chain Management – (CRM) Customer Relationship Management – Knowledge Management – Ethical issues in corporate governance and IT – virtual organization – monitoring SLAs’ (Service Level Agreements).

References:

1. Henry C. Lucas, *Information Technology – Strategic Decision Making for Managers*, Wiley - India Edition.
2. Rich Schiesser, *IT Systems Management*, PHI.

PRODUCTION AND OPERATIONS MANAGEMENT

ELECTIVES

POM 01- SUPPLY CHAIN AND LOGISTICS MANAGEMENT

Module I

Introduction to Supply Chain Management (SCM): Concept of SCM – Components – Features – Strategic issues in SCM, The Supply Chain Revolution -Customer focus in SCM , Demand planning, Purchase Planning – Make or Buy decision – indigenous and global sourcing, Development and Management of suppliers – Legal aspect of Buying – Cost management- Negotiating for purchasing and sub contracting – Purchase insurance – Evaluation of Purchase performance.

Module II

Manufacturing Scheduling: Manufacturing flow system – Work flow automation – Flexibility in manufacturing to achieve dynamic optimization, Material handling system design and decision, Strategic Warehousing – Warehousing Operations – Warehousing Ownership Arrangements – Warehouse Decisions.

Module III

Logistics: The Logistics of Business – The Logistical Value Proposition – The Work of Logistics – Logistical Operating Arrangements – Flexible Structure – Supply Chain Synchronisation, Transport Functionality, Principles and Participants – Transportation Service – Transportation Economics and Pricing – Transport Administration - Documentation.

Module IV

Information Technology and SCM: Information System Functionality – Comprehensive Information System Integration – Communication Technology – Rationale for ERP Implementation – ERP System Design – Supply Chain Information System Design – Enterprise Facility Network – Warehouse requirements – Total Cost Integration – Formulating Logistical Strategy

Module V

International Logistics and Supply Chain Management: Meaning and objectives, importance in global economy, Characteristics of global supply chains,: Global Supply Chain Integration – Supply Chain Security – International Sourcing - Role of Government in controlling international trade and its impact on Logistics and Supply Chain.

References:

1. Bowersox, Closs, Cooper, *Supply Chain Logistics Management*, McGraw Hill.
2. Donald J Bowersox, David J Closs, *Logistical Management (The integrated Supply Chain Process)*, TMH
3. Sunil Chopra, Peter Meindl, *Supply Chain Management (Strategy, Planning and Operation)*, Pearson Education, India.
4. Burt, Dobbler, Starling, *World Class Supply Management*, TMH.

POM02- TOTAL QUALITY MANAGEMENT

Module I

Quality Management – Definition, Concept, Features, Dimensions of Quality, Quality Planning, Quality Costs, Evolution of Quality Management ,Quality revolutions in US, Japan and India.

Quality Gurus – Deming’s principles on Total Quality Management, Juran’s Trilogy, Crosby’s principles on Quality Management.

Module II

Statistical Quality Control (SQC) Concepts, Acceptance Sampling by variables and attributes Control Charts for variables, fraction defectives and defects. Seven Tools of Analysis –Control Chart, Pareto Diagram, Ishikawa Diagram, Histogram, Flow Charts, Scatter Diagram, and Stratification – New Seven Analysis tools. Six Sigma concepts of process quality.

Module III

Benchmarking – Types, Reasons, Process.Quality Function Deployment (QFD) – Benefits, QFD Process, House of Quality. Failure Mode and Effect Analysis (FMEA). Taguchi Quality Loss Functions. Total Productive Maintenance (TPM) – Concepts, Objectives, Fundamental Elements, Total Preventive Maintenance, Components.

Module IV

Quality education and training quality process, Quality system – Quality measurement system – Cost of Quality – Quality planning – Quality information feedback – Internal customer concept – - Auditing for TQM. TQM in India. Pitfalls in operationalising Total Quality Management.

Module V

Quality awards – Rajiv Gandhi National Quality Award, Deming Application Prize, European Quality Award, and Malcolm Baldrige National Quality Award.

References:

1. Dale H Besterfield, *Total Quality Management* Pearson Education, New Delhi
2. Juran Joseph M, *Total Quality Management*, Mc Graw Hill.
3. Jain, *Quality Control and Total Quality Management*, Tata McGraw Hill.
4. R.P. Mohanty and R.R. Lakhe, *TQM in service sector*, Tata McGraw Hill.

POM 03- ADVANCED MAINTENANCE MANAGEMENT

Module I

Maintenance Concepts: Objectives & functions of Maintenance, Maintenance strategies, Organization for Maintenance, Types of Maintenance – maintenance systems – planned and unplanned maintenance – breakdown maintenance – corrective maintenance –opportunistic maintenance – routine maintenance – preventive maintenance – predictive maintenance – condition based maintenance systems – design-out maintenance – selection of maintenance systems.

Module II

Maintenance Planning and Equipment Efficiency Management: Overhaul and repair meaning and difference, Optimum Maintenance policy for equipments subject to breakdown, Replacement decisions: Optimum interval between preventive replacement of equipment subject to breakdown, group replacement, Physical Asset Management, Overall Equipment Effectiveness Measuring Equipment Effectiveness

Module III

Failure Data Analysis, MTBF,MTTF, Useful life-Survival curves, Repair time, Breakdown time distributions- Poisson's, Normal, Exponential, Failure Mode Effects and Criticality Analysis

Module IV

Availability, Reliability, Maintainability: Availability of repairable systems, Concept of Reliability, System reliability- Series, Parallel and mixed configuration, Reliability improvement, Concept of Maintainability, Maintainability prediction, Design for Maintainability, Maintainability Improvement, Availability- Maintainability-Reliability trade off.

Module V

Advanced Techniques: Reliability centered Maintenance, Total Productive Maintenance(TPM)- Philosophy & Implementation, Signature Analysis-MMIS-Expert systems, Concept of Tero-Technology, Reengineering Maintenance process,

References

1. Kelly and M.J. Harris, *Management of Industrial Maintenance*, Butterworth and Company Limited.
2. AKS Jardine, *Maintenance, Replacement and Reliability*, Pitman Publishing.
3. R.C.Mishra & K.Pathak, *Maintenance Engineering & Management*, PHI.
4. Sushil Kumar Srivatsava, *Industrial Maintenance Management*, S.Chand & Company.

POM 04 - LEAN MANUFACTURING

Module I

Lean manufacturing and six sigma – overview : Evolution of Lean; Traditional versus Lean Manufacturing; Business of Survival and Growth; Business Model Transformation; Ford Production System; Job Shop Concepts Concept of Lean; Toyota's foray in Lean.

Module II

Design - Value Stream Management: Definition; VSM Types; Product Family Selection; Value Stream Manager; Current State Map; Process Box; Value Stream Icons; 3 Ms - Muda, Mura, Muri - 7 Types of Muda; Future State Map; Value Stream Plan; Process Stability - Loss Reduction 7 Major Losses Reduction. Demand Stage :Market Dynamics; Customer Demand; PQ Analysis; PR Analysis; TAKT Time; Pitch; Finished Goods Stock; Cycle Stock; Buffer Stock; Safety Stock.

Module III

System implementation : Flow Stage : Continuous Flow; Cell Layout; Line Balancing; Macro and Micro Motion Analysis; Standardised Work; Concept of Kaizen; Steps involved in Kaizen Deployment; Industrial Engineering - Concepts and Fundamentals; KANBAN Concepts ; Types of Kanbans ; and Practical Application ; Concept of Pull; Changeover Time Reduction - External & Internal Single Minute Exchange of Die; Quick Die Change; Quality-Vendor,In Process and Customer Line ; Concept of PPM; Pokayoke; Prevention & Detection Types; Maintenance - Preventive, Time Based and Condition Based; Human Development for Lean, Leveling Stage of Lean Implementation : Production Leveling ; Leveling Box; Concept of Water Spider.

Module IV

Lean metrics and lean sustenance: Identify Lean Metrics; Steps involved in Goal Setting; Corporate Goals; Kaizen Cloud identification in VSM ; Lean

Assessment. Cultural Change; Reviews; Recognition; Improving Targets and Benchmarks.

Module V

Six sigma and DMAIC tools: Project charter, stakeholder analysis, SIPOC, Voice of the customer, Rolled throughput yield, KANO Models, CTQ Tree, Process Mapping Data collection, measurement system analysis, sampling plans, process capability, cost of poor quality (COPQ), FMEA Regression Analysis, cause & effect diagram, Hypothesis testing, Design of experiments, Response Surface methodology, Poka-yoke, Quality Control, Control charts.

References

1. Jeffrey Liker and David Meier, *“The Toyota Way Fieldbook”*, McGraw-Hill.
2. Pascal Dennis, *“Lean Production Simplified”*, Productivity Press.
3. James Womack and Daniel Jones, *“Lean Thinking”*, Free Press.
4. Don Tapping, Tom Luyster and Tom Shuker, *“Value Stream Management”* Productivity Press.
5. Tom Luyster and Don Tapping, *“Creating Your Lean Future State: How to Move from Seeing to Doing”*, Productivity Press.

POM 05 - INTEGRATED MATERIALS MANAGEMENT

Module – I

Introduction to Materials Management, Concept significance and strategic role of Integrated Materials Management, Materials codification and computerization, Universal product Code, RF Id System.

Module – II

Materials planning and forecasting, Inventory Planning and Control Models – EOQ Model, Quantity Discounts – Reorder point – Lead Time Analysis – Safety, Stocks – Q System – P System – S System. Materials Requirement Planning (MRP), Materials Problems in Indian Conditions, Inventory Audit and Information Systems.

Module – III

Purchasing Fundamentals – Make or Buy – Source Selection – Vendor Rating and Vendor Development - Value Analysis. Purchase Negotiations – Purchase Timing – Purchase Contracts – Purchase Insurance - Purchasing Capital Goods, Seasonal

Goods, Imported Goods, Deferred Payment Schemes – Lending Institutions – Leasing Trends. Governmental buying – D.G.S.&D Procedures, International Buying

Module – IV

Stores Management Concepts, Location and layout of Warehouses – Different typical models, Stores Procedures and Records for Receipt, Inspection, Issue, Reorder checking – Kardex Stores Accounting.

Module – V

Practical problems in Management of dead stocks, surplus stocks and scraps – Systems & Procedures for disposal and Control, Materials Handling and Transportation Management Case Studies, Evaluation of Materials Management Performance.

Reference:

1. Gopalakrishnan P & Sundarasan M, *Materials Management: An Integrated Approach*, Prentice Hall of India
2. Datta A.K, *Materials Management Text and Cases*, Prentice Hall.
3. J.R.Tony Arnold & Stephen N. Chapman, *Introduction to Materials Management*, Pearson Education
4. Gopalakrishnan P, *Handbook of Materials Management*, Prentice Hall.
5. Panneerselvam.R, *Production and Operations Management*, Prentice hall.

POM 06 - PRODUCTIVITY MANAGEMENT

Module I

Productivity concepts – Macro and Micro factors of productivity, productivity benefit model, productivity cycles. Internal and external factors affecting enterprise productivity.

Module II

Productivity Measurement at International, National and organization level, total productivity models. Productivity Management in manufacturing and service sector. Productivity evaluation models, productivity improvement model and techniques.

Module III

Value Analysis and Value Engineering: Concept – Procedure – Application and role in Productivity, Case examples of successful applications, Pareto Analysis, Zero-based-budgeting, Waste reduction and energy conservation.

Module IV

Work Study: Importance, Method Study and Work Measurement –Pioneers of Performance Measurement. Method Study: Method, Need and Procedure, Work simplification, Principles of Motion Economy.

Module V

Work Measurement: Techniques -Estimating, Stopwatch Time Study, Predetermined Time Standards, Synthetic Estimates of Work Times, Activity Sampling. Computation of Standard Time, Types of Elements, Performance Rating, Allowances – Need and Types.TPM: Meaning and objectives of TPM; Methodology of TPM, gains of TPM

References:

1. Sumanth, D.J., “*Productivity engineering and management*”, Tata McGraw-Hill,NewDelhi.
2. H. James Harrington, “*Business Process Improvement: The Breakthrough Strategy for Total Quality, Productivity and Competitiveness*”, McGraw-Hill Press.
3. Rastogi, P.N., “*Re-engineering and re-inventing the enterprise*”, Wheeler publications, New Delhi.

POM 07 - OPERATIONS STRATEGY

Module 1

Strategic Management : organizations and managers, contents of strategy, levels of strategic decision, designing a strategy, approaches to design - top-down and bottom-up approaches, steps, defining the purpose of operations, business environment, components of environment, economic environment, industries, industry life cycle, markets

Module II

Operations Strategy concept: aims of an operations strategy, contents of an operations strategy, and approaches to designing an operations strategy, market view, resources view

Designing an operations strategy –focuses of operations strategies: product differentiation, materials management– environmental scans, analysis of the environment, PEST analysis, operational audit, SWOT analysis- implementing the strategy - meaning of implementation, stages of implementation, designing infrastructure, controlling the strategy, action plan for implementation

Module III

Products and innovation: product planning, entry and exit strategies, new product development, market demands, operations' requirements, production possibility curve quality management – strategic importance of quality, quality management, quality revolution, Total Quality Management – zero defects, implementing TQM, ISO 9000, quality control

Module IV

Capacity Management: measures of capacity, capacity planning, approaches to planning, forecasting demand, timing and size of change, size of expansion, changing capacity over time, different levels of capacity plan

Module V

Structure of the supply chain: role of logistics and supply chain management, integration of activities along the supply chain, location of facilities, strategic sourcing and supply management, risk management, operational hedging, mass customization and technology movement of materials, flow of materials, importance of procurement, inventory management, models of independent demand

References:

1. Donald Waters, *Operations Strategy*, Thomson Learning India.
2. Premvrat, SardanaG.D., and Sahay, B.S.,“*Productivity Management – Systems approach*”,Narosa Publications, NewDelhi.

3. Joseph Prokopenko, “*Productivity Management : A Practical Handbook*”, International Labour Office.

POM 08 - TECHNOLOGY MANAGEMENT

Module 1

Evolution of Technology: Effects of New Technology- Technology Innovation-Invention-Innovation-Diffusion- Revolutionary and Evolutionary Innovation-Product and Process Innovation. Technology environment – Science and Technology in India.

Module II

Strategic Implications of Technology: Technology - Strategy Alliance-Convergent and Divergent Cycle- The Balanced Approach- Technology Assessment- Technology Choice- Technological Leadership and Followership-Technology Acquisition

Module III

Technology Absorption and Diffusion – absorption, adaptation and improvement, Diffusion of Technology: Rate of Diffusion- Innovation Time and Innovation Cost- Speed of Diffusion- Technology Indicators- Various Indicators.

Module IV

Technology policies, incentives and support mechanisms Organizational Implications of Technology: Relationship between Technical Structure and Organizational Infrastructure-Flexible Manufacturing Management System (FMMS).

Module V

Functional aspects: Financial Aspects in Technology Management-Improving Traditional Cost Management System- Barriers to the Evaluation of New Technology- Social Issues in Technology Management-Technological Change and Industrial Relations- Technology Assessment and Environmental Impact Analysis- Human Aspects in Technology Management-Integration of People and Technology

References:

1. Gerard H Gaynor, *Hand Book of Technology Management*, McGraw Hill
2. David L. Bodde, *The International Entrepreneur*, Prentice Hall of India, New Delhi
3. Frederic Betz, *Strategic Technology Management*, McGraw Hill

POM 09 - SERVICE OPERATIONS MANAGEMENT

Module I

Introduction to services – Nature and Characteristics of Services and Service Encounters, Service Organization as a system, Service Strategy formulation , Basic and Integrative elements of Strategic service.

Module II

Building Service System – Technology: Its impact on services and their management- Design and development of Services and Service delivery system, Work Measurement in Services, Time studies, Predetermined Time Standards, Work sampling, Locating and Designing Service- Factor weighting method, Center of Gravity method, Service facility Layout, Service layout strategies for Product Layout, Process Layout, Office layout, Retail store Layout, Warehousing and Storage Layout.

Module III

Operating the Service System- Managing Demand, Nature and pattern of Service demand, Strategies for influencing Demand, Yield management, Queuing theory and Simulation, Managing Supply, Capacity, Components of Capacity, Strategies for Management of Supply, Overbooking, Allocating capacity- Static, Nested and Dynamic Methods, Inventory Management in Services, Methods to reduce stock-outs, shrinkages and inventory inaccuracy

Module IV

Managing Service Operations- Service Quality, Dimensions of Service Quality, Achieving Quality, Reinforcing Service Quality through Service Recovery and Service Guarantee, Service Productivity, Measurement and Methods to increase Service Productivity,. Basic understanding of Data Envelopment Analysis and Scoring System.

Module V

Case studies in service operations management-

Travel and tourism sector	– Hotel, Airline
IT and communication sector	– Information technology, Telecom services, Computer networking service
Healthcare sector	– Hospital, Medical Transcription
Financial Services sector	– Insurance, Banking, Portfolio services
Educational services	– Education, Training.

References

1. Richard Metters, Kathryn King-Metters, Madeliene Pullman, Steve Walton, “*Service Operations Management*” Cengage Learning India Private Ltd.
2. Cengiz Haksever, Barry Render, Roberta S Russell, Roberta G. Murdick, “*Service Operations Management*”, Second Edition, Pearson Education Pvt Ltd.
3. Robert Johnson, Graham Clark, “*Service operations management : improving service delivery*”, Pearson Education, Third Edition.

POM 10 - OCCUPATIONAL HAZARDS AND INDUSTRIAL SAFETY

Module I

Understanding the importance of safety at work: Concept of Safety-Applicable areas- Recognition, evaluation and control of physical hazards- Hazard Analysis, Human Error and Fault Tree Analysis- Emergency Response-Hazards and their control in different manufacturing and processing industries.

Module II

Industrial Accidents: Causes and effects of Industrial accidents-Impact of accidents on employees, union, management and society- Organisation’s Role and Responsibility in the Prevention of Accidents- Different models.

Module III

Standard of Safety Norms: Indian scenario Safety Protection- Safety Policy – Personal safety – Responsibilities of management in health and safety-. Occupational Health and Safety considerations in Wastewater Treatment Plants. - Functions of National Safety Council

Module IV

Legal provisions regarding safety:

Factories Act-1948 1st Amendment 1987- Sections 11 -16, 18-20

Sections 17, 21 – 24, 28, 32,, 34-36, 38,45

The Mines Act Section 25 ESI Act – Section 39

Public Liabilities Insurance Act-

Section 13

Module V

Accidents in work place-Types, Investigation methods, Analysis ,Reporting and Recording
Injuries -First aids- Health problems in different types of industries – construction, textile, steel,food processing and pharmaceutical.
Fire- Causes, Types of fire, Extinction of fire, Prevention of fire.

References

1. Dr.Naseer Elahi, *Industrial Safety Management*, Gyan Publication, New Delhi.
2. L.M. Deshmukh, *Industrial Safety Management*, Tata Mc Graw Hill.
3. R.K.Trivedi, *Pollution Management in Industies*, S Chand Publishing, New Delhi.
4. O.P.Khanna, *Industrial Engineering*, S Chand Publishing, New Delhi.

INTERNATIONAL BUSINESS ELECTIVES

IB 01 - INTERNATIONAL ECONOMICS

- Module I** Introduction: International Economics- meaning, Scope & Importance Inter-regional and international trade. Importance of International Trade. Theoretical Aspects of Economic Integration: Free trade area, customs union and common market; Theory of customs union; Trade creation and Diversion effects.
- Module II** Theories of International Trade. Theory of Absolute Cost Advantage, Theory of Comparative Cost Advantage. Intra-Industry Trade. Gains from Trade, Measurement of gains, static and dynamic gains. Terms of trade – Importance & Types, Detrainment’s of Terms of trade, Causes of unfavorable terms of trade to less developed countries.
- Module III** Trade policy & Exchange Rate, Free trade policy - case for and against, Protections – case for and against, Types of Tariffs and Quotas, Determination of Exchange rate, Fixed & Flexible Exchange Rate- Merits & Demerits.
- Module IV** Balance of Payments, Balance of trade and Balance of payments;- Concepts and Components Equilibrium and Disequilibrium in Balance of Payments; Causes and Consequences, Measures to correct deficit in the Balance of Payments. International Monetary System, Devaluation; -

Merits, Demerits and Limitations, Foreign Trade Multiplier; - Concept and Limitations, IMF, World Bank – Objectives, Functions & Performance.

Module V Foreign Trade in India, Recent changes in the composition and direction of foreign trade; Causes and Effects of persistent deficit in the Balance of Payments; Measures adopted by the Government to correct the deficit after 1991; WTO & India Export Promotion measures, Partial and Full convertibility of Indian Rupees, Export Promotion – Contribution of SEZ Foreign Trade policy 2009, Role of Multinational Corporations in India.

References

1. Krugman, P.R. and M. Obstfeld , *International Economics : Theory and Policy*, Pearson.
2. D,Salvatore, *International Economics*, Wiley India.
3. Soderste, *International Economics*, Macmillan Press Ltd.
4. Cherunilam, Francis, *International Economics*, TATA McGraw-Hill Publishing Company Ltd, New Delhi.

IB 02 - INTERNATIONAL FINANCIAL SYSTEM

Module I Introduction to International Financial System: International Monetary System: Features and requirements; System of exchanging currencies – From Bretton Woods system to free float and convertibility; Pegging of currencies –target zone arrangement; European monetary system; International liquidity.

Module II Exchange Rate Determination: Exchange rate determination in spot and forward market – Interest Rate Parity (IRP), Purchasing Power Parity, Fisher open equation Monetary and portfolio balance approaches; Short run demand and supply theory, BOP theory, and Growth theory; Forecasting Exchange Rate.

Module III Foreign Exchange Markets and its Activities: Exchange rate quotations and practices; Foreign exchange market activities; Forex Exposure and Risk Management. Arbitraging, hedging and speculation.

Module IV International Financial Markets and Instruments: Changing scenario; International capital and money market instruments; International development banking; Euro – currency markets; International securities markets and instruments -Bond and notes market; equity market, GDR, ADR, EDR and IDR; Integration of financial markets and approach; Role of financial intermediaries.

Module V International Debt Problem: Problem of debt servicing and developing countries (with special reference to India).

References

1. Shapiro, C, Alan, *Multinational Financial Management*, Wiley India
2. Sharan, V., *International Financial Management*, Prentice Hall of India Private Ltd. New Delhi.
3. Levi, Maurice, *International Finance*, McGraw Hill Inc., New York.
4. Seth, A.K., *International Financial Management*, Rutledge,

IB 03 - INTERNATIONAL MARKETING

Module I Nature, importance and scope of international marketing International market orientation and involvement, International marketing management process – an overview. Influence of physical, economic socio - cultural, political and legal environments on international marketing, operations; Scanning and monitoring global marketing environment; International marketing information system.

Module II International Market Segmentation and Positioning; Screening and selection of markets; International market entry strategies. International Product Planning: Major Product and Services decisions. Product standardization vs. adaptation; Managing product line; International product life cycle; New product development.

Module III Pricing for International Markets: Factors affecting international price determination; International pricing process and policies; Delivery terms and currency for export price quotations; Transfer pricing. International Distribution Decisions: Distribution channel strategy-International distribution channels, their roles and functions; Selection and management of overseas agents; International distribution logistics inventory management transportation, warehousing and insurance.

Module IV International Promotion Strategies : Communications across countries-complexities and issues; International promotion tools and planning – Advertising, personal selling, publicity and sales promotion; Developing international promotion campaign; Planning for direct mail, sales literature, trade fairs and exhibitions.

Module V

International Marketing Planning, Organising and Control: Emerging trends in International Marketing; International Marketing through Internet; Ecological concerns and International Marketing ethics.

References

1. Cateora, Phillip R. and Graham L John, *International Marketing*, Irwin McGraw Hill, Boston.
2. Paul, Justin, Kapoor , Ramneek, *International Marketing*, McGraw Hill.
3. U.C, Mathur, *International Marketing: Text and Cases*, Sage India.
4. R, Srinivasan, *International Marketing*, Prentice Hall India.

IB 04 - INTERNATIONAL TRADE POLICIES AND PROCEDURES

Module 1

India's Foreign Trade and Investments: Pattern and structure of India's foreign trade; Terms of trade; Foreign investment flows; India's balance of payments account and correction policies.

Module II

Policy Framework and Promotional Measures: India's foreign trade and investment policy; Policy making body and mechanism; Export promotion measures and infrastructure support – export and trading, houses, export promotion schemes and incentives; Institutional arrangements for export promotion; Export processing/special economic zones, 100% EOUs.

Module 111

EXIM Operations and Documentation: Trade operations and documentation; Documentation areas and dimensions; Nature and characteristic features of Exim documents; EDI and documentation. EXIM Policy Framework: Legal framework, Objective of EXIM policy; Policy overview – Facilities and restrictions; getting started in export business. Legal framework in India – FEMA- Origin and objectives, Main provision of FEMA and FEDAI

Module 1V

International Trade Terms: Trade contract and trade terms; DA Letter of credit and parties involved; Process of opening and advising LC, Types of LC; Export Payment Terms: Credit risk management and payment terms; Main features of payment terms -Advance payment, open account, documentary credit – Documentary bills for collection –DP and DA; UCPDC .

Module V

Credit Risk Management: Export credit insurance – Concept and importance; Role of Export Credit Guarantee Corporation (ECGC); Covers issued by ECGC; Financial guarantees; Coverage of commercial and political risks – procedures and documentary requirements. Excise duty – Definition, rationale, stages of levying and collection; Type of duties.

References

1. H, Elhanan, *International trade and trade policy*, MIT Press.
2. Hazari, R. Bharat, *International Trade: Theoretical Issues*, Croom Helm, London and Sydney.

3. Mannur, H.G., *International Economics*, Vikas Publishing House, New Delhi.
4. Salvatore, D., *International Economics*, John Wiley & Sons..
5. Ministry of Commerce, *Handbook of Procedures, Volumes I and II*, Government of India, New Delhi.
6. Ram, Paras, *Exports: What, Where and How?* Anupam Publications, New Delhi,

IB 05 -GLOBAL SOURCING AND BUSINESS DEVELOPMENT

- Module I** Global Sourcing – procuring from all over the world: Meaning, Opportunities and Challenges in Global Sourcing – Differences between Global Sourcing and other sourcing Strategies - Global Sourcing Process – examples of successful companies profiting from Global Sourcing – General conditions required for efficient Global Sourcing.
- Module II** The most attractive regions for international procurement: important criteria when selecting country – Significant tools for country assessment – sourcing market: China, India, and Eastern Europe.
- Module III** Global Sourcing as a profit booster – products suitable for Global Sourcing – Positioning the purchasing department for Global Sourcing – Operational procurement – Strategic procurement management – Clear decision for or against Global Sourcing – Product specification for comparable offers – Suitability for various countries for various products – Search for finding optimal supplier – supplier information for Global Sourcing – Procurement, Controlling.
- Module IV** Legal aspects of Global Sourcing – basic elements of Global Sourcing contract - Significance of Global Sourcing of the UN convention on contracts for the international sale of goods –Agreements on default – payment terms – securities – Enforcement of claims in International Business – Assessment of country and debtor risk.
- Module V** Profitable growth and increasing the shareholder value through Global Sourcing - Global Sourcing as a growth booster – Global Sourcing as a value enhancement instrument for private equity houses – Positive effects of Global Sourcing on shareholder value.

References

1. Gerd Kerkhoff “*Global Sourcing –for the future*”, Wiley publishers.
2. Borstelmann, Kai,“*Global Sourcing*”, Wiley publishers.

3. Wolfgang Schneid, “*Global Sourcing – Strategic Reorientation of purchasing*”, GrinVerlag Pub.

IB 06 - INTERNATIONAL HUMAN RESOURCE MANAGEMENT

- Module I** HR and Global Business Challenge –The differences between domestic and international Human Resources – The Various perspectives and approaches of International Human Resource Management.
- Module II** The role of cultural understanding – Culture and HR functions in a global subsidiary Planning Recruitment and Selection, Staffing Policies, Performance Management of international employees, Performance Appraisal in a global context. Recent innovative methods in HRM.
- Module III** Orienting and training employees for global assignments – approaches to training - Integrating business strategy with international training & development. Compensation-various approaches – Factors affecting compensation systems. Benefits – The adjustments and incentives.
- Module IV** ILO and International Labor Relations – Key issues, Various Agreements International Labour standards, Safety and fair Treatment, Repatriation: Process, Problems and Solutions.
- Module V** MNC’s and HR Policies. Human Resources Practices and Programs adopted in USA, EUROPEAN and Major Asian countries (Japan, China and India).

References

1. Dowling, PJ and Welch, DE. *International Human Resource Management*, Cengage Learning, Thompson..
2. Randal Schuler & Susan Jackson. *Managing Human Resources in Cross-Border Alliances*. Rutledge Taylor & Francis Publication.
3. Pawan, Budhwar. *Managing Resources in Asia-Pacific*. Rutledge Taylor & Francis Publication.
4. Paul Sparrow., *Chris Brewster and Hillary Harris. Globalizing Human Resource Management*. Rout ledge Taylor & Francis Publication.
5. P.L ,Rao, *International Human Resource management*, Excel books.

IB 07 - INTERNATIONAL ECONOMIC ORGANISATIONS

- Module I** International Economic Organizations and Development Diplomacy: Regimes and Regimes theory.
- Module II** International Organisations as international institutions; International Monetary Fund (IMF); World Bank Group-International Bank for Reconstruction and Development (IBRD), International Development Agency (IDA), International Finance Corporation (IFC), Multilateral Investment Guarantee Agency (MIGA).
- Module III** General Agreement on Tariffs and Trade (GATT); World Trade Organisation (WTO); WTO Agreement, Tariff and Non- Tariff restrictions, Investment and transfer of technology, Quota restriction and anti- dumping, Permissible regulations, Dumping of discarded technology and goods in International Markets. Moduleed Nations Conference on Trade and Development (UNCTAD); International Labour Organisation (ILO).
- Module IV** Economic Integration and Cooperation-Meaning and Scope, rationale and Objectives, Forms of Integration, Integration Theory. Benefits and Disadvantages of RIAs. Economic Integration of Developed Countries and Developing countries..
- Module V** Selected Regional Blocks- NAFTA, EU, ASEAN, SAARC, SAPTA, Indo-Lanka Free trade, Indo -Singapore CECA Globalization vs. Regionalization.

References

1. Balassa, Bela, '*Theory of Economic Integration*', Routledge.
2. Krugman, P.R. and M. Obstfeld , *International Economics : Theory and Policy*, Pearson,
3. Daniels, D. John, Radebaugh, H. Lee, et.al, *International Business*, Dorling Kindersley Pvt Ltd.
4. Cherunilam, Francis, *International Economics*, TATA McGraw-Hill Publishing Company Ltd, New Delhi..

IB 08 - INTERNATIONAL LOGISTICS MANAGEMENT

- Module I** Marketing Logistics: Concept, objectives and scope; System elements; Relevance of logistics in international marketing; International supply chain management and logistics; Transportation activity – internal transportation, inter-state goods movement; Concept of customer service.
- Module II** General Structure of Shipping: Characteristics, liner and tramp operations; Code of conduct for liner conferences; Freight structure and practices; Chartering principles and practices; UN convention on shipping.
- Module III** Developments in Ocean Transportation: Containerization; CFS and inland container depots; Dry ports; Multi-modal transportation and CONCOR; Role of intermediaries including freight booking, shipping agents, C&F agents, Ship owner and shipper consultation arrangements.
- Module IV** Air Transport: Air transportation –total cost concept, advantages, freight structure and operations; Carrier consignee liabilities.
- Module V** Inventory Control and Warehousing: Inventory management – concepts and application to international marketing; Significance and types of warehousing facilities; Total cost approach to logistics.

References

1. D.M ,Lambert, S.R.,James, *Strategic Logistic Management*, Tata McGraw Hill, New Delhi,.
2. Branch, Alan, *Global supply chain management and International logistics*, Routledge.
3. G, Raghuram, *Shipping Management: Cases and Concepts*, Macmillan Publishers India ltd.
4. Sherlock, Jim, *Physical Distribution*, Wiley Blackwell.

IB09 - INTERNATIONAL CONSUMER AND INDUSTRIAL BUYER BEHAVIOUR

- Module I** Consumer Behaviour Theory and its Application to Marketing Strategy; Consumer Buying Process: Extensive, Limited and Routine Problem Solving Behaviours.
- Module II** Internal Determinants of Buying Behaviour: Individual differences among customers and markets segmentation; Needs, motivation and involvement; information processing and consumer perception; Learning; Attitudes and attitude Change; Personality and psychographics (values and life style analysis).

- Module III** Models of Consumer Behaviour; Organisational Buying Behaviour: Process, Influence and model.
- Module IV** Cross-Cultural: Consumer and Industrial Buying Behaviour; Economic Demographic and socio-cultural trends and consumer behaviour; Globalisation of consumer markets and international marketing implications.
- Module V** Innovation Diffusion and Consumer Adoption Process; Diffusion of Innovation Across Nations/Cultures; Consumer Satisfaction and Other Feedbacks; Cross-Cultural Consumer Research – Complexities and issues.

References

1. Assael, H., *Consumer Behaviour and Marketing Action*, Thomson, New Delhi.
2. Engel, James F., Roser D. Blackwell, and Paul W. Miniard, *Consumer Behaviour* TMH, New Delhi.
3. Hawkins, Dal I., Roger J. Best and Kenneth A. Coney, *Consumer Behaviour*, Mc Graw Hill, New Delhi.
4. Hoyer, Wayne D. and Deborah J. Macinnis, *Consumer Behaviour*, Hongnton Mifflin Company, Boston, New York.
5. Schiffan, Leon G. and Kanuk, Lealie. Lazar, *Consumer Behaviour*, Prentice Hall of India Pvt. Ltd., New Delhi.

IB 10 - INTERNATIONAL BUSINESS NEGOTIATIONS

- Module I** Nature of International Business Negotiations: Framework for international business negotiations - Background factors - Impact of national culture, organizational culture and personality on buyer-seller interaction – a model of the negotiation process with different strategies and planning – Distributive bargain and integrative negotiations.
- Module II** Cultural aspects of International Business negotiation. Role of culture, patterns of cross-culture behavior and communication. Importance of understanding the negotiating conventions and expectations between foreign counterparts. Comparative and inter-cultural studies of negotiating behavior.
- Module III** Inter-firm negotiation studies: buyers' negotiating strategies in international sourcing, negotiating sales, export transaction and agency agreements. Negotiating licensing agreements, negotiating international joint ventures, projects. Cooperative negotiation for mergers and acquisitions.
- Module IV** Frameworks and support for international business negotiations: multi-national, bilateral trade agreements, government supported trade

delegations, international trade fairs, international trading houses, industry associations.

Module V Ethics in negotiations. Differences from an ethical perspective of the importance of relationship development, negotiating strategies, decision making methods, contracting practices, illicit behaviours such as bribery. Best practices in negotiations, business etiquette. Personality and negotiation skills.

References

1. Claude Cellich, Subhash Jain, *Global Business Negotiations: A Practical Guide* , South-Western Educational Publishing.
2. Pervez N. Gauri and Jean Claude Usunier, *International Business Negotiations*, Elsevierltd.
3. Leigh L, *Negotiation Theory and Research*. Thompson.

Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

MASTER OF COMMERCE
(M.Com.)

Course Co-ordinator: Dr. E. Sulaiman

Academic support by
School of Management and Business Studies
Mahatma Gandhi University
Kottayam, Kerala

Master of Commerce (M. Com.)

PROGRAMME PROJECT REPORT (PPR)

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Conventional Graduate and Post Graduate Programmes in addition to Diploma and Certificate Programmes which are very relevant to contemporary society. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University.

1. Mission & Objectives of M.Com Programme

1.1 Mission

The main objective of offering M.Com is to train manpower required for teaching, research and industry requirements. After completing M.Com Programme the candidate should be able to join in teaching profession as Assistant Professor, join in research in any of the Universities/Institutions for Ph.D Programme and join the corporate world such as Banking, Insurance, Securities Market, IT enabled services and Manufacturing at managerial level positions in the areas of Accounting, Finance, Taxation, Marketing and Human Resources or start their own enterprises. The Post Graduate Programme in Commerce (M.Com) has been designed to provide high quality, relevant business education to B.Com/ BBA/BBM graduates with diverse socio economic backgrounds intending to develop their skills and knowledge in business, as well as those who wish to broaden their undergraduate business degree, with a holistic concern for better life, environment and society.

1.2 Objectives

1. To enable every student to cope up with the latest developments in business and accounting in the contemporary, national and global level through effective transaction of the curricular and co-curricular aspects.
2. To produce commerce post graduates with the required skills, problem solving ability and professionalism essential for being successful.
3. To ensure all-round development of the students' personality through proper education and exposure to the vast treasure of knowledge.
4. To provide exposure to learners in the latest trends in the branch of Commerce, and competence and creativity to face global challenges.

5. To develop entrepreneurship and managerial skills in students so as to enable them to establish and manage their own business establishments.
6. To facilitate students with skills and abilities to become competent and competitive for a good career and job placement.

2. Relevance of M.Com Programme with HEI's Mission and Goals

The Two Year Master of Commerce Programme is offered with an intention to impart specialized knowledge in different domains of business for inculcating an appropriate blend of intellectual skills and moral values in the students. More specifically, the Programme aims at developing human potential to serve

- (i) the Teaching Profession at various levels,
- (ii) the needs for Research in the Social Sciences, and
- (iii) the needs of Industry at the micro- and macro-levels.

The M Com Programme being offered through Distance mode is closely aligned with the vision and mission of the same Programme offered through regular mode in the University. Further, M Com in the distance mode follows the same syllabus and curriculum of the Programme in the regular mode of the University offered through its affiliated colleges.

3. Nature of Prospective Target Group of Learners

M.Com Programme has been designed to meet the expanding needs in Commerce education at all levels and provide necessary manpower to business, industry, service and government and private sectors in the areas like accounting, finance, taxation etc. The Programme offered through the Distance mode of the University will be an advantage for those who could not join regular colleges owing to constraints such as eligibility for enrolment, age of entry, time and place etc. Further, the target group of learners includes those from socially and economically disadvantaged groups (such as scheduled castes, scheduled tribes, fishermen, other backward communities, women, people below poverty line etc). Understanding the needs of the learners, we have structured our learning material and induction Programmes to lead the learners through the threshold of higher education and lead them through the course of the Programme and the final evaluation.

4. Appropriateness of Programme to be conducted in Open and Distance Learning Mode to acquire specific skills and competence

Distance learning Programmes are getting popularity in India and a large number of students desire to continue their studies along with their employment. The Programme could be considered appropriate in ODL mode to acquire specific skills and competence for the following reasons:

1. All the courses in the Programme are theory and/or problem based. So, no laboratory or experiment is needed to impart the skills and competence required for the Programme.
2. The specific skill and competencies required for an M.Com student can be imparted to a great extent through SLMs prepared with the approach of self-explanatory, self-contained, self-directed, self- motivating and self-evaluating.
3. Availability of large volumes of study material on the various courses of the M Com Programme in the Internet or websites of the UGC or Universities in the form of notes in

word/PDF format, PPTs, videos etc, and the counselling hours earmarked per course are considered sufficient to impart the required skill and competencies for the Programme.

4. The Programme is designed to impart necessary teaching skills among students by educating them with the diverse theories, models, approaches and intellectual traditions in commerce
5. The Programme practices the students in academic writing and equally helps them to improve their presentation skills through mandatory assignments and seminars.

5. Instructional Design

5.1 Curriculum Design

The M.Com Programme proposed to offer under distance mode is also offered by the University through its affiliated colleges under regular mode. The University is revising the curriculum and syllabi of its M.Com Programme once in every three years to ensure that the content is updated to reflect current academic knowledge and practice and also to ensure that the University used to provide the best learning experiences possible for students. As part of curriculum design, the curriculum and syllabus revision workshop considered the flexibility of adoption of the Course offered through Distance Learning Mode, and thus made an attempt to make required changes in the scheme and evaluation of the Programme .

5.2 Programme Details

Sem	Course Code	Title of Course	Course Type	Credits	Contact Session (Hrs)	IA (Marks)	ESE (Marks)	Total
I	DMC1CMT01	Advanced Financial Accounting	Complementary	4	12	20	80	100
	DMC1CMT02	Business Management	Complementary	3	9	20	80	100
	DMC1CMT03	Financial Management Concepts	Complementary	3	9	20	80	100
	DMC1CMT04	Quantitative Techniques	Complementary	3	9	20	80	100
	DMC1CMT05	Research Methodology	Complementary	3	9	20	80	100
		TOTAL			16	48	100	400
II	DMC2CMT06	Financial Management Strategies	Complementary	3	9	20	80	100
	DMC2CMT07	Human Resource Management	Complementary	3	9	20	80	100
	DMC2CMT08	Management Accounting	Complementary	3	9	20	80	100
	DMC2CMT09	Operations Research	Complementary	4	12	20	80	100
	DMC2CMT10	Project Management	Complementary	3	9	20	80	100
		TOTAL			16	48	100	400

III	DMC3CMT11	Advanced Cost Accounting	Complementary	4	12	20	80	100
	DMC3CMT12	International Business	Complementary	3	9	20	80	100
	DMC3CMT13	Direct Taxes, Law and practice	Complementary	3	9	20	80	100
	DMC3CMT14	Management Information System	Complementary	3	9	20	80	100
	DMC3CMT15	Security Analysis and Portfolio Management	Complementary	3	9	20	80	100
		TOTAL			16	48	100	400
Optional (Finance Stream)								
IV	DMC4OPT01	Business Environment	Open	2	6	20	80	100
	DMC4OPT02	Financial Services	Open	3	9	20	80	100
	DMC4OPT03	Investment Management	Open	3	9	20	80	100
	DMC4OPT04	Direct Tax: Assessment and Procedures	Open	3	9	20	80	100
	DMC4OPT05	Higher Accounting	Open	3	9	20	80	100
	DMC4VV01	Viva Voce	-	2	-	-	100	100
		Total			16	42	100	500
Optional (Marketing Stream)								
IV	DMC4OPT06	Marketing Management	Open	2	6	20	80	100
	DMC4OPT07	Market Research	Open	3	9	20	80	100
	DMC4OPT08	Marketing of Services	Open	3	9	20	80	100
	DMC4OPT09	Direct Taxes- Assessment and Procedures	Open	3	9	20	80	100
	DMC4OPT10	Higher Accounting	Open	3	9	20	80	100
	DMC4VV02	Viva Voce	--	2	-	-	100	100
	Total			16	42	100	500	600
	Grand Total			64	180	400	1700	2100

Notes: ESA: End Semester Examination

5.3 Duration of the Programme

Four semesters spread over two years.

5.4 Faculty and Support Staff Requirement

Course Co-ordinator

Dr. E. Sulaiman,
Director, School of Management and Business Studies, Mahatma Gandhi University

Qualification: M.Com (Finance), MBA (Marketing), UGC-JRF, Ph.D

Teaching Faculty

M Com Programme is co-ordinated by a full time regular faculty member of the University. Apart from this, the SDE has a panel of experts and qualified external teachers approved by the University. Their services are used in the preparation of Self Learning Material for engaging contact classes and for evaluation of answer scripts. There is sufficient number of staff in the administrative and academic division of SDE for the administrative work involved in the smooth conduct of the Programme.

Instructional Delivery Mechanism

In addition to provide SLMs prepared in line with the UGC guidelines on preparation of SLMs, students are offered 48 contact hours for each semester at the head quarters of the School of Distance Education and at the Learner's Support Centers during the weekend. The personal contact Programmes are being taken using audio visual aids, and students are encouraged to use web resources such as books, notes, videos etc.

Student Support Service Systems at SDE

The SDE establishes Learner Support Centres for the students at different locations within the jurisdiction of the University to facilitate contact classes and practical sessions.

In addition to this, the university has centralized resources to enable the student support activities in respect of Information Centre, Library with good collection of books and journals, Wi-Fi connectivity, Counselling, Students Grievance Redressal Cell, Post Office, Snack bar and Refreshment Centre, Reprographic centre etc.

6. Procedure for Admissions, Curriculum Transaction and Evaluation

6.1 Admission

The admission notifications for M Com Programme, among others are being issued in leading national and regional dailies during June-July. The detailed information regarding admission is being given on the SDE website and on the admission website. Students seeking admission shall apply online.

6.2 Minimum Eligibility for Admission

Those who have not less than 45 per cent marks in part III optional or 4.5 CCPA out of 10 or 1.8 CCPA out of 4 in B Com Finance, B Com Computer Application/ B.Com Co-operation/B. Com. Travel and Tourism (Vocational and Restructured) B. Com. Tax Procedure and Practices (Vocational and Restructured) B Com Actuarial Science Vocational/ B. Com. Office Management and Secretarial Practice/

B. Com. Hotel Management and Catering (Restructured)/ BBA/ BBS/BBM are eligible for admission to M Com Programme.

6.3 Personal Contact Programme

The students are offered Personal Contact Programmes at the head quarters of the School of Distance Education and at various Learning Support centers. There shall be at least fifteen instructional days in a semester and a minimum of ninety instructional hours.

6.4 Evaluation

Evaluation of each course shall be done on the basis of End Semester Assessment (ESA). There will be no internal assessment component for the course. Marks for each paper will be awarded out of 100. The minimum marks prescribed for Pass and Class as in the Regulations for the Regular courses shall be followed without any change. General rules existing in the case of Regular courses will be followed in the conduct of Viva-voce examinations.

6.5 Fee

Rs.10,000/- for the Full Programme

7. Requirement of the Library Resources

Mahatma Gandhi University Library and Information System consists of University Library, Libraries of the Schools and 4 Study Centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library is providing service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. The libraries of teaching departments are open during working hours of the Schools. Reading space is provided in all the three floors housing the various sections of the library. The library provides reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016.

The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET

consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B.	Name of School/Centre	Total No. of books
	School of Management and Business Studies	7549

8.1 Cost Estimate of the Programme and the Provisions

Sl.No	Expenditure	Cost estimate for M.Com Programme (100 students)
01	Pay and Allowance	1,65,000
02	Contact classes and evaluation	65000
03	Course materials	45000
04	Advertisement charges	50000
05	Postage and telephone	25000
06	Books and Periodicals	40000
07	Miscellaneous	12000
	Total	4,02,000
	Provisions (10%)	40,200
	Total	4,42,200
		Cost per student/year= Rs.4,422/-

9. Quality Assurance Mechanism and Expected Programme Outcomes

The SDE has devised the following mechanism for monitoring the effectiveness of the M.Com. Programme to enhance its standards of curriculum, instructional design etc.

- (a) Established a Monitoring Committee at the University level to develop and put in place a comprehensive and dynamic internal quality assurance system to enhance the quality of the Programmes offered through Distance mode as per the norms and guidelines of the University Grants Commission (Open and Distance Learning) Regulations, 2017.
- (b) The SDE has an approved panel of experts for preparing SLM. The SLM prepared is being edited by the board of subject expert. The SLMs are developed with the approach of self explanatory, self-contained, self-directed, self-motivating and self-evaluating.
- (c) The SDE of the University has full time faculty members exclusively for co-ordinating the Programme and also has a panel of qualified guest teachers for counselling students and engaging in personal contact Programmes..

Towards the end of the Programme, students will be able to:

- Develop an ability to teach Commerce for UG and PG Programmes in Colleges and Universities or undertake Research leading to M.Phil or Ph.D in Commerce.
- Write competitive examinations for securing lucrative jobs as teachers, finance managers, officers in government or other public/ private sectors etc.
- Appreciate importance of working independently and in a team
- Have exposure of complex commerce problems and find their solution
- Prepare business plans and projects effectively using quantitative and statistical techniques.
- Understand required analytical and statistical tools for financial and accounting analysis
- Develop an understanding of various commerce functions such as finance, accounting, auditing, taxation, investment analysis, financial analysis, project preparation and evaluation, and cost accounting
- Develop self confidence and awareness of general issues prevailing in the society.

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School of Distance Education
MAHATMA GANDHI UNIVERSITY, KOTTAYAM

SYLLABUS FOR M.COM

Semester	Name of the Paper	Maximum Marks
First Semester		
Paper I	Advanced Financial Accounting	100
II	Business Management	100
III	Financial Management Concepts	100
IV	Quantitative Techniques	100
V	Research Methodology	100
Second Semester		
Paper VI	Financial Management Strategies	100
VII	Human resource Management	100
VIII	Management Accounting	100
IX	Operation Research	100
X	Project Management	100
Third Semester		
Paper XI	Advanced Cost Accounting	100
XII	International Business	100
XIII	Direct Taxes- Law and Practice	100
XIV	Management Information System	100
XV	Security Analysis and Portfolio Management	100
<u>Optional</u>		
Fourth Semester (Finance Stream)		
Paper XVI	Business Environment	100
XVII	Financial Services	100
XVIII	Investment Management	100
XIX	Direct Taxes – Assessment and Procedures	100

XX	Higher Accounting	100
Fourth Semester (Marketing Stream)		
Paper XVI	Marketing Management	100
XVII	Market Research	100
XVIII	Marketing Services	100
XIX	Direct Taxes – Assessment and Procedures	100
XX	Higher Accounting	100
	Viva Voce	100

PAPER I

ADVANCED FINANCIAL ACCOUNTING

1. Financial Accounting concepts, conventions and International Accounting Standards in India.
2. Valuation of Goodwill and Shares-
 - a) Goodwill – Meaning and definition, Factors affecting Goodwill – Methods of Valuing Goodwill- Average Profit Method, Super Profit Method, Annuity Method and Capitalisation Method.
 - b) Valuation of Shares- Circumstances warranting Valuation- need for valuation- Methods of valuation- Net asset Method or Intrinsic Value Method, yield method, Earning capacity valuation method, Fair value.
3. Amalgamation, Absorption and external reconstruction – Net payment Method – Net Asset Method- Share Exchange Method- Entries in the books of the purchasing company – Entries in the books of the Vendor company – Intercompany owings and holdings- amalgamation in the nature of merger and amalgamation in the nature of purchase- advanced problems.
4. Alteration of Share Capital and Internal reconstruction- Procedure for reducing share capital – re-organisation- scheme of reconstruction- Accounting entries on Internal reconstruction.
5. Liquidation of Companies- modes of winding up, order of payment – preferential creditors- powers and duties of a liquidator- Statement of affairs- Deficiency account- Liquidators final statement of account.
6. Valuation of Assets- Need for valuation- types or methods of valuation of stock.

Books Recommended

1. Advanced accounting - S. P Jain & K.L Narang
2. Advanced accounting - R.L Gupta & M. Radha Swamy Vol I &II
3. Advanced accounting - Dr. M.A Arulanandam & K S Raman
4. Advanced accounting - R.S.N Pillai & Bhagavathy
5. Advanced accounting - Das & Ghosh
6. Advanced accounting - R.S Raman Vol I, II & III
7. Advanced accounting - Dr. S.N Maheswari Vol I&II
8. Advanced accounting - M.C.Shukela & T.S Grewal
9. Advanced accounting - H. Chakraborty
10. Advanced accounting - Dr. Paul & Kaur
11. Advanced accounting - Agarwal B D

PAPER II

Business Management

1. Management – Nature and Functions of Management- Social responsibility- Universality of Management- Management and Administration- levels of Management- Management by Objectives and Management by exception
2. Planning – Objective- Methods and Procedures- Planning and forecasting- Forecasting Techniques- Formulation of Policies and strategies
3. Organisation- Meaning, Organisation Chart- Manual – departmentation- organisation structure- Authority and responsibility- Span of Management- Delegation of authority- Forms of Organisation structure.
4. Decision Make- decision making process- Decision & making under conditions of certainty, risk and uncertainty.
5. Co-ordinating and controlling – Meaning, importance, Principles, techniques etc.
6. Directing – function- leadership- Delegation as a means of direction – directing process and techniques
7. Conventional Vs Modern Management. TQM- Quality circles standardization- BIS- ISO

Books Recommended

- | | |
|---|----------------------|
| 1. Management process | - Davara R.S |
| 2. Principles and practices of Management | - Peter F Druckes |
| 3. Business Administration and Management | - L.M Prasad |
| 4. Principles of organizations & Management | - L M Prasad |
| 5. Management principles and practice | - Wilkinson & Foster |
| 6. Principles of Management | - Koontz & O. Donnel |
| 7. Business Environment And Policy | - Francis Cherunilam |
| 8. Principles of Management | - Chaabra |
| 9. Business Organisation and Management | - Y K Bhooshan |

PAPER III

FINANCIAL MANAGEMENT CONCEPTS

1. Business Finance- Meaning- Scope of Finance functions- Objectives of Financial Management- Profit maximization – Wealth maximization Co-orporate planning and financial decisions- Objectives of Co-orporate planning.
2. Financial forecasting- Techniques of financial forecasting- Proforma financial statements- projected income statements and projected balance sheet- Cash budgeting- Meaning of Cash positions – Advantages of financial forecasting.
3. Capital needs of new enterprises – Calculation of total capital requirements- Capitalisation- Meaning and theories of capitalization- Over capitalization- Under capitalization- Causer- consequences and remedies of over capitalization and under capitalization
4. Capital Structure- meaning of the Capital Structure- Capital Structure and financial structure- Patterns of Capital Structure- Planning the Capital Structure- Concept of balanced Capital Structure- Co-orporate securities Ownership securities- Creditor ship securities- Planning proportionate mix of different securities in total capitalization- Principles of Capital Structure- Decisions- Cost principle - risk principle – Flexibility principle – timing principle – Factors influencing pattern of Capital Structures – Optimum Capital Structure- Capital Structure theories- Net income approach- net operating income approach- Modigliani- Miller approach- Traditional approach- Merits and limitations of each approach.
5. Leverage: Meaning- Types of Leverage- Operating Leverage- Types- Effects Significance- Financial leverage- favourable and unfavourable financial leverage, Significance- EBIT- EPs analysis, measures of financial leverage.

Books Recommended

1. Advanced Financial Management
By S. Kr. Paul
New Central Book Agency(P) Ltd.
8/1 Chinthamani Das Lane
Calcutta-700009
2. Management of systems
By R N Nauhria
Rajneesh Prakash.
Wheeler Publishing Co. New Delhi
3. International Financial Management
By P G Apthe
Tata Mc Graw
New Delhi

4. Financial Management : Theory and practice

By Prasanna Chandra
Tata Mc Graw
New Delhi

5. Financial Management

By I M Pande
Vikas Publishing House

6. Financial Management

By R M Sreevasthava
Sterlina Publishers
Bangalore

7. Financial Management

By S N Maheswari Suthan Chand

8. Financial Management

By S C Kuchhal
Chaithanya Publishers
Allahabad

PAPER IV

QUANTITATIVE TECHNIQUES

1. Meaning of Quantitative Techniques – Statistical Techniques – role of Quantitative Techniques In Business and Industry- Quantitative Techniques and Business Management- Limitations of Quantitative Techniques
2. Probability- Basic concepts – Theorems – Conditional probability- Bayes theorem- Mathematical expectation Binomial, poisson and normal distribution.
3. Sampling- Methods – Sampling theory- Standard error- Sampling distribution- Procedure of hypothesis testing- ‘t’ and ‘z’ test – tests of significance for attributes , large samples and small samples.
4. F- test and analysis of variance – the F test or the variance ratio test application- analysis of variance- assumptions – techniques- variance analysis in one way and two way classification.
5. Chi- Square test- area of application – steps involved in finding value of chi-square. Yate’s correlation- Chi-square as a test of population variance limitation.

Books Recommended

- | | |
|------------------------------|---|
| 1. S. P Gupta | - Statistical Methods (Sulthan Chand) |
| 2. P. N Ethance | - Fundamentals of Statistics (Kitab Mhala) |
| 3. S C Gupta | - Fundamentals of Statistics (Himalaya) |
| 4. C R Kothari | - Quantitative Techniques (Vikas) |
| 5. P K Gupta & Manmohan | - OR and statistical analysis(Sulthan Chand) |
| 6. D R Agarwal | - Quantitative Methods (Vrinda Publications) |
| 7. Sancheti Kapoor | - Statistics- Theory, Methods & application |
| 8. Crexten & Cowden Klein | - Applied General Statistics |
| 9. Statistics for Management | |
| 10. Krishnaswami O R | - Research Methodology |
| 11. Lin N | - Foundations of Social Research(Mc Graw Hill) |
| 12. Micheal V P | - Research Methodology in Management |
| 13. Mohankumar P S | - A Handbook on Research Methodology |
| 14. Raj Hans | - Theory and practice in social research |
| 15. Rajan K M | - A treatise on Form and style of thesis and dissertation |
| 16. Robinson | - PRA Techniques |
| 17. Sadhu & singh | - Research Methodology in Social Sciences |
| 18. Sharma R N & Sharma R K | - Research Methods in Social Sciences(Media Mumbai) |
| 19. Singh | - Tests, Measurements and Research Methods |
| 20. Thanulingam L | - Research Methodology in Social Sciences |
| 21. Thripathi P C | - A textbook of Research Methodology in Social Sciences |
| 22. Young P V | - Scientific Social Service and Research |

PAPER V

RESEARCH METHODOLOGY

1. Research: Meaning- definition – features –scientific method- role of social research – Fundamental research- Applied research – Objectives of Managerial research – research method vs Research Methodology
2. Types of Research: Experimental Research- Field investigation- Ex-post facto Research- Survey – case Study- Action Research- Evaluation Research
3. Research process: Steps – observation formulating research problem identifying and labeling variables – operational definitions – formulating hypothesis – constructing research design- sample design tools for collection of data.
4. Collection of Data: Questionnaire and interview schedule – preparing questionnaire items and interview items – format – pilot testing- sampling random sampling- selection- simple sample- systematic – stratified random- cluster- multistage- multiphase sample- PRA techniques.
5. Research report: Steps in report writing – format of the report – introduction review of literature- methodology –analysis and interpretation of data summary and conclusion – footnote- bibliography.

Books Recommended

1. Bajpal S. R - Methods of social Survey and Research
2. Gaulfung J - Theory and Methods of Social Research
3. Goode W.J & Hatt - Methods in Social Research
4. Joseph Antony Alex - Methodology for Research (Theological Publication)
5. Khanna J. K & Veshist - Evaluation structure and Research Methodology(ESS New Delhi)
6. Kothari C. R - Research Methodology : Methods and Techniques

PAPER VI

FINANCIAL MANAGEMENT STRATEGIES

1. Management of Working Capital:-

An aggregate view:- Concept of working capital – circular flow concept- signification of working capital management- Classification of working capital – Estimating working capital needs – Techniques of forecasting

2. Management of cash position:-

Controlling the level of cash- controlling cash inflow and outflow- Allocation of funds between cash and near cash assets.

3. Management of inventory:-

Inventory and financial manager, Inventory risk- Inventory control – Systems and methods of inventory control – Risk of stock – out managing investment inventory- Inventory valuation- Evaluation of inventory management.

4. Management of accounts receivables:-

Problem of receivables Management- Level of receivables- Election and evaluation of receivables- analyzing credit worthiness- collection of credit information – average age of receivables- Discriminant analysis- Evaluating credit risks- Designing credit terms – credit decisions- Collection of receivables- Cost- Benefit analysis- Factory, captive financing companies- default – risk analysis.

5. Management of marketable securities-

6. Internal Financing- Surplus and Reserve policies- Dividend theories, Welter's model – Gordon's Model, MM approach, Dividend policy- forms of dividend- Capitalisation of profit- earning payment and retention policy- Corporate dividend practices in India

7. Cost of capital- meaning- theories of cost of capital- cost of capital and Management decisions(including problems)

Books Recommended

1. Advanced Financial Management
By S. Kr. Paul
New Central Book Agency(P) Ltd.
8/1 Chinthamani Das Lane
Calcutta-700009
2. Management of systems
By R N Nauhria
Rajneesh Prakash.
Wheeler Publishing Co. New Delhi
3. International Financial Management
By P G Apthe
Tata Mc Graw
New Delhi
4. Financial Management : Theory and practice
By Prasanna Chandra
Tata Mc Graw
New Delhi
5. Financial Management
By I M Pande
Vikas Publishing House
6. Financial Management
By R M Sreevasthava
Sterlina Publishers
Bangalore
7. Financial Management
By S N Maheswari Sulthan Chand
8. Financial Management
By S C Kuchhal
Chaithanya Publishers
Allahabad

PAPER VII

HUMAN RESOURCE MANAGEMENT

1. HRM nature – scope and importance : manpower planning, career development planning, human resources function, pressure on the human resource function ; human resource activities, why to measure HR activities, human resource audit- conducting an HR audit- creating a quality frame work, total quality management.
2. Job analysis, job descriptions and job specifications. Recruitment and employee selection- placement , performance – appraisal- work motivation- employee morale- job satisfaction.
3. Training and development- identifying training needs , training methods, training administration- training evaluation- Human Resource development- training institutions in Kerala(IMG and KILA)
4. Group and inter group behavior intra- group behavior- characteristics of group- group effectiveness- inter group behavior- cooperation- competition, conflict, measurement of group behavior.
5. Quality of work in life , industrial democracy and workers participation in management, effectiveness of workers participation, organization development (OD) workers welfare quality circles, effectiveness of quality circles.
6. Performance appraisal- meaning , purpose and different method.
7. Stress management- concept of stress – consequences of stress – methods of managing stress.
8. Recent trends in HRM, employees for lease, human resource records- Exit policy- Challenge in HRM.

Books Recommended

1. Human Resource Management
By Mirza S Saiyadain
Tata Mc Graw Hill Publishing Co.
New Delhi
2. Human Resource effectiveness
By Jim Matthewman
Jaico Publishing House
Bombay, New Delhi
3. Total Quality Management
By S. M Sudara Raju

Tata Mc Graw
New Delhi

4. Personnel Management and Industrial relations
By R S Daver
5. Management of Human Resources
By Lallan Prasad & Banarjee
6. Modern Business Organisation and Management
By Sherlekar
7. Financial Management
By S N Maheswari Sulthan Chand
8. Indian Institute of Personnel Management
 - a) Personnel Toda(Journal)
 - b) Personnel Management in India

PAPER VIII

MANAGEMENT ACCOUNTING

1. Nature and scope of Management Accounting – Financial Accounting- Meaning, functions and limitations- cost accounting – meaning objects, functions, advantage and limitations. Management accounting- meaning and definitions, nature of Management accounting, scope, objective and function of Management accounting, Management Accounting vs Financial Accounting, Management Accounting vs Cost Accounting, Tools and techniques of Management Accounting , need and importance, limitations , installation- Management Accountant, Function, duties and Controller.
2. Analysis and interpretation of Financial Statements – Types of Financial analysis – Methods of Financial analysis- Comparative statements – Trend analysis- Common size statements – limitations of financial analysis.
3. Ratio analysis- Significance of Ratio analysis- Limitations of ratio analysis- classification of ratios- balance sheet ratios- income statement ratios- inter statement ratios- computation of ratios- preparation of trading and profit and loss account and balance sheet on the basis of ratios- statement showing proprietary fund.
4. Funds flow analysis and Cash Flow analysis- Schedule of changes in working capital – Funds flow statement – Cash flow statement – Estimation of working capital.
5. Management reporting- Methods of Reporting- Types of report—Requirement of a good report – General principles of a good reporting system- Report writing.

Books Recommended

- | | |
|---------------------------|-----------------------------|
| 1. Management Accounting | - R K Sharma & Sasi K Gupta |
| 2. Management Accounting | - S.N Maheswari |
| 3. Management Accounting | - Katyal & Dhiman |
| 4. Management Accounting | - Manmohan & Goyal |
| 5. Management Accounting | - Hingorani & Ramanathan |
| 6. Management Accounting | - S. C Gupta |
| 7. Management Accounting | - Jani & Narang |
| 8. Management Accounting | - RSN Pillai & Bhagavathi |
| 9. Management Accounting | - Das & Ghosh |
| 10. Management Accounting | - S. Nagaratnam |

PAPER IX

OPERATIONS RESEARCH

1. Operations Research- Meaning- Origin development – Nature – Operation research in India- OR as a tool in decision making- OR and management- features and methodology of OR- Phases of OR Study- Models in OR Methods of deriving the solution- Limitations of OR.
2. Linear programming – Meaning – concepts – notations , uses and applications- formulation , graphical solutions- simplex method- introduction of slack, surplus and artificial variables, duality (exclude sensitivity analysis).
3. Transportation and assignment problems. Transportation- Different initial allocation methods- move towards optimally- Modi method of solving transportation problem- assignment problems – solutions- variations in assignment problem.
4. Replacement decisions – introduction- replacement of items that deteriorate with time – replacement policy without change in money value- with change in money value- replacement of item that fail completely- group replacement policy – limitations.
5. Games theory- Introduction – terms – Two person Zero Sum game- Saddle Point- Games with saddle point- without saddle point- solution procedure for 2*2 games- Mixed strategies- use of dominance- Limitations of games in competition.
(Exclude graphical and LP Method)
6. Network analysis – CPM and PERT – Introduction- Network – concepts – construction of network diagram – numbering the events (Fulkerson’s rule). Requirements- network calculations- critical path method – concept of float programme evaluation and review technique- probability considerations in PERT- calculation of Float/Slack under PERT- PERT calculations. Points of similarities and dissimilarities inn PERT and CPM – Limitations of PERT and CPM
(Avoid crashing and resource allocation)
7. Decision theory- Quantitative approach to Management decision making- Decisions under conditions of uncertainty- Maximin and Minmax Hurwicz Laplace- Minimax regret criterion- decision making under risk- EMV – EOL- EVPI- EPPI criteria- Decision tree analysis- rolling back technique limitations.

Books Recommended

- | | |
|--|---------------------------------------|
| 1. OR And Statistical Analysis | - P K Gupta & Manmohan |
| 2. Quantitative Techniques (Vikas) | - C. R Kothari |
| 3. Operations Research(Sultan Chand) | - V. K Kepoor |
| 4. Operation Research | - Kanthi Swarup, P K Gupta & Manmohan |
| 5. Operation Research
(Ramnath & Co. Kedarnath) | - S. D Sharma |

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| 6. Operatoin Research
(Dhampat Raissons) | - M.G Nair |
| 7. Quantitative Methods
(Vrinda Publications) | - D. R Agarwal |

PAPER X

PROJECT MANAGEMENT

1. Concepts of Project and identification of project ideas
2. Entrepreneurship and intrapreneurship – Generations of project management- Portfolio models of planning- Screening of project ideas- Market and demand analysis- Markets survey and demand forecasting.
3. Project feasibility studies- technical feasibility- Financial feasibility- Economic analysis – estimate of the cost f project- requirement of long term funds- estimation of working capital requirements- Project cash flow statements and balance sheet.
4. Government regulations- licensing- import and export licensing- foreign exchange formalities.
5. Project appraisal techniques: NPV, IRR, PI, Pay back period, Urgency, ARR- Risk analysis in Capital Budgeting Sensitivity analysis, Scenario analysis, Simulation , Decision tree analysis- Social Cost benefit analysis- Capital rationing.
6. Evaluation of projects- Preparation of project reports- Types of Reports- Structure of Reports- Techniques of presentation.

Books Recommended

- | | |
|---|------------------------------------|
| 1. Project Management | - S Choudhary |
| 2. Implementing Projects | - Tevor L Young |
| 3. The implementation of Project Management | - L C Strekenbruck |
| 4. Projects- Preparation & Appraisal, Implementation | - Prasanna Chandra |
| 5. Control and Management of Capital Projects | -J W Hackney |
| 6. Practical Project Management | - W K Tailor & P F Watling |
| 7. System analysis & Project Management | - David I Cleland & William R King |
| 8. Construction Projects-
Their financial policy and control | - Vurgess R A |
| 9. Advance Project Management | - Harrison F I |
| 10. Planning Projects | - Tevor L Young |
| 11. Entrepreneurial Development | - Dr. C B Gupta & N P Sreenivasan |
| 12. Handbook of project Management | - Dennis Lode |

PAPER XI

ADVANCED COST ACCOUNTING

1. Cost- Cost analysis- Cost concepts & classification.
2. Marginal Costing- Break even analysis- Cost Volume Profit analysis- Applications of marginal costing and differential costing (Detailed study)- advantages and limitations
3. Budgetary Control – Budget and Budgetary Control- Objectives- preliminaries for the adoption of a system of budgetary Control- Types of Budgets- Functional Budgets and Cash Budgeting- Fixed and flexible budgets- Zero bases budgeting – performance budgets- responsibilities – accounting advantages and limitations.
4. Standard Costing- Standard Cost- Standard costing vs Budgetary control preliminaries to the establishment to the standard cost – variance analysis material, labour, overhead and sales variances- advantages and limitations.
5. Value analysis- Cost control and cost reduction- value added concept and productivity.
6. Integrated accounting.

Books Recommended

- | | |
|---|------------------------------|
| 1. Cost Accounting | - S P Jain & K L Narang |
| 2. Advanced Cost Accounting | - Saxena & Vasisht |
| 3. Advanced Cost Accounting | - S P Iyengar |
| 4. Advanced Cost Accounting | - Nigam & Sharma |
| 5. Advanced Cost Accounting | -Maheswari & Mittal |
| 6. Advanced Cost Accounting | - Maheswari S |
| 7. Advanced Cost Accounting | - Pattanshetty & D R Palekar |
| 8. Advanced Cost Accounting | - N C Prasad |
| 9. Advanced Cost Accounting | - Das Gupta |
| 10. Advanced Cost Accounting | - M L Agarwal |
| 11. Management Accounting | - R K Sharma & Shasi K Gupta |
| 12. Management Accounting | - S N Maheswari |
| 13. Practical Problems and solutions in Cost Accounting | - Jain & Narang |
| 14. Practical Problems and solutions in Cost Accounting | - Saxena & Vasisht |
| 15. Practical Problems and solutions in Cost Accounting | - M L Agarwal |
| 16. Practical Problems and solutions in Cost Accounting | - Khanna & Ahuja |

PAPER XII

INTERNATIONAL BUSINESS

1. International Business- Introduction- International Marketing – Difference between Domestic and International Marketing- Nature and scope of International Marketing – Multilateral marketing.
2. International Trading environment- Commodity arguments- trade blocks- regional trade agreements- GATT. Uruguay round of negotiations- trade liberalizations, TRIPS, TRIMS, EXIM Policy, UNCTAD, BOP, Convertibility and Exchange rate fluctuations.
3. Trade in services- Meaning , importance and characteristics.
4. Marketing strategies for the global market. Global environment- entering the global market- strategy for product , price, promotion distributions, threats , opportunities.
5. Globalisation Indian Business- Problems and opportunities for India. Multinational and transactional.
6. International Finance Management :
Reasons for investing abroad- Basic problems in financial management- Foreign currency management- Management exchange- risk management- forward market- foreign currency swap- arbitrate – financial multinational organization- mode of settlement in international trade.

Books Recommended

- | | |
|--|---|
| 1. International Business | - Francis Cherunilam |
| 2. International Business | - Bewnnet and son Wesley lugman |
| 3. Indian Foreign Trade | - Bagh V |
| 4. Beyond the Uruguay Round | - The Indians perspective of GATT-
response books, New Delhi |
| 5. Money Banking & International Trade | -Seth M C |
| 6. Export Strategy of India | - Kapadia |
| 7. Export Management | - Balagopal T A S |
| 8. Indian Export trade and
prospects of self sustained growth | - Manmohan Singh |
| 9. GATT Agreement, Final text of Uruguay round | - World Trade Centre, Mumbai |
| 10. Global Marketing Management | - Keegan |
| 11. Journals of the Indian Institute of Foreign Trade | |

PAPER XIII

DIRECT TAXES, LAW AND PRACTICE

1. Income Tax Law in India- A brief history- basic concepts: Assessment year- previous year- person- Assessee - Income – Gross Total Income- Total Income- Agricultural Income- deemed assessee- average rate – maximum marginal rate – Capital Receipts vs Revenue Receipts- Capital expenditure vs Revenue Expenditure.
2. Residential status and tax incidence- General norms – residential status of Individual, HUF , Firm and association of persons , company – residential status and incidence of tax.
3. Incomes exempt from tax- Income exempt u/s 10- incomes exempt u/s 13 A.
4. Heads of income – Salaries – Income from House property- Profits and gains of business or professions- Capital gain- Income from other sources.
5. Clubbing of Income and deemed incomes- Set off of loses and carry forward.
6. Deduction to be made in computing total income- Rebate of Income tax- Tax planning and Tax management .
7. Assessment of Individuals and HUF.

Books Recommended

- | | |
|--|---|
| 1. Income Tax and Practice | - Dr. H C Mehrotra & Dr. S P Goyal |
| 2. Income Tax Law and Practice | - R R Gupta & B S Gupta |
| 3. Income Tax Law and Practice | - B P Gaur & D B Narang |
| 4. Law and Practice of Income Tax in India | - Dr. Bhagavathi Prasad |
| 5. Indian Income Tax Law and Practice | -B B Lal |
| 6. Direct Tax Law and Practice | - Dr. Vinod K Singhaniania
– Kapil Singhaniania
- Monica Singhaniania |

PAPER XIV

MANAGEMENT INFORMATION SYSTEM

1. Introduction to MIS: Definition- Role of MIS- Characteristics – MIS and other academic disciplines- limitation of MIS- Structure of MIS- Operating elements- MIS structure based on management activity- MIS structure based on organizational functions.
2. Information System Concepts: Concepts of information, Nature of information- Definition and types of management information- Data vs information- Information for various levels of management- Value and cost of information – information as a corporate resource- definition of system- types of system- subsistence – super system- system stress and change- types of information system – operations support system- transactions processing system- process control system- enterprise collaboration system – management support system- MIS, DSS, Executive Information system- formal and informal information system, expert system.
3. Management of Information system: Planning information system- developing information system- System development process- system analysis and design- Implementing information system- Acquisition Evaluation, Testing, Documentation and maintenance of information system- Managing and controlling information system resources- information resource management- dimensions of IRM – Security and control issues in information system- information system controls, facility controls and procedural controls.
4. Data Base Management: Data Base concepts, model, design and types of data base- Data independence and schemes- data security and privacy.
5. The internet and E- commerce: Business use of Internet- E- commerce applications- Intranets and Extranets in Business- Enterprise collaboration systems- Electronic communication tools, electronic conferencing tools- online information services- website management.

Books Recommended

1. Management Information system:
Conceptual Foundations, Structure Development - Gordon B Davis & Margrethe H Olson
(Mc Graw Hill Book Co.)
2. Management Information system: Managing
Information Technology in the Internet worked
Enterprise - James A O' Brien (TMH)
3. Managing with Information - Jerome Kanter(PHI)
4. Management Information systems - W S Jawadekar(TMh)
5. Management Information systems:
A management end user perspective - James A O' Brien (Galgotia
Publications Pvt. Ltd. New Delhi)
6. Management Information systems - C S V Murthy(HPH)

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|---|---|
| 7. Management Information systems | - Gerral V Post & David L Anderson |
| 8. Information systems for Modern Management | - Robert G Murdick, Jeo E Ross |
| 9. Management Information systems | - Terry Lucey |
| 10. Management Information systems | - D P Goyal(Macmillan) |
| 11. Information systems concepts for management | - Henry C Lucas Jr (Mc Graw Hill) |
| 12. E- business | - Daniel Armor (Hewlet Packward) |
| 13. Easy Computers | - Editors: Mary Joseph
G. S Surabhi, SISO Publishers |
| 14. Information systems ; Analysis,
Design and implementations | - Hussain & Hussain(TMh) |
| 15. Readings in Management Information Systems | - Davis & Everest (Mc Graw Hill) |

PAPER XV

SECURITY ANALYSIS AND PORT FOLIO MANAGEMENT

1. Introduction- Meaning- Features- Objectives- Investment Vs Speculation and Gambling- Steps in Investment process- Investment avenues- derivative instruments.
2. Approches to security analysis- Fundamental Analysis- EIC Framework- Macro Economic factors- Economic forecasting- Industry analysis- Industrial factors to be analysed- Industry life cycle. Company analysis- Micro Company factors- Methods of forecasting earnings.
3. Technical analysis- Fundamental Vs Technical analysis. Traditionla Vs Modern tools of Technical analysis. Dow theory. Eillot wave theory- Charts and Chart patterns- Limitations of technical analysis.
4. Efficient Market Hypothesis – Meaning forms of Market efficiency- investment implications- Empirical Tests- EMH Vs Fundamental and Technical Analysis.
5. Portfolio Management- Portfolio analysis- meaning- measurement of risk and return of portfolios- Marko witz model, sharp single index model- risk reduction effects of diversification.
6. Portfolio Selection- Efficient portfolios- selection of optional portfolio utility theory – Sharpe’s portfolio optimization – CAPM.

Books Recommended

- | | |
|--|--------------------------------|
| 1. Investment Management | - Bhalla V K |
| 2. Portfolio Management | - Barua & others |
| 3. Modern portfolio theory and investment analysis | - Elton of Gruber |
| 4. Security analysis and portfolio management | - Fischer & Jordan |
| 5. Investments- Analysis & Management | - Francis Jack Clark |
| 6. Portfolio Management | - Kevin S |
| 7. Managing Investment | - Prasanna Chandran |
| 8. Investment | - Sharpe, alexander & Boracily |

Fourth Semester

Optional – Finance Stream

Paper XVI

BUSINESS ENVIRONMENT

1. Nature and scope of business environment- Business – scope – characteristics- business goals- Nature of environment- benefits and limitations of its study- internal and external environment- micro and macro environment.
2. Global environment- meaning and nature of globalization- manifestation of globalization- benefits from multi national companies- problems brought by multi national companies- strategies in globalization. Functions of world trading organization- Difference between GATT and WTO- WTO- Structure implication for India.
3. Political environment, Nature and extend of State regulation, reasons for State interventions- Types of interventions- Extend of State intervention- Problems of control.
4. Economic environment- Nature of economic environment- Industrial Policy 1991- Privatisation – Nature- Objectives- Disinvestments in India- Arguments for and against privatization- Ranga Rajan Committee Report on Privatisation- Disinvestment commission.
5. Social cultural environment- Meaning- Social responsibility of business- Nature – Models- Strategies- arguments for and against- Barriers- Approaches to Social Responsibility- Limits of social responsibility- Corporate Accountability. Business and Society- Social Audit- Nature- Features- Benefit- Orgainsation for social Audit- Social Audit in India.
6. Natural Environment- Nature of Physical Environment- Impact on Business.

Books Recommended

- | | |
|--|----------------------|
| 1. Essentials of Business environment | - K Aswathappa |
| 2. Business Environment | - Francis Cherunilam |
| 3. Business Environment and policy | - Francis Cherunilam |
| 4. Business Environment and policy | - V P Michael |
| 5. Business Policy Strategic Planning and Management | - P K Ghosh |

Optional – Finance Stream

Paper XVII

FINANCIAL SERVICES

1. Financial services- Meaning and scope – kinds of financial services.
2. Merchant Banking- Origin and evolution – Investment banking and Merchant Banking- Activities of investment banks and services of merchant banks- Investment banking in India- Merchant Banking in India- Regulation of merchant banking activity.
3. Other services- Project appraisal- preparation of project report - Designing the capital structure- corporate advisory services on corporate finance mergers and acquisitions (Including SEBI guidelines).
4. Credit rating – Meaning and definition- origin and nature- credit rating agencies in India- Determinant of credit ratings- recognition and monitoring of rating- Credit rating methods(domestic only).
5. Lease financing- Factoring. Venture capital- Credit cards.
6. Securitization of debts- Meaning, definitions, operational mechanism advantages- Securitization in India.

Books Recommended

1. Manual of Merchant Banking - Dr. J C Varma
2. Merchant Banking - H R Machiraju
3. Rise of Merchant Banking - Stampy Chapman
4. A practical guide to Merchant Banking - T Sundra Ranja
5. Manual of SEBI guidelines on Capital Issues & Merchant Banking - (NAMBHI Publication PB No. 37, New Delhi)
6. Financial markets and services - E. Glordon and K Natarajan

Optional – Finance Stream

Paper XVIII

INVESTMENT MANAGEMENT

1. Nature and scope of Investment Management - financial and economic – meaning of Investment - Investment and gambling – Importance of Investments- Factors favourable for investments- Investments – investment media- Features of an investment programme- The investment process.
2. Alternative forms of Investment - Government securities- types – Life Insurance, Kinds of policies- procedure for taking policies- Investment in units- Objective of Investment in units- Different unit schemes- Tax benefits- Provident Funds- National Saving schemes- Post Office Saving schemes- Investment in land- gold- silver- diamonds- stamps- antiques- banks.

3. Investment and taxation- capital gain taxation- corporate dividend taxation- tax saving ideas- Personal Investment strategies- Individual constraints of personal Investing.
4. Investment companies- development – types of investment companies- mutual fund- advantages.
5. Designing an Investment portfolio- Rational considerations- determining financial ability- components of Investment portfolio- Investment portfolio at different phases.

Books Recommended

- | | |
|---|----------------------|
| 1. Investment analysis management | - John Bowyer |
| 2. Principles of Investment text and cases | - Leonard Waight |
| 3. Security analysis and portfolio management | - Fischer and Jordan |
| 4. Investment Management | - V K Bhalla |
| 5. Personal Investing, making intelligent decisions | - Jawaharlal |
| 6. Investment Management | - Preeti singh |
| 7. Income Tax Law and Practice | - Dr. H C Mehrotra |

Optional – Finance Stream

Paper XIX

DIRECT TAXES: ASSESSMENT & PROCEDURES

1. Assessment of Income Tax : Firms- AOP- BOI- Companies.
2. Computation of Tax: Methods of taxation- Rounding off of tax- Rebate of Income Tax.
3. Income Tax authorities and powers: Assessing officers- Director General – Tax recovery officer- Appointment of Income Tax authorities- Jurisdiction of Income Tax authorities- powers of Income Tax authorities.
4. Procedure for assessment : Return of Income- Voluntary return – Return of laws- belated return- return on behalf of charitable trust and political party- revised return of income – compulsory return- prescribed forms of return of income-PAN – Types of assessment – rectification of mistakes.
5. Deduction and collection of Tax at source and advance payment of Tax: Procedures.
6. Collection and recovery of Tax: Payment of interest- assessee in default modes of recovery- Tax clearance certificate- Steps for future recovery.
7. Refunds: Procedure for refund- Issue of refunds- Double taxation relief avoidance of tax- evasion of Tax.
8. Tax planning.
9. Wealth Tax- Compilation of net wealth – Valuation of assets- Compilation of Tax.

Books Recommended

- | | |
|--|--|
| 1. Income Tax Law & Practice | - Dr. H. C Mehrotra & S P Goyal |
| 2. Income Tax Law & Practice | - R R Gupta & V S Gupta |
| 3. Income Tax Law & Practice | - B B Lal |
| 4. Indian Income Tax Law & Practice | - S Bhattacharya |
| 5. Indian Income Tax Law & Practice | - V P Gour & D B Narang |
| 6. Law & Practice of Income Tax in India | - Dr. Bhagavathi Prasad |
| 7. Direct Taxes Law and Practice | - Dr. Vinod K Singhania, Kapil Singhania, Monica Singhania |

Optional – Finance Stream

Paper XX

HIGHER ACCOUNTING

1. Accounts of Holding companies- Preparations of consolidated balance sheet- Minority Interest- Cost of control- Pre – acquisition profit and post acquisition profit- elimination of common transactions- Contingent liabilities- Unrealised profit- Bonus Issue- revaluation of assets and liabilities- treatment of dividend- Debentures of subsidiary company and preference shares of subsidiary company- Three company holding.
2. Accounts of public utility undertakings Double account system- Accounts of electricity concerns- computation of reasonable return and clear profit replacement of asset.
3. Accounting for specialized types of business- Farm accounts – Solicitors underwriters and hospitals- voyage accounts.
4. Inflation Accounting - Accounting for price level changes- Methods of price level Accounting Current purchasing power technique- replacement cost Accounting technique – advantages and limitations of price level Accounting .
5. Accounts of Co-operative societies.
6. Human Resource Accounting

Books Recommended

- | | |
|------------------------|-----------------------------------|
| 1. Advanced Accounting | -S P Jain & K I Narang |
| 2. Advanced Accounting | - R L Gupta & Radhaswary |
| 3. Advanced Accounting | - Dr. M A Arulanadham & K S Raman |
| 4. Advanced Accounting | - R S N Pillai & Bhagavathy |
| 5. Advanced Accounting | - Das & Ghosh |
| 6. Advanced Accounting | - B S Raman |
| 7. Advanced Accounting | - Dr. S N Maheswary |
| 8. Advanced Accounting | - M C Shukla & T S Grewal |
| 9. Advanced Accounting | - Komar & Paul |

- | | |
|---------------------------|-----------------|
| 10. Advanced Accounting | - Agarwal B D |
| 11. Management Accounting | - S N Maheswary |
| 12. Management Accounting | - Sarma & Gupta |

Fourth Semester

Optional – Marketing Stream

Paper XVI

MARKETING MANAGEMENT

1. Nature and scope of Marketing – Historical development of Marketing- Present a Marketing importance of Marketing Business- Functions, benefits and consequences of Marketing concepts- Marketing environment – Internal and external variables of Marketing system.
2. Consumer demand and Market segmentation- Consumer demand demographic variables- Market segmentation – Strategic Options- Criteria of segmentation success.
3. Product management- Product- types of goods- product decisions and strategies- product management problem- reasons for product change –add and drop policy- qualitative criteria for evaluating new products- profit criterion for evaluating new products – determining need for product change – comparison methods of product acquisition- acquisition through internal development- acquisition through merger.
4. Pricing- What is price? – Importance and significance of pricing- pricing objectives- pricing policies- factors affecting pricing decisions- procedure for price determination- kinds of pricing – price differentials- welfare aspects of price differentials- resale price maintenance.
5. Promotional programme forms of promotion . The promotional appropriation – importance of promotion- Sales promotion- Advertising – publicity – Selection of advertising media- qualitative and quantitative criteria for selecting media – personal selling.

Books Recommended

- | | |
|--|---|
| 1. Principles of Marketing | - Phill Kotler |
| 2. Marketing Management- analysis Planning & Control | - Phil Kotler |
| 3. Fundamental of Marketing | - William J Stanton |
| 4. Marketing management | - John A Howard |
| 5. Marketing Management | - S A Sherlekar |
| 6. Marketing Management | - Dr. Rajagopalan Nair |
| 7. Marketing | - R S N Pillai & Mrs. Bhagavathy |
| 8. Modern Marketing Management in the Indian context | - Ruston S Davar |
| 9. International; Marketing Management-
an Indian prospective | - R K Vashni and B Bhattacharya |
| 10. Marketing Strategy and Plans | - David J Luck Ferrel O.C |
| 11. Marketing Management | - V S Ramaswamy & S N Namakumari
(Mc Millan) |

Optional – Marketing Stream

Paper XVII

MARKET RESEARCH

1. Marketing Research – definition and scope – importance and functions of Marketing information systems- Benefits and uses of Marketing Information System- Cost and time considerations in Research- MR as an aid in decision making.
2. The MR process- Research objectives- Problem identification- Problem definition- information needs to solve the problems.
3. Marketing Research technique and questionnaire design- process of measurement and scaling- types and features.
4. Research applications- product research- advertising/ promotion research motivation research- distribution research- industrial marketing research.
5. Marketing research methods- Historical methods- Observation method- survey method.
6. Research report preparation- research proposal – written proposals- factors in organizing research reports- graphic and verbal reports- market forecast- market potential analysis- perception studies.
7. Ethics in marketing research- treatment of respondents- treatment of buyers- treatment of researchers, international code of marketing research practice.

Books Recommended

- | | |
|--|---------------------------------|
| 1. Marketing research | - Boyd, Westfall and Stach |
| 2. Marketing research | - David J Luck & Donald S Rubin |
| 3. Marketing research decisions | - Peter M Chisnall |
| 4. Marketing research- Principles, applications & Cases | - Dr. D D Sharma |
| 5. Marketing research | -David Aaker |
| 6. Marketing research- text, applications & Case studies | - Ramanuj Majumdar |
| 7. Research for Marketing | - Donald S Tul & Del I Hawkins |

Optional – Marketing Stream

Paper XVIII

MARKETING OF SERVICES

1. Marketing of Services- concepts and issues- Differentiation between goods and service Marketing- typical differences between manufacturing industry and service industry- Definition of services- Nature and Characteristics of services.
2. Managing services Marketing- the seven Ps of services Marketing – future of service Marketing- Marketing strategies of service firms.
3. The future of service Marketing- ethics in service Marketing- Challenges in service Marketing- Growth of Service Market- Consumer services- Industrial services- Marketing mix for Service Marketing.
4. Marketing of financial services- Bank Marketing – Branding and advertising of financial services- Consumer banking – recent trends in financial services- the Indian scene.
5. Marketing of hospitality services- concepts and issues – Marketing of hospitality and tourism services- management and Marketing of tourism in India.
6. Marketing of educational and professional services- Marketing of professional education services- implementation of advertising agencies- Marketing of professional support services.
7. Marketing of insurance, transport and restaurant services.

Books Recommended

- | | |
|--|---|
| 1. Services Marketing | - Jha |
| 2. Services Marketing | - Shankar |
| 3. Marketing of services | - Bindhi Chand |
| 4. Marketing Management : Analysis, planning, Implementation and control | - Philip Kotler (8 th edition) |
| 5. Financial Services- Direct Marketing research | -Tony Martin |

Optional – Marketing Stream

Paper XIX

DIRECT TAXES: ASSESSMENT & PROCEDURES

1. Assessment of Income Tax : Firms- AOP- BOI- Companies.
2. Computation of Tax: Methods of taxation- Rounding off of tax- Rebate of Income Tax.
3. Income Tax authorities and powers: Assessing officers- Director General – Tax recovery officer- Appointment of Income Tax authorities- Jurisdiction of Income Tax authorities- powers of Income Tax authorities.
4. Procedure for assessment : Return of Income- Voluntary return – Return of laws- belated return- return on behalf of charitable trust and political party- revised return of income – compulsory return- prescribed forms of return of income-PAN – Types of assessment – rectification of mistakes.
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6. Collection and recovery of Tax: Payment of interest- assessee in default modes of recovery- Tax clearance certificate- Steps for future recovery.
7. Refunds: Procedure for refund- Issue of refunds- Double taxation relief avoidance of tax- evasion of Tax.
8. Tax planning.
9. Wealth Tax- Compilation of net wealth – Valuation of assets- Compilation of Tax.

Books Recommended

- | | |
|--|---|
| 1. Income Tax Law & Practice | - Dr. H. C Mehrotra & S P Goyal |
| 2. Income Tax Law & Practice | - R R Gupta & V S Gupta |
| 3. Income Tax Law & Practice | - B B Lal |
| 4. Indian Income Tax Law & Practice | - S Bhattacharya |
| 5. Indian Income Tax Law & Practice | - V P Gour & D B Narang |
| 6. Law & Practice of Income Tax in India | - Dr. Bhagavathi Prasad |
| 7. Direct Taxes Law and Practice | - Dr. Vinod K Singhanian, Kapil Singhanian, Monica Singhanian |

Optional – Marketing Stream

Paper XX

HIGHER ACCOUNTING

1. Accounts of Holding companies- Preparations of consolidated balance sheet- Minority Interest- Cost of control- Pre – acquisition profit and post acquisition profit- elimination of common transactions- Contingent liabilities- Unrealised profit- Bonus Issue- revaluation of assets and liabilities- treatment of dividend- Debentures of subsidiary company and preference shares of subsidiary company- Three company holding.
2. Accounts of public utility undertakings Double account system- Accounts of electricity concerns- computation of reasonable return and clear profit replacement of asset.
3. Accounting for specialized types of business- Farm accounts – Solicitors underwriters and hospitals- voyage accounts.
4. Inflation Accounting - Accounting for price level changes- Methods of price level Accounting
 - a. Current purchasing power technique- replacement cost Accounting technique – advantages and limitations of price level Accounting .
5. Accounts of Co-operative societies.
6. Human Resource Accounting

Books Recommended

- | | |
|---------------------------|-----------------------------------|
| 1. Advanced Accounting | -S P Jain & K I Narang |
| 2. Advanced Accounting | - R L Gupta & Radhaswary |
| 3. Advanced Accounting | - Dr. M A Arulanadham & K S Raman |
| 4. Advanced Accounting | - R S N Pillai & Bhagavathy |
| 5. Advanced Accounting | - Das & Ghosh |
| 6. Advanced Accounting | - B S Raman |
| 7. Advanced Accounting | - Dr. S N Maheswary |
| 8. Advanced Accounting | - M C Shukla & T S Grewal |
| 9. Advanced Accounting | - Komar & Paul |
| 10. Advanced Accounting | - Agarwal B D |
| 11. Management Accounting | - S N Maheswary |
| 12. Management Accounting | - Sarma & Gupta |

Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

Master of Laws (LL.M.)

Course Co-ordinator: Shri. K N Somanathan

Academic support by

**School of Indian Legal Thought
Mahatma Gandhi University
Kottayam, Kerala**

MASTER OF LAWS (LL.M.)

PROGRAMME PROJECT REPORT

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State had also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Conventional Graduate and Post Graduate Programmes in addition to Diploma and Certificate Programmes which are very relevant to contemporary society. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University.

1. Programme's Mission & Objectives

The broad objective of the Programme is to enhance the competency of lawyers, law persons and researchers in law. Specific objectives of the Programme include:

1. To get a thorough understanding of the specific branch of law (specialisation) opted by the candidate and information pertaining to the current developments in the area.
2. To help students acquire practical skills in all the major areas of the specialisation.
3. To provide expertise and specialisation in areas of Law and Jurisprudence, which are of emerging significance and social relevance.
4. To produce law persons with a fair degree of understanding and appreciation of the contributions of eminent jurists and legal philosophers.

And above all, 5. To produce good citizens and efficient, learned men which the society and the legal system require.

2. Relevance of the Programme with HEI's Mission and Goals

Law today is one of the fastest growing professional studies across the world. It has made rapid advances in recent years. It has emerged as a developmental activity at all levels – global, national, regional and local. International Trade Law is one of the most important and fastest growing areas of global trade and commercial activities. It is the main stay of economy for many nations today.

A Post Graduate Programme in Law offers an opportunity for many students and aspiring lawyers to enhance, expertise and enrich their career. This would definitely raise good manpower, erudite lawyers and researchers which are essential for the sustainable development of the society and the nation as a whole. The Master of Laws (LL.M.) Programme of Mahatma Gandhi University has been designed to produce Lawyers and other professionals (as in Banking, Insurance, Public service, Government Service/ Public servants etc.) who will be competent to critically analyse and evaluate the Laws, legal systems and practices with a juristic perspective.

3. Nature of Prospective Target Group of Learners:

The LL.M.Course is a Two year (spread over 4 semesters) Programme in the Distance Education Mode. The Programme offers a blend of lecture classes supported by study materials prepared by eminent Law teachers and researchers in Law. This course aims at inculcating essential skills as demanded by field of legal practice and research as well as legal knowledge required for the various sectors like banking, insurance, public/government service. The curriculum has been designed to cater to the ever changing demands of the society. As only a small percentage of the aspirants for higher studies in Law in our state are being accommodated in the regular mode through colleges/university departments, it is hoped that the Programme offered through the distance mode of the university will be a boon for those who could not join regular colleges owing to social, economic and other constraints such as age of entry, time and place etc.

4. Appropriateness of Programme to be conducted in Open and Distance Learning Mode to acquire specific skills and competence

The Self Learning Material (SLM) for the Programme has been developed keeping in mind the said categories of learners. It has been prepared with the approach of being self-explanatory, self-contained, self-directed, self motivating and self-evaluating. The norms and guidelines suggested in the University Grants Commission (Open and Distance Learning) Regulations, 2017 such as backgrounds of learner and learning needs, learning experiences, and support and preparation in adapting to flexible learning were strictly adhered to during the planning period of developing SLM. The ingredients considered while developing SLMs include: (a) learning objectives (b) assessment of prior knowledge (c) learning activities (d) feedback of learning activities (e) examples and illustrations (f) self-assessment tests (g) summaries and key points (h) study tips etc.

The Programme could be considered appropriate to be conducted in ODL mode to acquire specific skills and competence for the following reasons:

1. The specific skill and competencies required for a Post Graduate in Law can be imparted to a great extent through SLMs prepared with the approach of being self-explanatory, self-contained, self-directed, self motivating and self-evaluating.
2. Availability of large volumes of study material on the various specialisations under the LL.M. Programme in the Internet or websites of the UGC or Universities and the counselling hours earmarked per course are considered sufficient to impart the required skill and competencies for the Programme.
3. The Programme stresses the application of theory and practical application of law and legal principles through project work, case studies, presentations and practical assignments.

5. Instructional Design

5.1 Curriculum Design

As part of curriculum design, the curriculum and syllabus revision workshop considered curriculum analysis of social needs, translating the needs into course, splitting the objectives into specific objectives, grouping the specific objectives into subjects, deriving the subjects from the classification, specifying enabling objectives, unitizing each subject matter, specification of required time and syllabus formulation.

5.2 Programme Details

Ist SEMESTER

Course Code	Name of the paper	Course type	Credits	Contact Session (Hrs)	External Marks	Internal Marks	Total Marks
DLM1CRT01	Legal Education and Research Methodology	Core	6	18	100	50	150
DLM1CRT02	Judicial Process	Core	4	12	75	25	100
DLM1CRT03	Law and Social Transformation	Core	4	12	75	25	100
DLM1CRP04	Practical examination Project (Wholly External)	Core	6	18	150	-	150
Total			20	60	400	100	500

IInd SEMESTER (OPTIONAL PAPERS) Branch I- Commercial Law

Course Code	Name of the paper	Course type	Credits	Contact Session (Hrs)	External Marks	Internal Marks	Total Marks
DLM2OCIT01	Foundations of Contractual Liability	Core	4	12	75	25	100
DLM2OCIT02	Law of Corporate Governance	Core	4	12	75	25	100
DLM2OCIT03	Law of Corporate Finance	Core	4	12	75	25	100
DLM2OCIT04	International Trade Law	Compl	4	12	75	25	100
Total			16	48	300	100	400

Branch II- Criminal Law

Course Code	Name of the paper	Course type	Credits	Contact Session (Hrs)	External Marks	Internal Marks	Total Marks
DLM2OCIIT01	General Principles of Criminal Law	Core	4	12	75	25	100
DLM2OCIIT02	Criminal Justice Administration	Core	4	12	75	25	100
DLM2OCIIT03	Human Rights and Criminal Justice System	Core	4	12	75	25	100
DLM2OCIIT04	Juvenile Delinquency	Compl	4	12	75	25	100
Total			16	48	300	100	400

IIIrd SEMESTER
Branch I- Commercial Law

Course Code	Name of the paper	Course type	Credits	Contact Session (Hrs)	External Marks	Internal Marks	Total Marks
DLM3OCIT01	Banking Law	Core	4	12	75	25	100
DLM3OCIT02	Insurance Law	Core	4	12	75	25	100
DLM3OCIT03	Intellectual Property Laws	Compl	4	12	75	25	100
Total			12	36	225	75	300

Branch II- Criminal Law

Course Code	Name of the paper	Course type	Credits	Contact Session (Hrs)	External Marks	Internal Marks	Total Marks
DLM3OCIIT01	Criminology	Core	4	12	75	25	100
DLM3OCIIT02	Penology	Core	4	12	75	25	100
DLM3OCIIT03	Socio-Economic Offences	Compl	4	12	75	25	100
Total			12	36	225	75	300

IVth SEMESTER

Branch I- Commercial Law

Course Code	Name of the paper	Course type	Credits	Contact Session (Hrs)	External Marks	Internal Marks	Total Marks
DLM4OCIT01	Information Technology Law	Core	4	12	75	25	100
DLM4OCIDS02	Dissertation	Core	8	24	200	-	200
DLM4OCIVV03	Viva-Voce	Core	4	-	100	-	100
Total			16	36	375	25	400

Branch II- Criminal Law

Course Code	Name of the paper	Course type	Credits	Contact Session (Hrs)	External Marks	Internal Marks	Total Marks
DLM4OCIIT01	Medical Jurisprudence and Forensic Science	Core	4	12	75	25	100
DLM4OCIIDS02	Dissertation	Core	8	24	200	-	200
DLM4OCIVV03	Viva-Voce	Core	4	-	100	-	100
Total			16	36	375	25	400

5.3 Duration of the Programme

The normal duration of the Programme shall be two years consisting of four semesters

5.4 Faculty and Support Staff Requirement

Course Co-ordinator

Shri. K N Somanathan

Faculty Member, School of Indian Legal Thought, Mahatma Gandhi University

Qualification: MA, LL.M., M Phil.

Teaching faculty

The teaching faculty shall be drawn from experienced law teachers and Practicing Lawyers with master's degree in law and higher qualifications.

5. Instructional Design

In addition to provide SLMs prepared in line with the UGC guidelines on preparation of SLMs, students are being offered 36 to 60 contact hours for each semester, conducted over 10 days during the weekends. The personal contact Programmes are being taken using audio visual aids, and students are encouraged to use web resources such as books, notes, videos etc.

Student Support Service Systems at SDE

The SDE establishes Learner Support Centres for the students at different locations within the jurisdiction of the University to facilitate contact classes and practical sessions.

In addition to this, the university has centralized resources to enable the student support activities in respect of Information Centre, Library with good collection of books and journals, Wi-Fi connectivity, Counselling, Students Grievance Redressal Cell, Post Office, Snack bar and Refreshment Centre, Reprographic centre, Drinking water etc.

6. Procedure for Admissions, Curriculum Transaction and Evaluation

Admission

The admission notifications for LL.M. Programme, among others are being issued in leading national and regional dailies during July- August. The detailed information regarding admission is being given on the SDE website and on the admission website.. Students seeking admission shall apply online.

Minimum Eligibility for Admission

Eligibility for admission to the Programme is a pass in LL.B. Degree Examination of the Mahatma Gandhi University or an equivalent examination recognised by the University.

Fee Structure

Master of Laws (LL.M.) Rs.20,000 for Full Programme.

Programme Delivery

The Programme is being delivered with the help of SLM and Personal Contact programmes. The SLM is being dispatched to the students during each semester by hand or by post. And, at the end of each semester assignments are given and the marks are included in the End Semester Evaluation.

Evaluation

The external theory examination of all semesters shall be conducted by the University at the end of each year.

Assignments:-Assignments are to be done from 1st to 4th Semesters. At least one assignment should be done in each semester for all courses.

7. Requirements of the Library Resources

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 Study Centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library is providing service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. The libraries of teaching departments are open during working hours of the Schools. Reading space is provided in all the three floors housing the various sections of the library. The library provides reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016.

The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, Pro Quest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11

Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	School of Indian Legal Thought	10518

8. Cost Estimate of the Programme and the Provisions

Sl.No	Expenditure	Cost estimate for LL.M. Programme (100 students)
01	Pay and Allowance	5,00,000
02	Contact classes and evaluation	1,45,000
03	Course materials	1,20,000
04	Advertisement charges	30,000
05	Postage and telephone	10,000
06	Books and Periodicals	55,000
07	Miscellaneous	15,000
	Total	8,75,000
	Provisions (10%)	87,500
	Total	Rs. 9,62,500/- Cost per student per year=Rs.9,625/-

9. Quality Assurance Mechanism and Expected Programme Outcomes

The progress and the quality of the Programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

Towards the end of the Programme, students will be able to:

- Develop an ability, skill and expertise to effectively analyse and arrive at solutions for legal problems they have to address.
- Appreciate importance of working independently and in a team and offer appropriate remedies for practical problems in Law faced by the individuals and society in general.
- Have exposure of complex legal problems and their solutions which have been arrived at by the judiciary and eminent jurists in India as well as in other countries.
- Develop an understanding of various legal functions in the areas of finance, banking, insurance, public service etc.
- Develop self-confidence and awareness of general issues prevailing in the society.

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MAHATMA GANDHI UNIVERSITY

(Abstract)

School of Distance Education LLM Course 2012- Introduction of the Syllabus of Regular LLM Course –Modifications-approved – order issued.

ACADEMIC A IV SECTION

U.O.No. 5849/3/2012/Acad

P.D. Hills, Dated: 15/10/2012

Read : U.O.No. 1802/SDE 11/4/2012 dated 04/04/2012

ORDER

As per item read above the University has decided to introduce the syllabus of 2 year regular LLM course for the Off Campus LLM Programme also.

In the light of above the Director School of Distance Education proposed the following modification for approval.

1. As the 3 year LLM course of Off Campus has been restructured in tune with the regular 2 year course, the fees levied from the students shall be regulated and fixed as Rs. 10,000/- per year.
2. Teaching practice included in the first year syllabus of LLM Course may be deleted from the first semester syllabus, instead the project work included may be externally evaluated with total marks of 100. The project work may be done with the supervision of an LLM degree holder with 5 years teaching experience and a certificate in this regard may be obtained while submitting the same for evaluation.
3. Evaluation process of the regular stream subjects comprising of 75 external and 25 internal marks may be modified to suit the Distance Education Stream of study. Since internal evaluation is not feasible in this stream the evaluation may be done out of 100 marks to all papers except the external project.
4. The BCI of India vide the letter No. BCID 1661/2012 (LE.Affi) dated 21/06/2012 informed that the LL.M. Course offered through Distance / Correspondence Course should not be considered a qualification for appointment to teach law to the students. This observation shall stand incorporated in the regulation of LLM Course of Off Campus stream.

The Vice Chancellor has approved the above modification in the Syllabus of LLM Course introduced in the Off Campus Stream from 2012-13 academic year onwards, exercising powers under chapter 3 section 10(17) of Mahatma Gandhi University Act, 1985.

Orders are issued accordingly.

**Sd/-
GEORGE K.C
ASSISTANT REGISTRAR III (ACAD)
For REGISTRAR**

To:

1. PS to VC/PVC
2. PA to Registrar /CE
3. EB.V
4. The Director, SDE
5. SDE – II/EI. 29
6. Stock File / File Copy

FORWARDED / BY ORDER

**Sd/-
SECTION OFFICER**

MAHATMA GANDHI UNIVERSITY

(Abstract)

LL.M. (Semester System) – Regulations, Scheme of exam and syllabus – Revised with effect from 2006-07 onwards - Approved – orders issued.

ACADEMIC A IV SECTION

No. Ac. A IV/3/788 (iv)/L.L.M./2006

Dated: P.D. Hills, 11/08/06

Read : 1. Minutes of the meeting of the Board of Studies in Law. (PG) held on 15.12.05.

2. U.O.No. Ac. A IV/3/788 (iii)/2006 dated, 09.06.06 approving the minutes of the meeting of the Board of studies in Law (PG) held on 05.05.06.

ORDER

As per the recommendations of the Board of studies held on 15.12.05, the LL.M. Degree Course has been semesterised with effect from 2006-07. The Vice-Chancellor, subject to ratification by the Academic Council, has approved the revised regulations, scheme of exam and syllabus of the LL.M. Degree Course (Semester System).

The revised regulations, scheme of exam and syllabus will be effective from 2006-07 academic year onwards.

Sd/-

**C. SOBHANA
ASSISTANT REGISTRAR (ACAD.I)
For REGISTRAR**

To:

1. Members of the BOS
2. Principal, Govt. Law College, Ernakulam
3. Director, SDE
4. PS to VC/PVC
5. PA to Registrar /CE
6. JR/DR/AR (Exam) – (LLM)
7. JR/DR/AR (Exam) – (Acad.)
8. Tabulation Section – (LLM)
9. EB Section concerned
10. Exam – Legal
11. Enquiry (U.O. Only)
12. Stock / File

APPROVED FOR ISSUE

Sd/-

SECTION OFFICER

REVISED REGULATION FOR THE LL.M DEGREE COURSE

2006-2007

(SEMESTER SYSTEM)

Objectives

The LL.M Degree Course offered in this institution intends (i) to train law students to critically analyze and evaluate the laws of different legal systems (ii) to produce experts specialised in legal spheres and (iii) to produce efficient academic lawyers.

1. Duration

The LL.M Degree course shall be of two years duration, consisting of four semesters. A semester shall consist of not less than 90 working days.

2. Specialisation

Specialisation (optionals) offered for LL.M course shall be as follows:

- i. Branch I -Commercial law
- ii. Branch II -Criminal law
- iii. Any other branch that may be added by the University in future.

3. Number of Seats

Number of students to be admitted to the course shall be limited to fifteen.

4. Eligibility

A candidate who has passed the LL.B Examination of the Mahatma Gandhi University, or any other University recognized as equivalent thereto, shall be eligible to be considered for admission.

5. Admission Procedure-and Fee Structure

Admission procedure and fee structure will be prescribed in the prospectus issued by the Government periodically.

6. Curriculum of LL.M Course

1. The first semester will consist of 3 compulsory papers, Teaching practice one Project Work.
2. The second semester will consist of 4 papers of the concerned optional.
3. The third semester will consist of 3 papers of the concerned optional.
4. The fourth semester will consist of one paper of the concerned optional, Dissertation and Viva-voce.

7. Practical examination I (Teaching Practice)

1. The student has to deliver a lecture on a topic assigned, before the Board of examiners constituted by the Principal.

2. Practical Examination II (Project)

Every student has to prepare a project on a topic duly assigned.

The Guidelines of practical examinations will be prescribed by the Principal.

8. Dissertation

Students promoted to the final semester shall register their topic of dissertation as per the procedure prescribed by the Principal at the beginning of the semester itself. Every candidate shall submit before the Principal three copies of the dissertation at least 10 days before the date of theory paper examination.

9. Viva-Voce

The Viva-Voce, will cover all subjects of the course of study as well as the dissertation work. Viva-voce Board constituted by the University shall consist of an external expert and 2 members of the faculty.

10. Internal Assessment

Marks for the internal assessment shall be awarded by the respective course teacher as per the following breakup.

a. Attendance—for every 5% of the attendance above the minimum prescribed 75 percent, one marks will be given.	5 Marks
b. Home assignment and class participation.	10 Marks
c. Test paper	10 Marks
Total	25 Marks

11. Eligibility to Register for Examination and Conditions for Promotions

Only students who secure the minimum attendance of 75% and above in a semester will be allowed to appear for the examination of that semester. A student who has satisfactorily completed the course of one semester and has registered for the examination of that semester shall be promoted to the next semester.

12. Pass minimum and classification of successful candidates

Those candidates who secure not less-than 50 percent of the aggregate marks of the papers of each semester and not less than 40 percent marks in each individual paper and also a separate minimum of 50 percent in each practical paper, dissertation and viva-voce shall be declared to have passed the LL.M examination.

Those candidates who secure not less than 60 percent of the marks for the written examinations of all semesters, Practical papers, Dissertation and Viva-Voce in the aggregate shall be placed in the first division. The other successful candidate- shall be placed in the second division.

13. Scheme of LLM Examination

Ist SEMESTER

Paper No	Name of the paper	Duration of external examination	Marks		Total
			External exam	Internal exam	
1.	Legal Education and Research Methodology	3 hrs	75	25	100
2.	Judicial Process	3 hrs	75	25	100
3.	Law and Social Transformation	3 hrs	75	25	100
4.	Practical examination. I teaching practice (wholly internal)			50	50
5.	Practical examination II project (wholly internal)			50	50
	Total				400

IInd SEMESTER (OPTIONAL PAPERS)

Branch I – Commercial Law

Paper No	Name of the paper	Duration of external examination	Marks		Total
			External exam	Internal exam	
1.	Foundations of Contractual Liability	3 hrs	75	25	100
2.	Law of Corporate Governance	3 hrs	75	25	100
3.	Law of Corporate Finance	3 hrs	75	25	100
4.	International Trade Law	3 hrs	75	50	50
	Total				400

Branch II – Criminal Law

IST Semester					
Paper No	Name of the paper	Duration of external examination	Marks		Total
			External exam	Internal exam	
1.	General Principles of Criminal Law	3 hrs	75	25	100
2.	Criminal Justice Administration	3 hrs	75	25	100
3.	Human Rights and Criminal Justice System	3 hrs	75	25	100
4.	Juvenile Delinquency	3 hrs	75	25	100
Total					400

IIIrd SEMESTER

Branch I – Commercial Law

Paper No	Name of the paper	Duration of external examination	Marks		Total
			External exam	Internal exam	
1.	Banking Law	3 hrs	75	25	100
2.	Insurance Law	3 hrs	75	25	100
3.	Intellectual Property Laws	3 hrs	75	25	100
Total					300

Branch II – Criminal Law

Paper No	Name of the paper	Duration of external examination	Marks		Total
			External exam	Internal exam	
1.	Criminology	3 hrs	75	25	100
2.	Penology	3 hrs	75	25	100
3.	Socio-Economic Offences	3 hrs	75	25	100
Total					300

IVth SEMESTER

Branch I – Commercial Law

Paper No	Name of the paper	Duration of external examination	Marks		Total
			External exam	Internal exam	
1.	Information Technology Law	3 hrs	75	25	100
2.	Dissertation	-			200
3.	Viva-Voce	-			100
	Total				400

Branch II – Criminal Law

Paper No	Name of the paper	Duration of external examination	Marks		Total
			External exam	Internal exam	
1.	Medical Jurisprudence and Forensic Science	3 hrs	75	25	100
2.	Dissertation				200
3.	Viva – Voce				100
	Total				400

SYLLABUS FOR THE LL.M DEGREE COURSE
FIRST SEMESTER PAPER - I

Legal Education and Research Methodology

1. **Objectives of legal education-** Legal education in India-evolution-role of agencies regulating legal education - attempts for reform - recommendations of different Commissions and Committees. Comparative perspectives, U.K., U.S.A- and Japan.
2. **Teaching methods-** lecture-case-problem discussion -tutorial and clinical.
3. **Legal research** - objectives- legal research and law reform – tools of research techniques - doctrinal-non doctrinal and socio legal approaches-relevance of social science research methods in law.
4. Selection and formulation of research problem- Hypothesis- Sampling and its role-research design.
5. **Sources of data collection** - observation, questionnaire and schedule, interview and. case study-surveys-analysis- interpretation and legal writing.

Suggested Readings

1. M.P. Jain - Outlines of Indian Legal History,Ch.31
2. Law Commission of India - XIV Report 1958, Vol.1, Ch.25
3. U.G.C - Report of the Curriculum Development Centre in Law 1989
4. S.K. Agarwala (Ed.) - Legal Education in India.
5. Glanville Williams - Learning the Law(Excluding Chapters VII, XVI and XXIII)
6. International Legal Centre - Legal Education in a Changing Society
7. Packer and Ehrlich - New Directions in Legal Education
8. Journal of Legal Education - Vols. 4,5,10,26,27,30,32,34 and 35
9. Journal of Bar council of India - Vols. 4,7,and 9
10. Indian Bar Review - Vol.13
11. Columbia Law Review - Vol. 76(1976)

- | | |
|--------------------|-------------------------------------|
| 12. Goode and Hatt | - Methods in Social Research |
| 13. Christie | - Legal Writing and Research Manual |
| 14. Peter Clinch | - Using a Law Library |
| 15. ILI | - Legal Research Methodology |

Paper II

JUPUCIAL PROCESS

1. Doctrine of Precedent-Ratio decidendi and Obiter Dictum-methods of determining ratio-Stare decisis and its exceptions-precedent in common law and Civil law Countries.
2. Logic and growth in law (both under Code system and. Common law)-Categories of illusory reference-legal reasoning (judicial as well as juristic). New rhetorics- role of judicial concepts and judicial descretion in judicial reasoning.
3. Nature of judicial process--search for the legislative- intention-methods. of judicial interpretation-role of Philosophy, logic, history tradition and sociology - judge as legislature-judicial creativity and its limitations.
4. Judicial process in Indian legal system- operation of precedent in India-Judicial process in a statue free zone and judicial: process on statutory materials-Judicial activism vis-a-vis judicial self restraint.
5. Prospective overruling- basic structure theory and limitations to constitutional amendments.

Suggested Readings

1. Roscoe Pound - Juris prudence, Parts 3,5,6
2. C.K. Allen - Law in the Making Chs. 3,4
3. Julius Stone - Legal System and Lawyer's reasonings, Chs.6, 7 & 8
4. Julius Stone - Social Dimensions of Law/ and Justice, Ch.14 (Part I & II)
5. Von Mehren - The Civil Law system, Ch. 16
6. Jerome Hall (Ed.) - Readings in jurisprudence, Chs-.9,12,13 & 24.

7. Cardozo - The nature of Judicial process
8. Rajeev Dhavan - The Supreme Court of India: A Socio-legal Critique of its Juristic Techniques (1977), Ch.1
9. Laxminath - Precedent in the Indian legal system
10. Rupert Cross & J. W.Harris - Precedent in English law
11. Jerzy Wroblewski - The Judicial application of law (Edited by Z. Bankowski and N. Mac Cormick) (1992). Chs. XII & XIII
12. Julius Stone - Precedent and the law, Butterworths (1985)
13. Maxwell - Interpretation of statutes
14. N.K. Jayakumar - Judicial process in India limitations and Leeways

PAPER – III
LAW AND SOCIAL TRANSFORMATION

1. Concept of law and legal system - Relationship between law; and society-law as an instrument of social change.
2. Historical and evolutionary theories. Sociological jurisprudence- realistic jurisprudence - law and social change-utilitarianism, Liberalism, in law - Marxian and post Marxian approaches to law.
3. Gender based social conflict and law - social and economic status of women - role of law gender based violence - law and its enforcement-empowerment of women - feminist critique of Indian jurisprudence.
4. Law and poverty-access to justice - legal aid to the poor and indigent-objectives and programmes - legal literacy and law reform - Agrarian reform - latest constitutional perspectives-untouchability.
5. Judicial activism and public interest litigation – Recent trends in judicial dispute settlement.

Suggested Readings

1. Roscoe Pound - Introduction to Philosophy of Law, Chs. 1,2 & 3
2. Roscoe Pound - Jurisprudence, Vol.I Parts I & II
3. Bodenheimer - Jurisprudence, Part I
4. W. Friedmann - Legal Theory
5. W.Friedmann - Law in a Changing Society
6. Julius Stone - Social Dimensions of Law/ and Justice Ch.1
7. B.Sivaramayya - Inequalities and the Law
8. Upendra Baxi - The Crisis of Indian Legal System, Chs.1,2,3,8,& 10
9. Upendra Baxi - Law and Poverty, Chs. 1,2,3,5,19,20 & 21
10. P.K.Gandhi (Ed.) - Social Action through Law. Department of Law-Special issue (1984) Cochin University Law Review, pp 43 3-5 46
11. Finnis J.M. - Natural Law & Natural Rights, Oxford

- 12. Lon. L. Fuller. - The Morality of Law
- 13. H.L.A Hart - The Concept of Law
- 14. M.D.A Freeman - Lloyd's Introduction to Jurisprudence
- 15. John Rawls - A Theory of justice
- 16. Robert F. Meagher - Law and Social Change- Indo-American Reflections.

SECOND SEMESTER (Optional Papers)
Branch I -Commercial Law
Paper I

Foundation of Contractual Liability

1. Basis of contractual obligation - historical evolution - Theories of contractual liabilities- modern developments - contract by public authorities.
2. Contractual terms.
3. Exemption and exclusion
4. Specific relief
5. Damages

Suggested Readings

1. Cheshire Fifoot - The Law of Contract.
2. Bollock and Mulla - The Indian Contract and. Specific Relief Act
3. Anson's - Law of Contract
4. P.S.Atiyah - An introduction to the Law of Contracts
5. P.S.Atiyah - The Rise and fall of Freedom of Contract
6. G.H. Tritel - Law of Contracts
7. Avtar Singh - The Law of contracts
8. Desai - Law of Contract
9. M.Krishnan Nair - The Law of Contracts
10. Chitty on Contract -
11. Jill Poole - Text book on Contract Law.

Paper II

LAW OF CORPORATE GOVERNANCE

1. Corporate organs and distribution of Corporate Power-General meetings, Board of Directors, Company Officers.
2. Duties and responsibilities of Corporate Management -Members, Creditors, employees, and social responsibility.
3. Remedies against Corporate abuses - investor protection locus stand; breach of fiduciary and statutory duties enforcements National Company Law- Tribunal and Appellate Tribunal.
4. Competition Law/- Meaning, purpose and development of. Competition Law; - Competition Policy - its necessity in the changing 'scenario.
5. Control over Market dominance - controls over mergers amalgamation and takeovers. Anti-competitive agreements, Enforcement agencies under Competition. Law Establishment powers and functions.

Suggested Readings

1. Brian R.Chettings - Company Law Theory Structure and Operation.
2. C.M.Schmithoff - Palmer's. Company Law;
3. Pennington's - Principles of Company Law
4. L.C.B Grower's - Principles of Modern Company Law
5. A.Ramaiya - A guide to the Companies Act
6. Brenda Hannigan - Company Law
7. John Lowry, Alan Dignan - Company Law;
8. Indian Companies Act., 1956 -
9. Mark Furse - Competition Law of the U.K. and E.C
10. Philip Clarke and Stephen Coronos - Competition Law; and Policy

Paper III

1. Law of Corporate Finance -Meaning, Importance and scope of Corporate Finance. Capital needs - Capitalization working capital securities borrowings - deposit debentures- Constitutional perspectives - the entries. 37, 43, 44, 45, 46, 47, 52, 82, 85 of List I Union List entry 24 of List II, State List.
2. Equity Finance - Share Capital, Prospectus, Information disclosure.
3. Debit Finance - Debentures - Creation of-Charges, Mortgages.
4. Protection of investors- Individual Share Holders right-Corporate Membership right- derivative actions, Qualified Membership right, conversion, consolidation and re-organization of shares, Transfer and Transmission of Securities Dematerialization of Securities - Protection during amalgamation. Merger and take-over, Budgetary Controls-control by SEBI.
5. Corporate Fund Raising - IDR, ADR, GDR, Euro-issues-Public financing Institutions - IDBI, ICICI, IFC and SFC, Mutual Fund and other collective investment schemes, Institutional investment-LIC, UTI, and Banks. FDI and NRI investment - Foreign Institutional investment(IMF and World Bank)

Suggested Readings

1. Alistair Hondson - The Law of Financial derivatives
2. Farrar's - Company Law
3. Gilbert Harold - Corporation Finance
4. Grower's - Principles of Modern Company Law
5. Austenn P.P - The Law of Public Company Finance
6. R.M. Gcode - Legal Problems of Credit and Security
7. Will's Ferrain - Company Law and Corporate Finance
8. Altman and Subrarnanyan - Recent Advances in Corporate finance
9. G.C.Kuchhal - Corporation Finance, Principles and Problems
10. S.D.Kulshreshtha - Government Regulation of Finance Management of Private Corporate Sector in India.

Paper IV

INTERNATIONAL TRADE LAW

1. Meaning of international trade- Public international law relating to trade-WTO-IMF and World Bank-GATT- Private law relating to international trade-agencies for promoting unification to trade laws-UNCITRAL-UNIDROIT-UNCTAD, ICC & IMO
2. Agency in international Trade-factors and mercantile agent-convention on commercial-agents- insurance, brokers- forwarding agents and loading brokers.
3. Contract for carriage of goods - Carriage of goods by Air, Sea, Land and Rail - Contract for international sale- CIF and FOB contracts.
4. Financing International Trade - Government incentives, FT (D&R) Act 1996 and FEMA 2000.
5. Dispute Settlement-Mediation in Conciliation and Arbitration-WTO-Dispute Settlement Mechanism.

Suggested Readings

1. Clive M Schmitthoff - International Trade, Law
2. Charles D. - Sale of Goods carried by Sea
3. Ademuni Odeke - Law of International Trade
4. Bichawat R.S - Law of Arbitration and Conciliation
5. Charley, Janetle - International Trade Law
6. Ivamy, E.R. Hardy - Carriage of goods by sea
7. David.M.Sarron - CIF- and FOB contracts

BRANCH II- CRIMINAL LAW

PAPER 1

GENERAL PRINCIPLES OF CRIMINAL LAW

1. Substantive Criminal Law - Elements of Crime- Actus reus- Mens.rea.
2. Welfare offences-Exclusion of mens rea - white collar crimes-strict Responsibility- Joint Responsibility.
3. Inchoate crimes - conspiracy, abetment, Attempt-incitement- Indian and English law.

4. General Defences – Excusable - Justifiable.
5. Punishment-Different kinds of Punishment-sentencing policy.

Suggested Readings

1. Glanville Williams - Text Book of Criminal Law
2. Jerome Hall - General Principles of Criminal Law
3. R. Cnigam - Law of Crimes in India Vol.I
4. Kenny - Outlines of criminal law
5. Edwards - Mens Rea in Statutory offences
6. P.R.Glazebrook (Ed.) - Reshaping the criminal law
7. Collin, Howard - Strict Responsibility
8. Law Commissiom - 42 Report and the 14th Report Vol.II
9. Smith & Hogen - Criminal Law
- 10.Rusell Heaton - Criminal Law

Paper II

CRIMINAL JUSTICE ADMINISTRATION

1. Hierarchy of Courts and other Agencies, Mode of Appointments, Training, Hierarchical setup.
2. Police System and prosecution system, Recruitment and training, Hierarchical setup,
3. Pre-trial procedures-arrest and questioning of, the accused, the rights of the accused, the evidentiary value of statements/ articles seized/collected by the Police, right to counsel, role of the prosecutor and the judicial officer in Investigation.
4. Trial Procedures- the Accusatory system of trial and the inquisitorial system of trial-role of the Judge the prosecutor and defence attorney in the trial-admissibility and in admissibility of evidence-expert evidence appeal of the Court in awarding appropriate punishment.
5. Correction and after care services-Institutional correction of the offenders-Rehabilitation of Prisoner-prison reforms.

Suggested Readings

- | | |
|---|---------------------------------------|
| 1. Celia Hampton | - Criminal Procedure |
| 2. Wilkins and Cross | - Outlines of the law of Evidence |
| 3. Archhold | - Pleading, Evidence and Practice |
| 4. Sarkar | - Law of Evidence |
| 5. K.N. Chandrasekharan Pillai
(Ed.) | - R.V. Kelkar's of Criminal Procedure |
| 6. Sandors & Young | - Criminal Justice |
| 7. Eastern and Piper | - Sentencing and punishment |
| 8. Lucia Zodner | - Criminal Justice |
| 9. Andrew Ashworth Mike
Redmayne | - The Criminal Process |

Paper III

HUMAN RIGHTS AND CRIMINAL JUSTICE SYSTEM

1. The concept of Human Rights-origin and development International movements for the protection of human rights-U.N charter and its agencies.
2. Protection of human rights under the Indian Constitution-Public Interest Litigation and Criminal Justice.
3. Implementation of Human rights in India - Role of Judiciary.
4. Human Rights & Weaker Sections - Women and Children - Analysis of statute Law.
5. Human Rights of arrested persons, under trials and prisoners.

Suggested Readings

1. Forest Martin et.al. (ed.) International Human Rights Law and Practice- Part I. and II of. cases, treaties and materials.
2. Vijay Chitinis, et.al (ed.)- Human Rights and the Law -National and Global Perspective.
3. Basu D.D. Human Rights in Constitutional Law.
4. Singh Sehgal B.P-Human Rights in India - Problems and Perspectives.
5. Protection of Human Rights in Criminal Justice administration-- A study by Prof. Upendra Baxi and Manjula Batra.
6. L.H. Leigh-Protection of Human Rights in Criminal Procedure. The British Experience.

Paper IV

JUVENILE DELINQUENCY

1. Concept of juvenile delinquency-Factors responsible for Juvenile Delinquency- Nature and Extent of Juvenile Delinquency in India.
2. Concept of Juvenile Justice-origin and development- nature and Extent of Juvenile Justice in India-other countries.
3. Legislative Approaches - Juvenile Justice Act 1986-Juvenile Justice Care and Protection of Children Act-2000

4. Children's Court-Probation-Children's home and schools.
5. After care - Rehabilitation.

Suggested Readings

1. Barry Krishery James F.Austin - Reinventing Juvenile Justice
2. N.K.Chhakrabarti - Juvenile Justice
3. R.N.Choudhry - Law Relating to Juvenile Justice in India.
4. Sheldon, Glusk - Unraveling Juvenile Delinquency
5. Sethna - Society and the Criminal
6. The Juvenile Justice (Care and Protection of children Act, 2000)
7. Juvenile Justice Act, 1986.

III Semester

BRANCH I - COMMERCIAL LAW

PAPER I BANKING LAW

1. Introduction- Different kinds of banks and their functions, Multifunctional banks-Growth and Legal issues.
2. Law relating to. Banking Companies in India-Controls by Govt. and its agencies-the RBI as the Central Bank-suspension and winding up-contract between banker and customer -their rights and duties.
3. Relationship of Banker and customer - Legal character-Contract between banker and customer - Banking duty to customers-consumer protection and banking as service.
4. Negotiable Instruments - Meaning and Kinds - Transfer and Negotiations - Holder and Holder in due course - presentment and payment-Liabilities of Parties.
5. Recent Trends of Banking system in India- /automatic teller machine and use of internet- Travellers cheque- smart cards-credit cards.

Suggested Readings

1. Bani A - Review of current Banking theory and practice
2. Pagets - Law of Banking
3. M.L.Tannan - Tannan's Banking Law and Practice in India 1997)
Two volumes
4. L.C.Goyle - The-Law of Banking and Bankers.
5. K.C.Shekar - Banking Theory and Practice in India.
6. Amallesh Banerjee & S.K.Singh (eds.) - Banking and Financial Sector Reforms in India, 7 volumes.
7. Raj Kapila & Uma Kapila (eds.) - Banking and Financial Sector Reforms in India, 7 volumes.
8. Good Hart - The Central Bank and the Financial System
9. K.Subramanyan - Banking Reforms in India.
10. Janaki Raman - Committee Report on securities operation of Banks and Financial institutions (1993)
11. Narasimham - Committee report on the Financial System 1991), Second Report (1999).

Paper II

INSURANCE LAW

1. Introduction- Nature; of insurance contract-various kinds of insurance, proposal, policy, parties, consideration, need for Utmost good faith, insurable interest, indemnity.
2. General Principles of Law of insurance-The Risk-Commencement, Attachment and duration, settlement of claim and subrogation-Effect of war upon policies.
3. Indian Insurance Law - General insurance Act 1938 and insurance Regulatory Authority Act, 2000

4. Marine insurance- Term of insurance contract- express and implied conditions in the marine insurance policy-Risk covered by the policy and expected perils-proximate cause of loss-avoidance of policy.
5. Concept of average, in Insurance contract- Settlement of-insurance claims.

Suggested Readings;

1. John Hanson and Christopals, Henby - All risks property Insurance
2. Peter Mac Donald - Eggers and Patric Poss, Good Faith and Insurance Contracts.
3. Banerjee - Law of Insurance
4. Mitra B.C. - Law Relating to Marine insurance.
5. Birds - Modern Insurance Law;
6. Edwen. W.Patterson - Cases and Materials on Law; of Insurance
7. Arnold - The Law of Marine Insurance and Average, Vol. I & II
8. The (Indian) Marine Insurance Act 1963.

Paper III

INTELLECTUAL PROPERTY LAWS

1. Concept of "intellectual Property- Kinds of Intellectual Property Importance of" intellectual property, rights and the need for their, legal protection.
2. Copyright-Subject matter of copy rights-rights conferred by copyright-Fair use. Infringement and remedies,
3. Patents- Patentable subject matters- patentability criteria Patent' granting procedure-Rights-conferred-infringement and remedies.
4. Definition of Designs concept, of novelty or- originality-items not protected under Design-Functional Designs.
5. Trademarks and passing off-Registration of -Trade Marks -Rights conferred Infringement - and remedies.

6. International Protection of Intellectual property-Overview; of International Conventions- Berne convention WIPO Treaties. 1996. Paris Conventions-TRIPS Agreement Madrid Agreement on Marks-1989 Protocol-Hague
7. Agreement on Design-India's position vis-à-vis International conventions and Agreements.

Suggested Readings

1. Cornish W.R. - Intellectual Property; Patents, Copyright, Trade Marks and allied Rights.
2. P.M.Bakshi - Intellectual property, Indian Trends
3. P.Narayanan - Intellectual Property Law
4. P.Narayanan - Law of Trade Marks and Passing off

Statutes and Agreements

1. The Patent Act,1970
2. The Design Act, 2000
3. The Trade Marks Act, 1999
4. The Copy Right Act 1957
5. TRIPS Agreement
6. GATT

Branch II Criminal Law

Paper I CRIMINOLOGY

1. Criminology - Nature, scope and relevance in criminal justice Administration.
2. Schools of Criminology- classical- neoclassical- positive- cartographic or-ecological psychiatric and psychological – socialist, and sociological.
3. Causation of crime-different theories of causation-biological and psychological factors- mental deficiencies- environmental factors-economic and social factors.
4. Alcoholism-drug trafficking Individual and collective violence

5. Social institutions and crime-family, school-religion-mass media of communications like, newspaper-film and Television- Political and cultural organizations.
6. Victim and criminal justice.

Suggested Readings

- | | | |
|--------------------------|---|-----------------------------|
| 1. Vernon Fox | - | Introduction to Criminology |
| 2. Sutherland and Cressy | - | Criminology |
| 3. W.C.Reeklers | - | Crime problem |
| 4. Caldwell | - | Crminology |
| 5. Barners & Teeters | - | New Horizons in Criminology |
| 6. Sethna | - | Society and the Criminal |
| 7. Chris Hale, et.al | - | Criminology |
| 8. Ahmad Siddique | - | Criminology |

Paper II

PENOLOGY

1. The concept – of punishment-Methods of punishment-corporal and Non-corporal punishments – compensation – imprisonment – solitary – confinement - capitalpunishment alternatives to punishment individualization of punishment.
2. Sentencing Process Role of Judiciary- Determinate and Indeterminate¹ sentencing
3. Prison System- history and development -prison reform -judiciary and prison administration,
4. Correctional and rehabilitative techniques-prison system probation institutions of correction-drug addiction and correction-Evaluation of the provisions in NDPS to contain drug menace
5. Administration of criminal justice-Crime problem and crime prevention-drug addiction and terrorism-enforcement machinery special powers for dealing with drug menace and terrorism-Judicial Supervision of criminal justice system.

Suggested Readings

1. Water Moherly - Ethics of punishment
2. Shah - Probation Services in India
3. Galliber and M Cartney - Criminology-
4. Bhattacharya - Prisons
5. Cross - The English Sentencing System
6. B.S.Chopra - Quantum of Punishment
7. Stewart - A modern View of Criminal Law
8. Fitz Gerald - Criminal Law and Punishment

Paper III

SOCIO – ECONOMIC OFFENCES

1. The concept of White Collar crimes and Socio-economic Offences-Origin and development in the Indian context.
2. Prevention of Socio-economic Offences-The – Preventive machinery designed in statutes like FEMA, FERA, Indian income Tax Act, NDPS Act.
3. Trial and punishment of Socio-economic Offences-special provisions-Deviation from the general rules of procedure.
4. Corruption in Government and Public Services- Machinery designed to prevent such corruption.
5. Corruption of politicians - Machinery to deal with it.

Suggested Readings

1. Sutherland - White Collar Crimes
2. 47th Report of Law Commission - Socio-economic Offences
3. Gilber Meier - White Collar Crimes-Offences in Business, politics and profession.

IVth Semester

Branch I - Commercial Law Information Technology Law

1. The origin and development of Information Technology Law, Object, Extent and Scope of the information Technology Act,2000
2. Electronic Evidence-Global Information Technology Agreement-Electronic Governance-Elements records.
3. Digital signature-The relevance of Digital Signature in business transactions-Domain names and the law-Registration of Domain names-Adjudication of Domain name disputes.
4. Authorities under the information Technology. Act,2000 Offences and Penalties under the Act.
5. Internet and the law-cyber crimes- legal measure to prevent cyber piracy-internet and Protection/of copy rights. Application of patents to computer Technology and digital environment-Business Method Patents and software patents.

Suggested Readings

1. Kamath, Nandan (ed) - Law relating to computers, internet, and E-commerce, A guide to Cyber Laws and the Information technology Act, 2000
2. Varma S.K. and Raman Mittal (eds) - Legal Dimensions of Cyber Space
3. Ian Lloyd - Information Technology Law.

IVth semester Branch II Criminal Law

MEDICAL JURISPRUDENCE AND FORENSIC SCIENCE

1. Medical Jurisprudence-Definition-History and development
2. Medical Negligence-Ethical code for Medical Professionals
3. Forensic Science- Origin and development. Importance of Forensic Science in Criminal Investigation.
4. Scientific examination of documents-experts and Scientific evidence. Forensic Ballistics-Finger Printing/DNA Printing Polygraph-Voice identification.
5. Judiciary and scientific evidence-Evidentiary, value of conclusions of medical professional.

Suggested Readings:

1. T.D.Dogra & Abhijit Rudra - Lyonis Medical Jurisprudence and Toxicology
2. B.S.Nabar - Forensic Science in Crime Investigation
3. Dr. R .A. Sharma - Forensic Science in Criminal Investigation and Trails
4. Kaushalendra Kumar - Forensic Ballistics in Criminal Justice.

Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

**Post Graduate Certificate in E-Learning and E-Content Development
(PGCEED)**

Course Co-ordinator: Dr.Sajimon Abraham

Academic support by

University Centre For International Co-Operation (UCIC)

Mahatma Gandhi University

Kottayam, Kerala

Post Graduate Certificate in E-Learning and E-Content Development (Distance Learning Programme - Certificate Programme)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with a vision to provide the opportunity of quality education to all realms of society. Since the beginning, thousands of students availed this opportunity for higher education throughout Kerala to a great extent and also outside the state to some extent. But after the new directions of UGC in 2014, University had stopped all its Off-Campus Centres of the School of Distance Education inside and outside the State.

Now it is the new endeavour to revamp the functioning of the school with different types of Diploma and Certificate programmes very relevant to the contemporary society, in addition to the conventional Graduate and Post Graduate programmes with the academic and infrastructural support of the eminent Schools and interdisciplinary interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Certificate Programme has been designed by the University Centre For International Co-Operation and to be conducted by the School of Distance Education with the academic support of the School.

University Centre For International Co-Operation is an inter-school Center to promote international co-operation of various schools/departments/centers and Affiliated colleges with Countries and higher educational institutions abroad through collaborative, on-line teaching, learning and Research.

(a) Programme's mission & objectives :

Learning on the techniques of Developing and delivering online learning materials and the way of conduct it is integral to addressing the task of new way of teaching and learning. As Institutions and individual are increasingly recognize the value of online learning, training functions must keep pace with advances in instructional methodologies and new technology. It is critical that training professionals remain up-to-date with changes to how training is produced and delivered. This certificate program provides the foundation for today's instructional development that focuses on aligning skills and knowledge needed to achieve organizational strategic goals and objectives. Content also provides the knowledge and skills for planning and designing e-learning instruction in training areas to match today's

varied company business needs based on identifiable learning objectives, rapid authoring tools, content requirements, and outcomes.

(b) Relevance of the program with HEI's Mission and Goals :

This programme will innovate the traditional instructional design with fresh e-learning techniques utilizing the latest development in Information Technology. Based on examples from organizations that have implemented successful virtual training, this program will provide you with the skills to develop individualized, asynchronous e-learning experiences that motivate learners to change their approach towards learning. Learn to skillfully meet instructional design challenges in any industry and apply the principles of effective e-learning to individualized courses, tutorials, games, simulations and other e-learning modules.. which go in-line with the mission of the center and Institution - To provide education to massive people to establish as world class Institution.

(c) Nature of prospective target group of learners:

- Individuals who want to become Instructional designers
- Faculty Members who are interested in developing MOOC programmes
 - Individuals seeking a career change or position within the e-learning instructional design field
- Training managers or coordinators
- Human resources professionals
- Professionals who have taken on a training role within their department
- Graduates are eligible to join in this programme

(d) Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence :

As the programme is targeting for working people and those engaged in regular studies the only way to deliver the programme is through week end contact classes and through distance learning mode like on-line lectures and sharing of video and audio files. Today's internet and networking availability is strong in our country which is reachable to most of the common man we can effectively utilize this facility as a medium for course delivery, evaluation and for other administrative requirements. On completion of this course the participants can work as

- Instructional Design Expert
- MOOC programme Instructors
- On-line learning expert globally
- Provide e-learning support to companies co-operate training

(e) Instructional Design :

- i. Duration of the Programme: Six Months –Two Semesters
- ii. Eligibility: Any Degree
- iii. Number of Courses : 4

Scheme & Evaluation

Course Code	Course Type	Contact Classes (Hrs)	Course Name	Credits	IA Marks	ESE Marks	Total Marks
CEED-101	Common Core course (Theory)	12	Introduction to E-learning	4	20	80	100
CEED-102	Common Core course (Theory)	12	Instructional Design Strategies	4	20	80	100
CEED-103	Common Core course (Theory)	12	Development of E-Content in Multi-Media	4	20	80	100
CEED-104	Common Core course (Practical)	30	Practical & E-Content Development Project	Practical -1 Project Work -3	20	80	100

(f) Procedure for admissions, Curriculum Transaction and Evaluation

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. A graduate in any discipline is the minimum eligibility for the admission. Fee structure will be decided by the University. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/ Presentation of case study for each course. Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

‘P’ grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Post Graduate Certificate programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

GPA =

$$\frac{\text{Total credit points earned by the student from all the required courses of the programme}}{\text{Total credits of all courses required in the programme}}$$

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus

8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

Equivalent Percentage = (GPA obtained) X 10

(g) Requirement of the laboratory support and Library Resources:

Details of Laboratory support required for the programme

The computing facility available in the campus as well as the regional centers can also be used for this purpose. Some external computing facilities may be hired based on the number of enrolment. Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library is providing service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. The libraries of teaching departments are open during working hours of the Schools. Reading space is provided in all the three floors housing the various sections of the library. The library provides reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016.

The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	UCIC	200

(h) Cost estimate of the programme and the provisions:

Budget estimate (for 100 students)

S.No.	Item	Amount (Rs. in Lakhs)
1.	Manpower	2
2.	Study material	1.5
3.	Laboratory/ Library	1.
4.	Internal assessment	0.5
5.	End semester examination	1.
	Total	6.00

Total Programme fee: Rs.6000/-

(i) Quality assurance mechanism and expected programme outcomes

The quality of the programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the programme, the subject experts, Director, School of Distance Education and Head of the University Centre For International Co-Operation. The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

Syllabus

Post Graduate Certificate in E-Learning and E-Content Development (Distance Learning Programme - Certificate Programme)

CEED-101 Introduction to E-learning

Generations of Distance Educational Technology – Role of E-Learning as a new teaching methodology– Components of e-learning: CBT, WBT, Virtual Classroom – Barriers to e-Learning, Roles and Responsibilities: Subject Matter Expert – Instructional Designer – Graphic Designer – Multimedia Author – Programmer – System Administrator – Web Master, Satellite Broadcasting – Interactive Television – Call Centers – Whiteboard Environment Teleconferencing: Audio Conferencing – Video Conferencing – Computer Conferencing Internet: E-mail, Instant Messaging, Chat, Discussion Forums, Bulletin Boards, Voice Mail, File Sharing, Streaming Audio and Video Content: E-Content, Dynamic Content, Trends – Technology: Authoring, Delivery, Collaboration – Services: Expert Service, Information Search Service, Knowledge Creation Service – Learning Objects and E-Learning Standards , Process of E-Learning: Knowledge acquisition and creation, Sharing of knowledge, Utilization of knowledge – Knowledge Management in E-Learning, Teaching-Learning Process, Interactions: Teacher-Student – Student-Student – Student-Content – Teacher- Content – Teacher-Teacher – Content-Content Role of Teachers in E-Learning – Blended Learning – Cooperative Learning – Collaborative Learning – Multi Channel learning – Virtual University – Virtual Library, Assessment in E-Learning – Quality in E-Learning – Tools for Development – Costs, for Developing and Using E-Learning Environments – Challenges and Careers – Future prospects of e-Learning

CEED-102 Instructional Design Strategies

Various Instructional Development Models, Stages of instructional design, learning events and learning outcomes: concepts and meaning, - Instructional designs: objective-based, skill-based, competency based, learning style based and combination of teaching strategies and instructional designs. Instructional technology for groups: Psycho-dynamics of group learning, lecture method, seminar, symposium, panel discussion, team teaching, project approach and workshop.- Instructional technology – small groups: group discussions, simulation approach, role-playing, buzz group technique, brainstorming, case discussions and assignments. Meaning, significance and importance of Tutorials, mastery learning and Keller plan - Programmed instruction: nature, types and development - Computer assisted instruction: characteristics, Language Laboratory, Measurement and Evaluation: meaning, significance and importance - Criterion referenced and norm-referenced testing.- Innovations in evaluation: credit system, semester pattern, grading system, Computerized Question Bank ,test construction and administration. - Remedial teaching and its inclusion.

CEED-103 Development of E-Content in Multi-Media

Back ground of Print Media: India & Global – Growth & Development of Print Media – Growth & Development of Electronic Media – Radio: State & Private sector's expansion – Television: Growth, Origin & development – State ownership – Commercial & Public service – History of

Television Broadcasting Benefits of Multimedia in Instruction – Media and Motivation – Issues Surrounding

Multimedia Hardware: Platforms – Peripherals Creation Tools: Painting and Drawing Tools – Image ,Project Management and Instructional Design Project Management Issues – Roles of Project Managers, Instructional Designers, Subject-Matter Experts, Content Writers, Programmers, Media Producers Instructional Development Phases: Analysis & Planning – Design – Development – Implementation – Evaluation & Revision, Guidelines for Creating Text – Spacing – Justification – Fonts – Variable Spacing – Scrolling – Scrolling – Display Speed – Screen Focus Points – Hypertext and Hypermedia Images: Images and Learning – Displaying Images – Appearance – Costs –Digitization Animation: Animations and Learning – Displaying Animations – Costs Audio: Audio and Learning – Scriptwriting Guidelines – Speech – Sounds – Music – Audio Quality – MIDI – Digitization Video: Video and Learning , Interactivity Features , Tasks of Presentation Design – Resolution – Anti-aliasing – Color and Palettes – Interface Style – Layout – Interface Elements (Background, Panels, Buttons & Controls, Images, Text, Video, Sound, Animation) – Feedback and Error Messages, Ethical Issues, Using a software package for Audio, Video Creation and Editing.

CEED-103 Practical & E-Content Development Project

Necessary Practical's using free wares will be Undertaken. A student has to develop an E-Content on short learning object in his area of descpline.

References

1. E-Learning: New Trends and Innovations, P.P. Singh, Sandhir Sharma, Deep & Deep Publications, 2005
2. Aggarwal, J.C. (1995) Essential of Educational Technology: Teaching Learning Innovations in Education. Delhi: Vikas Publishing House (P) Ltd.
3. Romiszowski, A.J. (1974) The selection and Use of Instruction: A systems

Approach. London: Kogen Page.

4. Multimedia: Making it Work, Seventh Edition, Tay Vaughan, McGraw Hill Osborne Media, 2006 .
5. Creating Instructional Multimedia Solutions: Practical Guidelines for the Real World, Peter Fenrich, Informing Science Publication, 2005.

Programme Project Report (PPR)

for

Distance Learning Programme under School of Distance Education

Post Graduate Certificate in English Language Teaching (PGCELT)

Course Co-ordinator: Prof. Jaya Jaise

Academic support by

School of Pedagogical Sciences (SPS)

Mahatma Gandhi University

Kottayam, Kerala

Post Graduate Certificate in English Language Teaching (Distance Learning Programme - Certificate Programme)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with a vision to provide the opportunity of quality education to all realms of society. Since the beginning, thousands of students availed this opportunity for higher education throughout Kerala to a great extent and also outside the state to some extent. But after the new directions of UGC in 2014, University had stopped all its Off-Campus Centres of the School of Distance Education inside and outside the State.

Now it is the new endeavour to revamp the functioning of the school with different types of Diploma and Certificate programmes very relevant to the contemporary society, in addition to the conventional Graduate and Post Graduate programmes with the academic and infrastructural support of the eminent Schools and interdisciplinary interuniversity Centres of the University. All these Schools/Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Certificate Programme has been designed by the School of Pedagogical Sciences and to be conducted by the School of Distance Education with the academic support of the School.

The School of Pedagogical Sciences is a statutory department of Mahatma Gandhi University, Kottayam, which started functioning in 1992. The School envisions to create a cadre of professionally groomed Teacher Educators and Researchers capable of imparting world class Teacher Education and who are in high demand in the globalised scenario. It is also expected to elevate the discipline of Education to international standards.

a) Programme's mission and objectives:

The mission of the Programme is to improve the quality of education to global standards through the learning of the English language and by developing the spoken and written language skills, which are required in education, career and society. The Certificate Course in English Language Teaching is intended to provide knowledge in the science of teaching English. It will also serve

- to provide knowledge, experience and guidance to teachers of English
- to impart adequate information in the art and science of teaching English

- to equip teachers with necessary pedagogic skills in English
- to enable teachers to make use of instructional sources and facilities.
- to develop proper attitude towards teaching English
- to improve quality in the teaching of English.

b) Relevance of the programme with HEI's mission and goals:

There is an increasing demand for English Language Teachers around the globe. It is important that Teachers of English are certified/licensed and have adequate knowledge for the Teaching of English. This Course focuses mainly on teachers /aspiring teachers who have not got a professional training in teaching of English, especially those teachers working in the Arts, Science, Engineering, Medical and Legal streams. This Course offers the best option to acquire the essence of the essentials for teaching the English language as well as an understanding of the methods suitable and effective for the teaching, learning and evaluation of it.

A teacher/an aspiring teacher of any subject (having professional degrees like Engineering/Medicine/Law/etc. or Master's degree like M.Sc./M.A./etc. or Bachelor's degree like B.Sc./B.A./etc.), who wishes to become a teacher in that respective field but does not have knowledge of the pedagogy, can pursue this Course so as to be able to communicate better with students in English. Moreover, for those aspiring to teach abroad in Higher Education Institutions, there is need for being groomed to be a 21st century teacher of English.

c) Nature of prospective target group of learners:

The Course targets teachers who are working as well as prospective teachers, who have completed their Professional, Master's or Bachelor's Degree. A teacher/an aspiring teacher of any subject (having professional degrees like Engineering/Medicine/Law/etc. or Master's degree like M.Sc./M.A./etc. or Bachelor's degree like B.Sc./B.A./etc.), who wishes to become a teacher in that respective field but does not have knowledge of the pedagogy, can pursue this Course so as to be able to communicate better with students in English. The Course is offered through the Open and Distance Learning mode, which will be convenient for those who are working, especially for women.

d) Appropriateness of the programme to be conducted in open and distance learning mode to acquire specific skills and competence:

The world today is a global village and communication skills are of paramount importance. Effective communication is both verbal as well as non-verbal. English language is the window to the world. Teaching of English is skill-based and centered on the four basic language skills. So training of in-service as well as pre-service teachers in the Teaching of English at all levels of education (school, under graduate, post graduate and professional) is most appropriate and challenging.

e) Instructional design:

The duration of the Certificate Course in English Language Teaching is six months. It is offered in Distance Learning mode and comprises four Papers, each of 4 Credits and 120 Study Hours (including 12 Contact Hours). The mode of transaction involves print, audio, video and e-learning. Library resources of the University will be available for supplementing the course materials provided. Adequate contact sessions will be provided.

Summary of CERTIFICATE COURSE IN ENGLISH LANGUAGE TEACHING

Course Co-ordinator:

Prof. Jaya Jaise, School of Pedagogical Sciences,
Mahatma Gandhi University, Kottayam, Kerala

Course Duration: 6 months

Course Code	Course Name	Credits	Internal Marks	External Marks	Total Marks
SDE-ELT.1	LEARNING THE ENGLISH LANGUAGE	4	20	80	100
SDE-ELT.2	THE LANGUAGE SKILLS	4	20	80	100
SDE-ELT.3	INSTRUCTIONAL PROCEDURES FOR ENGLISH LANGUAGE	4	20	80	100
SDE-ELT.4	SUPPORT AND EVALUATION OF ENGLISH LANGUAGE INSTRUCTION	4	20	80	100
Total		16			400

Evaluation

Assessment involves both internal as well as external components. The internal assessment for each Paper will be based on one assignment and one seminar, each carrying 10 marks. Examination will be

conducted at the end of the Course. The duration of examination of each Paper will be three hours and maximum marks 80.

f) Procedure for Admissions, curriculum transaction and evaluation:

Candidates (graduates, postgraduates) and those who are in the field of teaching are eligible for admission irrespective of age. Programme delivery will be through Distance Learning along with the Contact classes. The study materials will be delivered through online and print forms. Assignments and reports can be submitted online. The candidate will be graded based on the indirect grading pattern.

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. Fee structure will be decided by the University. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/Presentation of case study for each course. Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8

65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

'P' grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Certificate Programme is 4.

Calculation of Grade Point Average (GPA):

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the Programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the Programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

GPA =

Total credit points earned by the student from all the required courses of the programme
Total credits of all courses required in the programme

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

Equivalent Percentage = (GPA obtained) X 10

g) Requirement of the Laboratory, Support and Library resources:

Details of Laboratory support required for the Programme

The School offers a vast repertoire of resources including a net connected library, fully equipped computerlab, psychological lab and technological lab to the learners.

The computing facility available in the campus as well as the regional centers can also be used for this purpose. Some external computing facilities may be hired based on the number of enrolment. Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The libraries of teaching departments are open during working hours of the Schools. The various department libraries have a good collection of subject specific books and journals.

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A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	School of Pedagogical Sciences	6246

h) Cost estimate of the programme and the provisions:

Budget estimate (for 100 students)

Sl.No.	Item	Amount (Rs. in Lakhs)
1.	Manpower	2
2.	Study material	2
3.	Laboratory	1
4.	Internal assessment	1
5.	External examination	1.5
	Total	7.5

Total Programme fee: Rs.7500/-

i) Quality assurance mechanism and expected programme outcomes:

The quality of the Programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the Programme, the subject experts, Director, School of Distance Education and Head of the School of Pedagogical Sciences. The Co-ordinator of the Programme shall ensure the regular student feedback of courses, teachers and Programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the Programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Adequate measures will be taken to improve and maintain standards of curriculum and instructional design. Moreover, the progress and the quality of the Programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

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Syllabus

Post Graduate Certificate in English Language Teaching

Course Objectives:

This course will help to

1. gain insights about the language learner, not only as cognitive entity, but as a social being, functioning in a multilingual environment.
2. understand the nature of language as a dynamic entity, subject to variation and change.
3. become familiar with the linguistic, psychological and social processes underlying learning of language.
4. enhance proficiency in English in terms of the structure of English (sounds, words, grammar).
5. become aware about different approaches, methods, models, techniques, and strategies for English language teaching.
6. get an idea about the various traditional and technological supporting resources.
7. critically innovate in terms of teaching strategies, so that teaching the four skills, viz. listening, speaking, reading and writing, may be more effective.
8. examine the various aspects related to assessment and evaluation.
9. survey the various means of teacher empowerment.
10. gain an understanding of the nature, functions and implications of planning for teaching language.

SDE-ELT.1: LEARNING THE ENGLISH LANGUAGE

Study Hours: 120, including 12 Contact Hours

Number of Credits: 4

Duration of Examination: Three hours

Maximum Marks: 80

Unit 1: Historical Perspective of English in India

Pre-Independence period, East-West Controversy, Macaulay's Minutes – Post-Independence period, English Language Policies – Status of English, Associate Official Language, Three-Language Formula

Unit 2: English Language Learning

Objectives of learning the English Language – Functions of English, Link Language, International Language, Library Language, Window to the World, Language of Trade, Science and Technology – Factors and Problems in English Language acquisition – Influence and Interference of Mother Tongue (Transfer of Learning) – Scope of learning the English Language

Unit 3: Factors Influencing English Language Learning

Sociological, Psychological, Environmental, and Cognitive Influences on Language Learning – of Age, Gender, Intelligence, Aptitude, Attitude, Personality, Motivation, Individual Differences

Unit 4: Elements and Genres of English Language

Grammar, Vocabulary (Types – Active, Passive, Content, Structural; Spelling and Causes for Mistakes; Meaning – Conceptual, Contextual; Punctuation; Pronunciation; Usage; Expansion), Prose, Poetry, Novels, Short Stories, Travelogues, Drama, Rhymes

Unit 5: Curriculum Development in English

Principles of Curriculum Development in English – Psychological, Sociological, Philosophical, Linguistic, and Constructivist (Social and Cognitive)

SDE-ELT.2: THE LANGUAGE SKILLS

Study Hours: 120, including 12 Contact Hours

Number of Credits: 4

Duration of Examination: Three hours

Maximum Marks: 80

Unit 1: Language Skills

Elements of Language – Communication Skills – Macro Skills – Classifications of Language Skills – Interdependence of Language Skills

Unit 2: Listening Skill

Sub Skills of Listening: Basic, Intermediate and Advanced – Types of Listening: Extensive, Intensive, Focused, Selective, Casual – Tasks for Developing Listening Skill – Evaluation/Assessment and Criteria for Scoring

Unit 3: Speaking Skill

Sub Skills of Speaking: Basic, Intermediate and Advanced – Tasks for Developing Speaking Skill – Evaluation/Assessment and Criteria for Scoring

Unit 4: Reading Skill

Sub Skills of Reading: Basic, Intermediate and Advanced – Kinds of Reading: Individual, Choral, Loud, Silent, Extensive, Intensive, Literal, Interpretive, Creative, Critical – Tasks for Developing Reading Skill – Evaluation/Assessment and Criteria for Scoring

Unit 5: Writing Skill

Sub Skills of Writing: Basic, Intermediate and Advanced – Mechanics of Writing – Characteristics of Good Handwriting – Punctuation – Tasks for Developing Writing Skill – Evaluation/Assessment and Criteria for Scoring

SDE-ELT.3:INSTRUCTIONAL PROCEDURES FOR ENGLISH LANGUAGE

Study Hours: 120, including 12 Contact Hours **Number of Credits:** 4

Duration of Examination: Three hours **Maximum Marks:** 80

Unit 1: Planning for English Language Instruction

Meaning, Importance and Purpose of Planning – Year Plan, Unit Plan and Lesson Plan; Approaches in Lesson Planning – Herbartian, Constructivist – Teaching Skills – Micro Teaching (Stimulus Variation, Explanation, Illustration, Questioning, Response Management, Reinforcement, Closure)

Unit 2: Methods and Approaches for English Language Instruction

A brief review of Grammar-Translation Method, Direct Method, Bilingual Method, Structural-Oral-Situational Approach, Natural Approach, Suggestopedia, Communicative Approach

Unit 3: Strategies and Techniques for English Language Instruction

Questioning, Co-operative Learning, Collaborative Learning, Brain Storming, Peer Tutoring, Role Play, Computer Assisted Instruction, Workshops, Symposia, Mastery Learning, Buzz Sessions, Debates, Individualized Assignments, Language Games, Reflective Teaching

Unit 4: Models for English Language Instruction

Models of Teaching – Meaning and Definition – Basic Elements of a Model – Models for English Language Instruction, their Syntax, and their Instructional & Nurturant Effects

Unit 5: Expanding English Language Learning

Study Skills and Reference Skills – Locating Information (Encyclopedia, Dictionary, Thesaurus), Gathering Information (Skimming, Scanning, Intensive and Extensive Reading – SQ4R), Storing Information (Note Making, Note Taking, Summarizing, Information Transfer), Retrieving Information (using Technology and Computers)

SDE-ELT.4: SUPPORT AND EVALUATION OF ENGLISH LANGUAGE INSTRUCTION

Study Hours: 120, including 12 Contact Hours **Number of Credits:** 4

Duration of Examination: Three hours **Maximum Marks:** 80

Unit 1: Support for English Language Instruction

Resources for English Language Learning – Syllabus, Textbook, Workbook, Teachers' Handbook, Supplementary Reader, Journals, Magazines, Periodicals, Library, Community Resources, Smart Classrooms, Digitalized Language Laboratories, EDUSAT, web tools, Audio-Visual Aids, Traditional and Technological Aids.

Unit 2: Teacher Empowerment Practices

Pre-service and In-service Courses – Professional Organizations –Online Teacher Networks – Reflective Teaching – Teacher Portfolio – Coping with Professional Stress – Developing Communicative Competence and Soft Skills.

Unit 3: Taxonomy of Educational Objectives

Bloom's Taxonomy of Educational Objectives with reference to Language Learning and its revised version – Objective based Instruction – Competency based Instruction – Learning as Student Activity

Unit 4: Evaluation of English Language

Construction of Achievement Test (Design, Blue Print, Writing of Test Items) – Different Types of Test Items, their Merits and Demerits – Continuous and Comprehensive Evaluation – Portfolio – Grading System Vs Credit and Semester System

Unit 5: Trends in Evaluation of English Language

Review of Current Trends in Assessment – Performance based Assessment – Portfolio Assessment, Rubrics, Online Assessment – Research Trends in English Language Education with special reference to Instructional Strategies and Instructional Materials – Action research in English Language Education.

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Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

Post Graduate Certificate in Instrumental Methods of Chemical Analysis
(PGCIMA)

Course Co-ordinator: Dr. Beena Mathew

Academic support by

School of Chemical Sciences

Mahatma Gandhi University

Kottayam, Kerala

POST GRADUATE CERTIFICATE IN INSTRUMENTAL METHODS OF CHEMICAL ANALYSIS

(Distance Learning Programme - Certificate Programme)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with a vision to provide the opportunity of quality education to all realms of society. Since the beginning, thousands of students availed this opportunity for higher education throughout Kerala to a great extent and also outside the state to some extent. But after the new directions of UGC in 2014, University had stopped all its Off-Campus Centres of the School of Distance Education inside and outside the State.

Now it is the new endeavour to revamp the functioning of the school with different types of Diploma and Certificate programmes very relevant to the contemporary society, in addition to the conventional Graduate and Post Graduate programmes with the academic and infrastructural support of the eminent Schools and interdisciplinary interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Certificate Programme has been designed by the School of Chemical Sciences and to be conducted by the School of Distance Education with the academic support of the School.

The School of Chemical Sciences is one among the initial statutory departments of Mahatma Gandhi University. The academic programmes of the School of Chemical Sciences (SCS) were initiated from the very inception of the university. At present the school offers four different M.Sc. programmes along with M.Phil, M. Tech and Ph.D programmes covering all branches of chemistry and polymer science. The school, since its inception, has been making a steady progress in all spheres of activity and has academic programmes spread in four broad divisions namely Inorganic Chemistry, Organic Chemistry, Physical Chemistry and Polymer Chemistry. In spite of the nationwide diversions of talented students from basic sciences, more than 1000 students appear for our entrance tests to graduate programmes annually. Keeping in view the vision and mission of the School, the syllabi of the various courses are frequently updated introducing new

courses in emerging areas with inter-disciplinary content. The faculty members are actively engaged in research in various branches like synthetic organic chemistry, theoretical and computational chemistry, catalysis, material and solid state chemistry, nanochemistry and technology, photochemistry, polymer composites etc. The school has state-of-the-art instrumentation facility for research activities.

a) **Programme's mission & objectives :**

The aim of the certificate course **Instrumental Methods for Chemical Analysis** through distance learning programme is to prepare students to become experts and develop skills towards doctoral studies, and /or professional industrial careers in chemical analysis, structure characterization of materials. This module will provide the student with an understanding of the theory, practices and instrumentation associated with various analytical techniques.

b) **Relevance of the program with HEI's Mission and Goals :**

The course focuses on state-of-the-art developments in their practices and instrumentation, as well as issues to deal with the identification of samples in complex matrices. This course places a strong emphasis on the professional development of the students. Such a qualification will enable and facilitate career progression for the students.

c) **Nature of prospective target group of learners:**

Science graduates can join the programme. Students doing their Masters/M.Phil/Doctoral studies can also join the programme to strengthen their analytical skills.

d) **Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence :**

This course places a strong emphasis on the professional development of the students. Such a qualification will enable and facilitate career progression for the students. On successful completion of this module, a student will be able to (i) Understand the principles, practices and instrumentation associated with various analytical techniques, (ii) Describe sample preparation and method development issues relating to the use of advanced techniques for analysis and identification, (iii) Competently operate and calibrate associated laboratory instrumentation, and (iv) Critically appraise the literature and identify future trends in this area.

e) **Instructional Design :**

The course is of 6 months which includes theory and practicals. Study materials will be given by online. Test papers and assignments are also online. 20% of the practicals is by virtual lab.

Course Code	Course Type	Contact Classes (Hrs)	Course Name	Credits	IA Marks	ESE Marks	Total Marks
SDE-SCS-1	Common Core course (Theory)	12	Spectroscopic Methods of Analysis	4	20	80	100
SDE-SCS-2	Common Core course (Theory)	12	Chromatographic Techniques	4	20	80	100
SDE-SCS-3	Common Core course (Theory)	12	Electroanalytical Techniques	4	20	80	100
SDE-SCS-4	Common Core course (Practical)	60	Applications of Analytical Techniques	2	20	30	100
			Project	2		50	
Total		96		16	80	320	400

f) **Procedure for admissions, curriculum transaction and evaluation:**

Any student with minimum B.Sc. degree in science can apply. The student has to pay an amount for the programme which is decided by the University. The course contents will be delivered online. For practicals, 20% will be virtual and remaining will be by direct laboratory work. This course will have three types of graded activities that will be included in overall course grade. These include: **Assignments:** Answer monthly quizzes that account for 20% of the course total grade. Each quiz includes 20 multiple choice questions that examines your understanding of the learning materials. **Open-ended Questions:** Answer two open-ended questions that account for 80% of the course total grade. The questions encourage creative thinking, and their answers are based on the knowledge gained in the course. **Final project:** At the end of the course the candidate will be asked to complete a final project. It will consist of a written report that focuses on the utilization of analytical techniques for various applications. The final project will be graded and will contribute to 25% of the overall course grade.

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. Fee structure will be decided by the University. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

'P' grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Certificate programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

GPA =

$$\frac{\text{Total credit points earned by the student from all the required courses of the programme}}{\text{Total credits of all courses required in the programme}}$$

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

$$\text{Equivalent Percentage} = (\text{GPA obtained}) \times 10$$

g) Requirement of the laboratory support and Library Resources:

To handle the practical components in syllabus, technicians and consumables are required. The Laboratory facility of the school shall be provided to the students during holidays and vacation. Certain level of the practical would be conducted and performed by applying virtual reality methods

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library is providing service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. The libraries of teaching departments are open during working hours of the Schools. Reading space is provided in all the three floors housing the various sections of the library. The library provides reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016.

The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are

comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	School of Chemical Sciences	4100

h) **Cost estimate of the programme and the provisions:**

The budget detail for the programme is given in the following Table.

Budget Estimate

S. No.	Item	Amount (Lakh)
1	Online study materials	1.5
2	Online virtual lab.	1.5
3	Online quizzes/assignments/evaluation	1
4	Laboratory demonstrations	2
5	Contact classes	1

	TOTAL	7 Lakh
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Total Programme fee: Rs.7000/-

i) Quality assurance mechanism and expected programme outcomes:

The quality of the programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the programme, the subject experts, Director, School of Distance Education and Head of the School of Chemical Sciences. The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

Syllabus

Post Graduate Certificate in Instrumental Methods of Chemical Analysis

Month 1: UV-Vis. Spectroscopy: Electronic spectroscopy, basic principle, electronic transitions in organic, inorganic and organometallic molecules and application to structure elucidation. Basics of ultraviolet light absorption, terminology, laws of light absorption, measurement of the spectrum, presentation of the spectrum, solvents for uv/vis spectroscopy, UV/vis. spectroscopy generalizations. Types of electronic transitions. Typical absorptions of simple isolated chromophores. Empirical rules for calculating UV/vis. absorptions: Woodward-Fieser rules. Instrumentation, Applications based on the above topics.

Month 1: IR Spectroscopy: Introduction, electromagnetic radiation, molecular vibrations, infrared spectroscopy basics, instrumentation. General approach to IR spectrum analysis, Table of functional group absorptions, example spectra for various functional groups. Problems on spectral interpretation with examples.

Month 1 : Raman Spectroscopy: Introduction, Instrumentation, Raman spectroscopy of molecules, predicting number of active modes of vibrations, analysis of representative spectra of various compounds with various functional groups at the coordination sites; application of isotopic substitution.

Months 2-3: NMR Spectroscopy: NMR Basics and ^1H Resonance: nuclear spin states, chemical shift, instrumentation, solvents for ^1H NMR. informations from NMR spectroscopy: chemical equivalence, integration, factors influencing chemical shifts, ^1H correlation chart, spin-spin splitting (n+1 rule), coupling constants. ^{13}C Resonance: Background, ^{13}C Correlation chart, ^{13}C Correlation chart for carbonyl compounds, solvents for ^{13}C NMR. ^{13}C NMR spectroscopy, proton-coupled ^{13}C spectra, proton-decoupled ^{13}C spectra, off-resonance proton-decoupled ^{13}C spectra. special considerations in ^{13}C nmr spectroscopy, nuclear overhauser enhancement, problems with integration of ^{13}C spectra, heteronuclear coupling in ^{13}C spectra, Calculating Chemical Shift Values. In ^{13}C NMR spectroscopy, base values for ^{13}C chemical shift in typical hydrocarbons. Problems based on various techniques.

Month 4: Mass Spectroscopy : Introduction, instrumentation, basic principles, ionization techniques, isotope abundance, molecular ion, fragmentation processes of organic molecules, deduction of structure through mass spectral fragmentation, high resolution MS, soft ionization methods, ESI-MS and MALDI-MS, Problems on spectral interpretation with examples.

Month 5: Chromatographic Techniques: Principle, instrumentation and applications of gas chromatography, high performance liquid chromatography(HPLC), ion exchange chromatography, size exclusion chromatography, thin layer chromatography(TLC). Interpretation of results.

Month 6: Electro analytical Techniques

Introduction, basic principle, and instrumentation, applications of electro analytical techniques such as impedance analysis, cyclic voltammetry and amperometry. Interpretation of results.

Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

Post Graduate Certificate in Nanoscience and Nanotechnology
(PGCNN)

Course Co-ordinator: Dr. Nandakumar Kalarikkal

Academic support by

**International and Inter University center for Nanoscience and
Nanotechnology (IIUCNN)
Mahatma Gandhi University
Kottayam, Kerala**

**POST GRADUATE CERTIFICATE IN NANOSCIENCE AND
NANOTECHNOLOGY (PGCNN)
(Distance Learning Programme - Certificate Programme)**

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Certificate Programme has been designed by the International and Inter University center for Nanoscience and Nanotechnology and is to be conducted by the School of Distance Education with the academic support of the Centre.

The Centre for Nanoscience and Nanotechnology was established as a nodal research centre of Mahatma Gandhi University in the year 2009. The Centre focus on the enhancement of research and higher studies in the cutting edge areas of nanoscience and nanotechnology. Considering the achievements in its academic and research pursuits in the past years since its inception, the state Govt. of Kerala has elevated the status of the Centre to International and Inter University Centre for Nanoscience and Nanotechnology (IIUCNN) in the year 2013. The Centre is motivated to thrust its research and development focusing on developing novel materials and devices prospering the outrage of nanoscience. The Centre also take up the social, ethical, legal and environmental issues related to nanoscience and nanotechnology. Thus, IIUCNN intends to act as a prime point to provide training and research in various interdisciplinary areas.

a) Programme's mission & objectives :

The aim of the certificate course Nanoscience and Nanotechnology through distance learning programme is to prepare students to become experts and develop skills towards doctoral studies, and/or professional industrial careers in synthesis, characterization of applications of nanostructured materials and composites . This module will provide the student with an understanding various strategies involved synthesis of nanomaterials. their characterizations and potential applications

b) Relevance of the program with HEI's Mission and Goals :

The programme focuses on state-of-the-art developments in their practices and instrumentation, as well as issues to deal with nanostructured materials. This programme places a strong emphasis on the professional development of the students. Such a qualification will enable and facilitate career progression for the students.

c) Nature of prospective target group of learners:

Students with science background (Bachelor degree holders) can join for the programme. Students doing their Masters/M.Phil/Doctoral studies can also join the programme to strengthen their analytical skills. Working professionals in government and private sector companies can also pursue this programme

d) Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence :

This course places a strong emphasis on the professional development of the students. Such a qualification will enable and facilitate career progression for the students. On successful completion of this module, a student will be able to (i) Understand the basics of Nanoscience and Nanotechnology (ii) to synthesize nanoparticles with different morphologies (iii) to characterize the above nanoparticles using various analytical techniques and (iv) to apply these nanoparticles in day to day applications

e) Instructional Design :

The course is of 6 months which includes theory and practicals. Study materials will be given by online. Test papers and assignments are also online. 20% of the practicals is by virtual lab.

Structure of the Course

Duration	:	6 months
Credits	:	16
Contact Hours - Theory	:	36 hrs
Contact Hours - Practical	:	120 hrs (20% by virtual lab.)

Course Code	Course Type	Course Name	Contact Sessions (Hours)	Credits	Internal Marks	External Marks	Total Marks
SDE-SCS-1	Common Core course (Theory)	Introduction to Nanoscience and Nanotechnology	12	4	20	80	100
SDE-SCS-2	Common Core course (Theory)	Strategies for synthesis of Nanomaterials	12	4	20	80	100
SDE-SCS-3	Common Core course (Theory)	Characterization of Nanostructured materials	12	4	20	80	100
SDE-SCS-4	Common Core course (Practical/ Project)	Synthesis, Characterization and application of Nanoparticles	*96	4	20	80	100
Total			132	16	80	320	400

*(20% by virtual lab.)

Course Design

For practicals, 20% will be virtual and remaining will be by direct laboratory work. This course will have three types of graded activities that will be included in overall course grade. These include: **Assignments:** Answer monthly quizzes that account for 20% of the course total grade. Each quiz includes 20 multiple choice questions that examines your understanding of the learning materials. **Open-ended Questions:** Answer two open-ended questions that account for 80% of the course total grade. The questions encourage creative thinking, and their answers are based on the knowledge gained in the course. **Final project:** At the end of the course the candidate will be asked to complete a final project. It will consist of a written report that focuses on the utilization of analytical techniques for various applications. The final project will be graded and will contribute to 25%.

f) Procedure for admissions, curriculum transaction and evaluation:

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. Any student with minimum Bachelor degree in science can apply. Fee structure will be decided by the University. The course contents will be delivered online and in print form. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

For practicals, 20% will be virtual and remaining will be by direct laboratory work. This course will have three types of graded activities that will be included in overall course grade. These include: **Assignments:** Answer monthly quizzes that account for 20% of the course total grade. Each quiz includes 20 multiple choice questions that examines your understanding of the learning materials. **Open-ended Questions:** Answer two open-ended questions that account for 80% of the course total grade. The questions encourage creative thinking, and their answers are based on the knowledge gained in the course. **Final project:** At the end of the course the candidate will be asked to complete a final project. It will consists of a written report that focuses on the utilization of analytical techniques for various applications. The final project will be graded and will contribute to 25% of the overall course grade.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

‘P’ grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Certificate programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

$$\text{GPA} = \frac{\text{Total credit points earned by the student from all the required courses of the programme}}{\text{Total credits of all courses required in the programme}}$$

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

Equivalent Percentage = (GPA obtained) X 10

g) Requirement of the laboratory support and Library Resources:

To handle the practical components in syllabus, technicians and consumables are required. The laboratory facility of the centre shall be provided to the ODL students on holidays and vacation days. Certain level of the practical would be conducted and performed by applying virtual reality methods.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library is providing service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. The libraries of teaching departments are open during working hours of the Schools. Reading space is provided in all the three floors housing the various sections of the library. The library provides reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest

dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	International and Inter University Centre for Nanoscience and Nanotechnology	268

h) Cost estimate of the programme and the provisions:

The budget details for the course is given in the following Table.

Budget Estimate

S. No.	Item	Amount (Lakhs)
1	Staff salary teaching /Non-Teaching	5
2	Online study materials	2
3	Online virtual lab.	3
4	Online quizzes/assignments/evaluation	2
5	Laboratory demonstrations	3
6	Contact class arrangements	1
7	Examination	1
	TOTAL	17 Lakhs

Total Programme fee: Rs.17500/-

i) Quality assurance mechanism and expected programme outcomes:

The quality of the programme will be ensured through strict monitoring by an executive committee that includes the Co-ordinator of the programme, subject experts, Director, School of Distance Education and Head of the International and Inter University center for Nanoscience and Nanotechnology (IIUCNN). The Co-ordinator of the programme shall ensure regular student feedback of courses, teachers and the programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme's efficacy will be held, in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

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Syllabus

Post Graduate Certificate in Nanoscience and Nanotechnology (PGCNN)

Month 1:

Introduction to nanotechnology and nanomaterials, how it all began: synthesis of carbon buckyballs, list of stable carbon allotropes extended, fullerenes, metallofullerenes, solid C₆₀, bucky onions, nanotubes, nanocones, properties of individual nanoparticles, methods of synthesis for carbon nanostructures, carbon nanofilaments.

Month 2:

Synthesis Procedures of Nanomaterials (7h) Bottom-up vs. top-down, epitaxial growth, self-assembly, modeling and applications production techniques of nano-tubes carbon arc bulk synthesis in presence and absence of catalysts high purity material (bucky paper) production using pulsed laser vaporization (PLV) of pure and doped graphite high-pressure CO conversion (HIPCO) nano-tube synthesis based on boudoir reaction chemical vapor deposition (CVD)

Month 3:

Characterizations of Nanomaterials (7h) Optical microscopy, electron microscopy, secondary electron scattering, back scattering, scanning probe microscopes, focused ion beam technique, X-ray diffraction, SPM-AFM, STM, optical, electronic and vibrational spectroscopic tools etc..

Month 4:

Polymer Nanocomposites and Processing (7h) Polymer nano-composites: definitions, incorporation of nanomaterials in polymer matrix: interface, why nanomaterials, methods of preparation of polymer nanocomposites, nanoparticle dispersion and reinforcement by surface modification, surface modification of carbon nanofibers, compounding of layered silicate nano composites, nanoparticles in rubber processing, nanopolymers by microemulsion, Nanotechnology and tissue engineering.

Month 5:

Nanomaterials for Polymer Nanocomposites (7h) Classification of nanoparticles, layered nanoparticles (Clay), fibrillar nanoparticles (carbon nanotubes (CNTs) etc.) and other nanoparticles, polymer clay nano-composites (PCNC), preparation steps - intercalation, exfoliation & functional CPNC, PNC with CNTs for electrical conductivity, PNC with CNTs - thermoset matrix and CNTs - thermoplastic matrix, comparison of PNC with normal composites based on composition, mechanical, thermal, rheology, morphology & process parameters.

Month 6:

Properties of Nanomaterials (7h) 36 Rheology of polymeric nanocomposites, VGCF and its alignment, nanocomposites of liquid crystalline polymers. Characterization of polymer nanocomposites: TEM and related techniques, mechanical properties of nanocomposites, mass transport through polymer nanocomposites, flammability properties, electrical properties, Thermal conductivity, Electro spun nanofibers.

Reference Books:

1. Nanotechnology and Tissue Engineering: The Scaffold, Ed. Cato T. Laurencin, Lakshmi S. Nair, CRC Press, 2008.
2. Synthesis and Characterization of Nanopolymers by Microemulsion, Uttam Kumar Mandal, Pallavi Bhardwaj, Saroj Aggarwal, LAP Lambert Academic Publishing, 2012.
3. Rubber-Clay Nanocomposites: Science, Technology, and Applications Ed. Maurizio Galimberti, John Wiley & Sons, 2011.
4. Introduction to Nano Science, (CRC Press of Taylor and Francis Group LLC), G. Louis Hornyak, Joydeep Dutta, Harry F. Tibbals and Anil K. Rao, May 2008, 856pp, ISBN-13: 978142004805
5. Ashby, Michael F., Ferreira, Paulo J., Schodek, Daniel L. 2009. Nanomaterials and nanotechnologies: An overview. In: Nanomaterials, Nanotechnologies and Design, Linacre Haus, Jordan Hill, Oxford, 2009.
6. Introduction to Nanoscience and Nanotechnology, K. K. Chattopadhyay, A.N. Banerjee, PHI Learning Private Limited.
7. Applied Colloid and Surface Chemistry, Richard M. Pashley and Marilyn E. Karaman, John Wiley & Sons Ltd, 2004.
8. Nanostructuring Operations in Nanoscale Science and Engineering, Kal Renganathan Sharma, The McGraw-Hill Companies, Inc. ISBN: 978-0-07-162609-5, 2010.

Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

Post Graduate Diploma in Computer Applications
(PGDCA)

Course Co-ordinator: Pushpalatha K. P.

Academic support by

School of Computer Sciences

Mahatma Gandhi University

Kottayam, Kerala

Post Graduate Diploma in Computer Applications
(Distance Learning Programme – Diploma Programme)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Post Graduate Diploma Programme has been designed by the School of Computer Sciences and to be conducted by the School of Distance Education with the academic support the school.

School of Computer Sciences was established in the year 1990 with an objective to impart higher education and research in the field of Computer Science. The School enjoys considerable repute as a centre of learning, a reputation matched by a stimulating physical and intellectual atmosphere. Currently the School offers a second level M Sc programme in Computer Science, an M Tech in Computer Science and Technology with specialization in Communication and Network Technology, an M Phil programme in Computer Science and Ph D. The thrust areas of study and research includes Machine Learning and Pattern Recognition, Image Processing and Computer Graphics, Design and Analysis of Algorithms, Soft Computing, Data Mining, Big Data Analytics, Advanced and Wireless Networking, Internet programming, Cloud Computing and Advanced Computing Paradigms. The up to date curriculum and high standard of teaching matched with the state-of-the-art infrastructure and computational facilities of the School provide an intellectually stimulating atmosphere for the holistic development of students.

(a) Programme's Mission & Objectives:

Mission:

To create skilled IT professionals who are competent for employability/initiate IT startups thereby strengthening the nation to achieve globally dominant economy that fulfills the needs of society, by properly utilizing the School's technical infrastructure and human resources.

Objectives:

- Increase the availability of higher education to a greater sections of the population in particular the disadvantaged groups who are deprived of opportunities
- Provide advanced and innovative system of education of high standard through systematic and flexible process to the learners
- Use education as a life long tool for acquiring skills and knowledge

(b) Relevance of the programme with HEI's Mission and Goals:

Though huge number of learning facilities are provided in private and public sectors, a greater percentage of population including youth and old, employed and unemployed, are not getting enough opportunities study the various standard technical programmes due to many reasons. The nation is in need of a large number of highly skilled professional human resources with whom the nation can achieve globally dominant economy and become the pioneers of a higher education model that is not just the best in the world, but the best for the world, delivering social, economic and intellectual value par excellence. The programme proposed by the School is designed in such a way that, the learners coming from various streams, can achieve technical skills in different advanced and latest technologies in the area of computer science in a professionally competing level. This enables them to engage in the IT-enabled departments or sections of many government and private sector organizations. The professionals produced by this programme can contribute a lot to the total economy of the nation and will be able to push it to its most momentous heights. India has emerged to be the world's third largest economy – an achievement underpinned, by its unique demographic advantage, but also a prospect of the country's pioneering reforms in higher education over the past 20 years.

(c) Nature of prospective target group of learners:

The PGDCA programme with a duration of one year, is designed to technically professionalize the learners including youth and old, employed and unemployed.

(d) Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence:

This programme has a duration of one year (2 semesters) and it covers 6 courses of four credits and a Main Project of 8 credits in one year. The programme is flexible in regard to modalities and timing of teaching and learning as also the admission criteria without compromising necessary quality considerations. This programme will enable skill updation and quality education of relevance to learners, employed or unemployed, who missed the opportunities during their formal studentship age and who are located at educationally disadvantageous places. The courses of this programme need the learners to do reading and comprehending printed materials during non-contact hours and do practical assignments using laboratory of the School during the contact hours (150 hours). The timing of contact hours is flexible, mostly during holidays. Thus the syllabus shall be properly and systematically completed and examinations shall be completed within the 1 year period.

(e) Instructional Design :

(i) Curriculum Design

Duration: 1 year (2 Semesters)

The programme is of duration of 1 year (2 Semesters) which includes theory, practicals and project work. There are enough contact classes given to direct teaching and training. The assessment involves both internal and external components.

Course Code	Course Type	Course Name	Contact Hours	Credits	Internal Marks	External Marks	Total Marks
SDE SKS PGD 1	Core course	Operating Systems	12	4	20	80	100
SDE SKS PGD 2	Core course	Data Structures and Algorithm Analysis	12	4	20	80	100
SDE SKS	Core	Data Base	12	4	20	80	100

PGD 3	course	Management Systems					
SDE SKS PGD 4	Core course	Internet Programming	12	4	20	80	100
SDE SKS PGD 5	Core course	Object Oriented Programming Using Java	12	4	20	80	100
SDE SKS PGD 6	Core course	Software Engineering and Project Management	12	4	20	80	100
SDE SKS PGD 7	Core course	Practical	120	4	20	80	100
SDE SKS PGD 8	Core course	Main Project	4	4	20	80	100
Total			196	32	160	640	800

(ii) Detailed syllabi: Annexure I

(f) Procedure for admission, curriculum transaction and evaluation:

The PGDCA programme with a duration of one year, is designed to technically professionalize the learners including youth and old, employed (anywhere) and unemployed. The admission procedure of this programme is based on the following eligibility criteria:

A pass in any recognized regular bachelor's Degree programme of minimum three years duration in any discipline with Mathematics at 10+2 level.

OR

A pass in any recognized Regular Bachelors Degree programme of minimum three years duration in any discipline with Mathematics/Statistics/Business Mathematics/ Business Statistics as one of the Subjects.

OR

A pass in BCA/BSc Computer Science/ BSc Information Technology/ B.Tech degree of a minimum three years duration from a recognized University.

All the courses are evaluated based on assignments/internal/external evaluation. For the Main Project, the candidate has to complete a major project work along with the two theory courses in the second semester and submit a project report and the evaluation is done based on project presentation and viva-voce.

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. Fee structure will be decided by the University. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/Presentation of case study for each course. Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

‘P’ grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Diploma programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

$$\text{GPA} = \frac{\text{Total credit points earned by the student from all the required courses of the programme}}{\text{Total credits of all courses required in the programme}}$$

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

$$\text{Equivalent Percentage} = (\text{GPA obtained}) \times 10$$

(g) Requirement of the Laboratory support and Library Resources:

The necessary software and the hardware support for completing the programme will be provided by the School. Library facilities of the School and the University will be extended to the learners for reference purpose as per requirements.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library is providing service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. The libraries of teaching departments are open during working hours of the Schools. Reading space is provided in all the three floors housing the various sections of the library. The library provides reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016.

The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

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A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
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Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4

E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	School of Computer Sciences	4130

(h) Cost estimate of the programme and the provisions:

The budget details for the programme is given in the following Table.

S. No.	Item	Amount (Lakhs)
1	Manpower	5
2	Study Materials	3
3	Examinations	2
4	Practical	3
	TOTAL	13 Lakhs

Total Programme fee: Rs.13000/-

(i) Quality assurance mechanism and expected programme outcomes:

The quality of the programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the programme, the subject experts, Director, School of Distance Education and Head of the School of Computer Sciences. The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the

Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

Annexure I

1. SDE SKS PGD 1 Operating Systems

Unit I

Operating System: Introduction, Operating System Services, System calls, Types of System Calls, Operating System Design and Implementation, Operating System Structure, System Boot, Process Management: Process Concepts and Scheduling, Operations on Process, Inter-process communication, Communication in client server system

Unit II

Threads: Multithreading models, Thread Libraries, Threading Issues, Process Synchronization- Critical section problem, Peterson's solution, Synchronization Hardware, Semaphores, Classic problem of Synchronization, Monitors, CPU Scheduling- Scheduling Criteria, Scheduling Algorithms, Load balancing, Multicore Processors, Real time CPU scheduling

Unit III

Deadlock: Deadlock Characterization, Methods for Handling Deadlock, Deadlock Prevention, Deadlock Avoidance, Deadlock Detection, Main memory- Swapping, Contiguous Memory Allocation, Segmentation, Paging, Structure of the Page Table, Virtual Memory- Demand Paging, Copy-on-Write, Page Replacement, Thrashing

Unit IV

Mass-Storage Structure: Overview of Mass-Storage Structure, File-System Interface-File Concept, Access Methods, File Sharing, Protection, File-System Implementation-File-System Structure, NFS, I/O Systems- I/O Hardware

Unit V

Protection and Security: Goals of Protection, Principle of Protection Domain of Protection, Security Problem, Program Threats, Cryptography as a Security Tool, Virtual Machines

References

- Abraham Silberschatz, Operating System Concepts, John Wiley & Sons, Eighth Edition, 2014.
- Abraham Silberschatz, Peter B. Galvin, Greg Gagne, Operating System Concepts, John Wiley & Sons, Eighth Edition, 2013.
- Andrew S Tanenbaum, Modern Operating Systems, Pearson, 2015.

2. SDE SKS PGD 2 Data Structures and Algorithm Analysis

Unit I

Implementing generic components: Pre-Java, Simple generic classes and interfaces, Running-Time Calculations, General rules, Solutions for the maximum subsequence sum problem, List (Abstract Data Type) ADT, Lists in the Java Collections API, Implementation of linked list, Stack ADT, Queue ADT.

Unit II

Implementation of Trees: Tree traversals with an Application, Binary trees, Search tree ADT—Binary search trees, AVL trees, B-Trees, Hash function, Separate chaining, Hash Tables without linked lists, Rehashing, Heaps - Binary Heap, d-Heaps, Skew Heaps, Binomial Queues.

Unit III

Insertion sort, Heap sort, Merge sort, Quicksort, Linear-time sorts: Bucket Sort and Radix Sort, Equivalence Relations, Dynamic equivalence problem, Basic data structure, Smart union algorithms, Path compression.

Unit IV

Algorithms: Topological sort, Shortest-path algorithms, Network flow problems, Minimum spanning tree, Greedy algorithms, Divide and conquer, Dynamic programming, Randomized algorithms, Backtracking algorithms.

Unit V

Amortized Analysis - Fibonacci Heaps, Advanced Data Structures and Implementation- Top-Down Splay Trees, Red-Black Trees, Suffix arrays and Suffix trees, Pairing heaps.

References

- Mark Allen Weiss, Data Structures and Algorithm Analysis in Java, Pearson Education, Third Edition, 2012.
- Debasis Samanta, Classic Data Structures, PHI Learning, 2014.
- Nitin Upadhyay, The Design and Analysis of Algorithms, Katson, 2013.

3. SDE SKS PGD 3 Data Base Management Systems

Unit I

Database, Advantages of using DBMS approach, Data models, Schemas, Instances, Three-schema architecture and data independence, Database languages and interfaces, Relational model concepts, Relational model constraints and relational database schemas, SQL data definition and data types, Specifying constraints in SQL, Basic retrieval queries in SQL, INSERT, DELETE, and UPDATE Statements in SQL.

Unit II

Complex SQL Retrieval Queries, Specifying Constraints as Assertions and Actions as Triggers, Views (Virtual Tables) in SQL, Schema Change Statements in SQL, Unary Relational Operations: SELECT and PROJECT, Relational Algebra Operations from Set Theory, Binary Relational Operations: JOIN and DIVISION, Additional Relational Operations, Entity Types, Entity Sets, Attributes, and Keys, Weak Entity Types.

Unit III

Enhanced Entity, Relationship Model, Subclasses, Superclasses and Inheritance, Specialization and Generalization, Overview of object database concepts, Object definition language, Object database conceptual design, Simple OQL queries, Database entry points, and iterator variables, XML hierarchical (Tree) data model, Database programming: techniques and issues, Embedded SQL, dynamic SQL, and SQLJ.

Unit IV

Functional dependencies, Normal forms based on primary keys, General definitions of second and third normal forms, Boyce-Codd normal form, Introduction to transaction processing, Desirable properties of transactions, Two-phase locking techniques for concurrency control, Concurrency control based on timestamp ordering, Validation (Optimistic) Concurrency Control Techniques, Granularity of Data Items and Multiple granularity locking, Using locks for concurrency control in indexes.

Unit V

Multivalued dependency and fourth normal form, Join Dependencies and fifth normal form, Active database concepts and triggers, Temporal database concepts, Spatial database concepts, Multimedia database concepts, Information retrieval (IR) concepts, Overview of data mining technology, Characteristics of data warehouses.

References

- RamezElmasri, Shamkant B. Navathe, Fundamentals of Database Systems, Pearson Education, Sixth Edition, 2011.
- SilberschatzA ,Database Systems Concepts, McGraw Hill, Sixth Edition, 2011.

4. SDE SKS PGD 4 Internet Programming

Unit I

HTML: General introduction to internet and WWW; Text tags; Graphics, video and sound tags; Link and anchor tags; Table tags; Frame tags; Miscellaneous tags (layers, image maps etc.); CSS; DHTML; Example applications; Simple introduction to XML and VRML .

Unit II

CGI Programming: HTML forms and fields; Perl: Basic control structures, Data types and basic features; CGI programs: GET & POST methods, Simple applications; Cookies; Server side includes; Example applications.

Unit III

Creating web pages: Javascript- Basic data types; Control structures; Standard functions; Arrays and objects, Event driven programming in Javascript, **Handling html form with PHP, AJAX, JQUERY,** JDBC, .NET Technology, JSP.

Unit IV

Introduction to Python: Data and expressions- Values and types: int, float, boolean, String, and list; Variables, Expressions, Statements, Tuple assignment,Control flow and functions, Example and applications.

Unit V

Programming Elements of Python: **Lists, Tuples, Dictionaries;** Files, Modules, Packages; Handling exceptions, Example and applications.

References

- Joel Sklar, Principles of Web Design, Vikas Publications, 2014.
- V.K. Jain, Advanced Programming in Web Design, Cyber Tech Publications,2008
- H M Deitel, P J Deitel& A B Goldberg, Internet and Worldwide web programming: How to Program, 3/e, Pearson Education, 2007

- Charles Dierbach, “Introduction to Computer Science using Python: A Computational Problem-Solving Focus, Wiley India Edition, 2012
- John V Guttag, “Introduction to Computation and Programming Using Python”, Revised and expanded Edition, MIT Press , 2013

5. SDE SKS PGD 5 Object Oriented Programming through Java

Unit I

Brief history of Java, Special features of Java, C++ Vs JAVA, JAVA and internet and WWW, JAVA support systems, JAVA environment. JAVA program structure, Tokens, Statements, JAVA virtual machine, Constant & variables, Data types, Declaration of variables, Scope of variables, Symbolic constants, Type casting. Operators: Arithmetic, Relational, Logical Assignments, Increment and decrement, Conditional, Bitwise, Special, Expressions & its evaluation. If statement, if...else... statement, Nesting of if...else... statements, else...if Ladder, Switch, ? Operators, Loops –While, Do, For, Jumps in Loops, Labelled Loops.

Unit II

Defining a class, Adding variables and methods, Creating objects, Accessing class members, Constructors, Methods overloading, Static members, Nesting of methods. Inheritance: Extending a Class, Overriding Methods, Final Variables and Methods, Final classes, Finalize methods, Abstract methods and classes, Visibility control.

Unit III

Arrays: One dimensional & two dimensional, Strings, Vectors, Wrapper classes, Defining interface, Extending interface, Implementing interface, Accessing interface variable, System packages, Using system package, Adding a class to a package, Hiding classes.

Unit IV

Creating threads, Extending the threads class, Stopping and blocking a thread, Life cycle of a thread, Using thread methods, Thread exceptions, Thread priority, Synchronization, Implementing the runnable interface.

Unit V

Local and remote applets Vs applications, Writing applets, Applets Life Cycle, Creating an Executable applet, Designing a Web Page, Applet Tag, Adding applet to HTML File, Running the applet, Passing Parameters to applets, Aligning the display, HTML tags & applets, Getting input from the user, JDBC.

References

- E.balaguruswamy,”Programing with java - a primer” Mcgraw Hill Education, 2014
- Herbert Schildt, Java: The Complete Reference, Seventh Edition,2007

- Peter Norton, “Peter Norton Guide To Java Programming”, Techmedia Publications, 1997.
- Walter Savitch, “Java: An Introduction to Problem Solving and Programming”, Pearson Education, 7th Edition, 2015.
- Bruce Eckel , “Thinking in Java”, Pearson Education, 4th Edition, 2006.

6. SDE SKS PGD 6 Software Engineering and Project Management

Unit I

Introduction : Software engineering, Software development projects,, Need for software process, Characteristics of a software process, Software life cycle model: Basic concepts, Waterfall model and its extension, Rapid application development, Spiral model, Project estimation techniques, COCOMO model, Risk management- Risk assessment, Requirements analysis and specification: Requirement gathering and analysis, Users of SRS document, Time spending and Resource to develop an SRS Document, Characteristics of Good SRS Document, Attributes of Bad SRS Document, import categories of Customer Requirements, Functional requirements.

Unit II

Software Design: Overview of the Design Process, Characterise a good software design, Cohesion and coupling, Layered arrangement of modules, Approaches to software design, Function oriented design: Overview of SA/SD methodology, Structured analysis, Developing the DFD Model of a system, Structured design, Problem partitioning, Abstraction, Modularity.

Unit III

Object-oriented design: Object-oriented design concepts, UML, UML Diagrams, Use Case Model, Class Diagrams, Interaction Diagrams, Activity Diagram, Patterns- Basic Pattern concepts, An Object-oriented analysis and design methodology, OOD goodness criteria.

Unit IV

Coding and Testing: Coding, Code review, Software documentation, Testing, Unit testing, Black-box testing, White -box testing, Debugging, Program analysis tools, Integration testing, System testing, Software reliability and quality management: Software reliability, Statistical testing, Software quality, Software quality management system, ISO 9000.

Unit V

Computer aided software engineering (CASE): Characteristics of software maintenance, Software maintenance process models, Basic issues in reuse program, Reuse approach, Client-Server software, Client-Server architectures, CORBA, COM/DCOM, Service-Oriented architecture (SOA), Software as a service (SaaS).

References

- Rajib Mall, Fundamentals of Software Engineering, PHI Learning Private Limited, Fourth Edition, 2014.
- Pressman, R.S., Software Engineering: A Practitioner's Approach, MGHISE, 7th Edition, 2010.
- Kelkar, S.A., Software Engineering: A Concise Study, PHI, 2007.

Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

**POST GRADUATE DIPLOMA IN CULTURE AND HERITAGE TOURISM
MANAGEMENT (PGDCHTM)**

Course Co-ordinator: Shri. Abin K I

Academic support by

**School of Tourism Studies
Mahatma Gandhi University
Kottayam, Kerala**

**POST GRADUATE DIPLOMA IN CULTURE AND HERITAGE TOURISM MANAGEMENT
(PGDCHTM)**

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State had also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Certificate Programme has been designed by the School of Tourism Studies and is to be conducted by the School of Distance Education with the academic support of the School.

The School of Tourism Studies, which came up in 2010 is envisaged as a centre of higher learning and research in Tourism and Hospitality Studies and is the first University department of its kind in Kerala. The aim of the School is to develop skilled human resources specific to regional and global needs in applied, technical, interpersonal, analytical and communication abilities to master in travel management, hospitality management, foreign languages and allied areas.

Studies on tourism and hospitality education conducted by the Ministry of Tourism, GOI and FHRAI highlighted the need for more professionals. A survey by the Ministry of Tourism indicates that there is a demand for 2.03 lakh trained professionals every year of which 66 percent is at skill level and 34 percent at managerial level (69020). FHRAI's 43rd annual convention reaffirmed the fact about the mismatch between demand and supply, with Indian students still needing more institutions as the existing institutions meet only 15 percent of the industry requirements. A study conducted by the Dept. of Tourism, Govt. of Kerala says that there is a paucity of qualified talent for middle management positions in Kerala and most companies are bringing talent from outside the state to fill positions.

a) Programme's mission & objectives :

The aim of the post graduate diploma programme in culture and heritage tourism management through distance learning programme is to prepare students to become experts and develop skills towards pursuing career interests in tourism and appreciation regarding cultural heritage resources, art and cultural organizations, heritage preservation, cultural travel and other cultural tourism interests. This module will provide the student with an understanding of the theory and in managing the cultural heritage resources which are the core assets of tourism industry. The course helps to-

1. Understand tourism as an industry and its essential components.
2. Understand the definitions, concepts and terminologies of culture, heritage and its useful relationships with tourism.
3. Understand cultural heritage tourism resources by exploring various categories of heritage attractions.
4. Understand the heritage tourism demand by analyzing heritage visitor characteristics, visitor typology and travel motivations.
5. Understand heritage tourism management involving heritage tourism product development, heritage product conservation and interpretation, promotion and marketing strategies.

(b) Relevance of the programme with HEI's Mission and Goals :

The course focuses on the developments, practices as well as issues to deal with the conservation and management of cultural heritage resources. This course places a strong emphasis on the professional development of the students in the cultural heritage tourism sector in particular. Such a qualification will enable and facilitate career progression for the students in tourism.

(c) Nature of prospective target group of learners:

Students with any degree background can join the programme. Students doing their Masters/M.Phil/Doctoral studies can join the programme to strengthen their diagnostic skills.

(d) Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence:

This course places a strong emphasis on the professional development of the students. Such a qualification will enable and facilitate career progression for the students. On successful completion of this module, a student will be able to (i) Understand the principles and practices associated with cultural heritage tourism management, (ii) Field visit to heritage monuments and sites to study the properties of the monuments in detail (iii) Development of professional skills to work in the heritage tourism sector (iv) Critically appraise the literature and identify emerging trends in this sector.

(e) Instructional Design:

The course is of one year which includes theory classes, assignments, case studies and field visits.

Instructional Design

POST GRADUATE DIPLOMA IN CULTURE AND HERITAGE TOURISM MANAGEMENT (PGDCHTM)

Course Code	Course Name	Credits	Contact classes (Hours)	Internal Marks	External Marks	Total Marks
SDE-PS-1	Basics Of Tourism	4	12	20	80	100
SDE-PS-2	Introduction To Cultural Heritage	4	12	20	80	100
SDE -PS-3	Heritage Tourism in India	4	12	20	80	100
SDE-PS - 4	Internship and Report	4	12	20	80	100
SDE-PS-5	Cultural and Heritage Tourism Management	4	12	20	80	100
SDE-PS-6	UNESCO and Cultural Heritage Tourism	4	12	20	80	100
SDE-PS-7	Emerging Trends And Innovative Practices In Heritage Tourism	4	12	20	80	100
SDE-PS-8	Project / Viva Voce	4	12	20	80	100
Total		32	96			800

(f) Procedure for admissions, curriculum transaction and evaluation:

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. Graduates in any discipline can apply for the programme. Fee structure will be decided by the University. The study materials will be delivered through online and print formats. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/Presentation of case study for each course. Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Final project: At the end of the course the candidate will be asked to complete a final project. It will consist of a written report that focuses on the utilization of analytical techniques for various applications. The final project will be graded and will contribute to 80% of the overall course grade. Evaluation will be done annually.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

‘P’ grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Certificate programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

$$\text{GPA} = \frac{\text{Total credit points earned by the student from all the required courses of the programme}}{\text{Total credits of all courses required in the programme}}$$

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

$$\text{Equivalent Percentage} = (\text{GPA obtained}) \times 10$$

(g) Requirement of the laboratory support and Library Resources:

To handle the practical components in syllabus field visits are required. Books relating to tourism management and cultural heritage studies are needed. Certain level of the practical would be conducted and performed by applying virtual reality methods.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library is providing service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. The libraries of teaching departments are open during working hours of the Schools. Reading space is provided in all the three floors housing the various sections of the library. The library provides reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016.

The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest

dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	School of Tourism Studies	1464

(h) Cost estimate of the programme and the provisions:

The budget details for the course are given in the following Table.

Budget estimate (for 100 students)

S.No.	Item	Amount (Rs. in Lakhs)
1.	Manpower	2.5
2.	Study material	2
3.	Laboratory/ Library	1
4.	Internal assessment	0.5
5.	End semester examination	1
	Total	7.00

Total Programme fee: Rs.7000/-

(i) Quality assurance mechanism and expected programme outcomes:

The quality of the programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the programme, the subject experts, Director, School of Distance Education and Head of the School of Tourism Studies. The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

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Syllabus

POST GRADUATE DIPLOMA IN CULTURE AND HERITAGE TOURISM MANAGEMENT (PGDCHTM)

The post graduate diploma in Culture and Heritage Tourism Management is meant for students pursuing career interests in tourism and appreciation regarding cultural heritage resources, art and cultural organizations, heritage preservation, cultural travel and other cultural tourism interests.

1. Course Code: PGDCHTM
2. Number of credits: 32
3. Type of course: Distance Mode
4. Duration: 1 Year (2 Semesters)

Programme Description:

A conceptual blending between culture, heritage and tourism, analysis of a wide range of heritage attractions, study of heritage visitor motivations, contemporary approaches to heritage tourism product development and management, heritage marketing and approaches to planning and design of cultural heritage tourism programmes.

Objectives of the Programme:

After successful completion of the programme, students will be able to,

1. Understand tourism as an industry and its essential components.
2. Understand the definitions, concepts and terminologies of culture, heritage and its useful relationships with tourism.
3. Understand cultural heritage tourism resources by exploring various categories of heritage attractions.
4. Understand the heritage tourism demand by analyzing heritage visitor characteristics, visitor typology and travel motivations.
5. Understand heritage tourism management involving heritage tourism product development, heritage product conservation and interpretation, promotion and marketing strategies.
6. Understand the emerging trends and innovative practices in the heritage tourism sector

SDE PS1COURSE – IBASICS OF TOURISM

Unit I - History of Tourism-Motivating factors- Tourism- meaning & definition, Features and Types of Tourism- Typology of Tourists-Tourism Products- Impacts of Tourism: Economic, socio-cultural and environmental impacts

Unit II - Players in Tourism- Central and State Governments, Tourism Industry, NGOs, Tourists, Host Community, International, National and Regional tourism related organizations – UNWTO, IATA, PATA, WTTC, TAAI etc

Tourism Industry-Travel Agents and Tour Operators, Tourist Guide and Escort services-travel documentation, Hospitality, Transport Operators- Air, Land, Water, Souvenir and Leisure segments

Unit III Tourism Marketing- Global tourism market- Top countries-Product packaging-Inbound and Outbound Tours- Promotional tools: digital marketing- Destination branding etc

CASE STUDIES

1. Prepare a three nights and four days package tour of Kannur district for tourists from Italy and discuss the same at a workshop (4 hours).
2. Prepare a twonights and three days package tour focusing on heritage tourism products in Malappuram district for a group of tourist from Mumbai and discuss the same at a workshop (3 hours).
3. Identify the travel formalities for processing VISA to London, Sri Lanka, Australia and China (3 hours).
4. Find the methods and modes of transport available for a tourist from Kolkata to reach Kozhikode (3 hours)

References:

Cooper, Chris et al (2008), Tourism Principles and Practice, Pearson Education.

Swain, Sampad Kumar, Mishra, Jithendra Mohan (2013), Tourism Principles and Practices, Oxford University Press.

N Jayapalan (2007), An introduction to Tourism, Atlantic Publishers, New Delhi

Kotler, Bowen, Makens (2011), Marketing for hospitality and Tourism, Pearson, New Jersey.

Prasanna Kumar (2010), Marketing of Hospitality and Tourism Services, Tata Mc Graw Hill, New Delhi.

John Walker, Josielyn Walker (2012)), Exploring the Hospitality Industry, Pearson, New Delhi

Ronald, Conrad (2010), Trends and Issues in Global Tourism, Springer, London.

Medlik, Ingram (2007), The Business of Hotels, Routledge, London

R March, Woodside (2010), Tourism Behaviour-Travellers' Decisions and Actions, CABI, Oxfordshire.

Priyan C Oommen (1986), Tourism Discovered, Global Communications, Thiruvananthapuram.

SDE PS2 COURSE - 2INTRODUCTION TO CULTURAL HERITAGE

Unit I - Cultural Heritage- meaning and concepts, features of Indian culture-different dimensions, Types of Heritage- tangible, intangible, natural and built heritage- heritage values- Importance of ASI and UNESCO in heritage conservation-benefits of heritage tourism- Heritage Tours

Unit II - Heritage Resources of India –Indian architectural styles- North versus South, UNESCO World heritage sites and National Monuments in India- role of ASI in heritage tourism development and promotion,

Unit III - Heritage Resources of Kerala- places of worship, forts, palaces, caves, relics- Intangible heritage: major festivals, fairs, major art forms and handicrafts etc

CASE STUDIES

Assessment of any one of the Heritage Sites in Kerala - 20 Hours

1. Padmanabhapuram Palace
2. Muziris Heritage Zone
3. Edakkal Caves
4. Tripunithura Hill Palace
5. Thiruvananthapuram East Fort Zone

Prepare an album with detailed descriptions on any five heritage products of Kerala (20 hours).

References:

Allchin, B, Allchin, F.R etal. (1989), Conservation of Indian Heritage, Cosmo Publishers, New Delhi.

Dhar, Prem Nath (2008), Cultural and Heritage Tourism- An overview, Kanishka Publishers, New Delhi.

Jacob, Robinet etal (2012), Tourism Products of India- A national perspective, Abhijeet Publications, New Delhi.

Dhar, Prem Nath (2010), Heritage, Cultural and Natural Sites Tourism, Kanishka Publishers, New Delhi.

Praveen Sethi (2005), Heritage Tourism, Anmol Publications, New Delhi.

Sreedhara, Menon A (2008), Cultural Heritage of Kerala, DC books.

Timothy, D and Boyd, S (2003), Heritage Tourism: Theme in Tourism, Pearson, Essex.

Vijayakumar B (2015), (Ed), Paithrika Tourism, Kerala Bhasha Institute.

Visitor Management: Case studies from World Heritage Sites

Brochures of UNESCO Heritage Sites in India

SDE PS3 COURSE 3 - HERITAGE TOURISM IN INDIA

Unit - I –Heritage Tourism - meaning and concepts, features of Indian heritage-different dimensions, Types of Heritage tourism products, Archaeological Sites and Museums

Unit - II - Heritage Tourism Destinations of India –Major attractions and heritage tourism products in North, South, East and West Indian Cities

Unit - III –Scope of Heritage tourism in India, incredible features, major challenges faced by heritage tourism

Unit – IV – Sustainable and Responsible Practices in National Monuments of India

Unit – V – SWOT Analysis of Heritage Tourism in Kerala / India

References:

Ram Acharya (2007), Tourism and Cultural Heritage of India, RBSA Publishers, New Delhi

Albanese Marilia, Archaeology – Northern India, White star Publishers, New Delhi

Singh Vipul, (2009) Interpreting Medieval India – Volume – 1, Mac Milan Publishers, New Delhi

Basham A.L, (2007) The Wonder that was India, Surjeet Publications, New Delhi

Praveen Sethi (2005), Heritage Tourism, Anmol Publications, New Delhi

Dhar, Prem Nath (2008), Cultural and Heritage Tourism- An overview, Kanishka Publishers, New Delhi.

Jacob, Robinet etal (2012), Tourism Products of India- A national perspective, Abhijeet Publications, New Delhi.

Dhar, Prem Nath (2010), Heritage, Cultural and Natural Sites Tourism, Kanishka Publishers, New Delhi.

Sreedhara, Menon A (2008), Cultural Heritage of Kerala, DC books.

Dallen J. Timothy (2009), Cultural heritage and tourism in the developing world,Routledge

Brochures of UNESCO Heritage Sites in India

SDE PS4 COURSE 4–INTERNSHIP AND REPORT

INTERNSHIP (100 Hours)

Hundred hours to be spent with a tour operator / travel agency or with a heritage Tour Guide / museum curator / tribes in a tribal hamlet or with heritage documentation team in a heritage site / archaeological site and submit a report of 40-50 pages.

SDE PS5 COURSE – 5 CULTURAL HERITAGE TOURISM MANAGEMENT

Unit I– Cultural Heritage Tourism definition and features, Sustainability, impacts of heritage Tourism, heritage conservation-Heritage Visitor characteristics and motivations

Unit II Heritage Product Development: Historic, cultural. Natural –Heritage Circuits, Tours, Zones and heritage Walks- heritage product interpretation

Unit III Heritage Management Operations- Systems and procedures, legal aspects and policy framework, Visitor Management – Case study of one heritage destination / monument in India, Legislations relating to heritage management in India, Heritage Management – Role of Stakeholders, Government, NGO’s, Host community, International Organisations

Unit IV CASE STUDIES

Prepare a marketing brochure containing any two UNESCO heritage sites and products of India

OR

Prepare a 10 minute documentary on the handicrafts / mural paintings of Kerala.

Prepare a heritage walk tour circuit connecting major heritage buildings, worship places, archaeological sites of Kerala etc

References:

Arthur Pederson (2002), Managing Tourism at World Heritage Sites, UNESCO World Heritage Centre.

Ashwoth G J (2000), The Tourist Historic City-Retrospect and Prospect of Managing the Heritage City, Pergamon, Oxford

David Baker and Gill Chitty (1999), Managing Historic Sites and Buildings, Routledge

Marion Blockley and Alison Hems (2005), (Ed), Heritage Interpretation, Routledge.

Misiura, Shashi (2006), Heritage Marketing, Butterworth Heinnemann, London.

Peter Howard (2003), Heritage Management, Interpretation, Identity, Bloomsbury T &T Clark.

Fyall Allan, Garrod Brian, Leask Anna, Wanhill Stephen, (2008) Managing Visitor Attractions Second Edition, Routledge

Swarbrooke John (2015) The Development and Management of Visitor attractions Second Edition, Routeledge

SDE PS6 COURSE – 6 UNESCO AND CULTURAL HERITAGE TOURISM

Unit – 1 UNESCO – Role, importance, functions, activities in heritage management

Unit – 2 UNESCO and World Heritage Sites – Classification, Activities, Tourism Development and Promotion, Observance of World Heritage Day – importance and purpose, World Heritage Commission.

Unit – 3 Prominent UNESCO Sites in different continents – Asia, Europe, Africa, North America, South America etc Tourist statistics to prominent UNESCO monuments and sites

Unit – 4 World Heritage Sites and Tourism Promotion, Financial assistance from UNESCO

Unit – 5 Cultural Heritage Tourism in India – Features, Products and major attractions of India, Role of UNESCO in cultural heritage tourism

Reference

Ram Acharya (2007), Tourism and Cultural Heritage of India, RBSA Publishers, New Delhi

Praveen Sethi (2005), Heritage Tourism, Anmol Publications, New Delhi

Arthur Pederson (2002), Managing Tourism at World Heritage Sites, UNESCO World Heritage Centre.

David Baker and Gill Chitty (1999), Managing Historic Sites and Buildings, Routledge

Marion Blockley and Alison Hems (2005), (Ed), Heritage Interpretation, Routledge.

Misiura, Shashi (2006), Heritage Marketing, Butterworth Heinnemann, London.

Peter Howard (2003), Heritage Management, Interpretation, Identity, Bloomsbury T & T Clark.

SDE PS7 COURSE – 7 EMERGING TRENDS AND INNOVATIVE PRACTICES IN HERITAGE TOURISM

Unit – 1 Innovations in Heritage Tourism, Trends in Heritage cities, towns and villages, Heritage streets and conservation strategies

Unit – 2 UNESCO, ASI their role and functions, Sustainable Practices adopted in Heritage Monuments/ sites and archaeological sites

Unit – 3 Innovative heritage tourism practices in world renowned monuments and archaeological sites

Unit – 4 World Heritage Sites – importance in global tourism, financial assistance from UNESCO for conservation of UNESCO sites and monuments

Unit – 5 Heritage Tourist, features, priorities and requirements, Heritage walk tour, Heritage tour itinerary preparation, Heritage Tour packages

Reference

Websites of UNESCO / Archaeological Survey of India / State Tourism Departments / Ministry of Tourism

Fyall Allan, Garrod Brian, Leask Anna, Wanhill Stephen, (2008) Managing Visitor Attractions Second Edition, Routledge

Swarbrooke John (2015) The Development and Management of Visitor attractions Second Edition, Routledge

Hanna P Stephen, Potter E Amy, Modlin E Arnold, Carter Perry (2015), Social Memory and Heritage Tourism Methodologies, Routledge

Dhar Prem Nath (2008), Cultural and Heritage Tourism: An Overview, New Delhi

Arthur Pederson (2002), Managing Tourism at World Heritage Sites, UNESCO World Heritage Centre.

David Baker and Gill Chitty (1999), Managing Historic Sites and Buildings, Routledge

Marion Blockley and Alison Hems (2005), (Ed), Heritage Interpretation, Routledge.

Misiura, Shashi (2006), Heritage Marketing, Butterworth Heinemann, London.

Peter Howard (2003), Heritage Management, Interpretation, Identity, Bloomsbury T &T Clark.

SDE PS8 COURSE – 8 PROJECT / VIVA VOCE

Students should select any one of the heritage / cultural tourism destinations, conduct a field study and submit a project report (60 – 80 pages) under the guidance of a faculty.

An exhaustive list of assignments

1. Features of Indian Cultural Heritage
2. UNESCO Sites in India
3. Heritage Tourism Resources of India
4. Heritage Tourism Monuments in India
5. Architectural features of Indian Monuments
6. Heritage Tourism and Archaeological Survey of India
7. Heritage Tourism in Kerala
8. Uniqueness of Western Ghats as a natural tourism site
9. Man-made wonders of South India
10. Prominent Heritage Tourism Destinations in India
11. Entrepreneurship avenues in Heritage Tourism
12. Strategies for Sustainable Heritage Conservation

13. Heritage Documentation its need and importance
14. Traditional Architecture of Kerala and its significance in Heritage Tourism
15. Intangible and Tangible Heritage of India / Kerala

XXXXX

Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

Post Graduate Diploma in Data and Business Analytics (PGDDBA)

Course Co-ordinator: Dr.Sajimon Abraham

Academic support by
School of Management and Business Studies (SMBS)
Mahatma Gandhi University
Kottayam, Kerala

POST GRADUATE DIPLOMA IN DATA AND BUSINESS ANALYTICS (PGDDBA)
(Distance Learning Programme - Diploma Programme)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with a vision to provide the opportunity of quality education to all realms of society. Since the beginning, thousands of students availed this opportunity for higher education throughout Kerala to a great extent and also outside the state to some extent. But after the new directions of UGC in 2014, University had stopped all its Off-Campus Centres of the School of Distance Education inside and outside the State.

Now it is the new endeavour to revamp the functioning of the school with different types of Diploma and Certificate programmes very relevant to the contemporary society, in addition to the conventional Graduate and Post Graduate programmes with the academic and infrastructural support of the eminent Schools and interdisciplinary interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Post Graduate Diploma Programme has been designed by the School of Management and Business Studies and to be conducted by the School of Distance Education with the academic support of the School.

School of Management and Business Studies is a regular statutory Department for Management studies in Mahatma Gandhi University. The School had a humble beginning on 25th March 1999 with a two year full-time MBA program for the management aspirants with the objective of molding enterprising youth into career oriented and competent management professionals. With dedicated and high calibre professional expertise and state-of-art infrastructure, the institution imparts the best of theory and practical knowledge to carve a niche for itself in the challenging two year MBA, MPhil and PhD programmes on Management and Business Studies. Ours is one of the prominent Management Institutes in South India. The MBA program offered by SMBS is aimed at creating business leaders and entrepreneurs by leveraging on its strength in technology, computing and social sciences. The department is currently engaged in a diverse set of activities including teaching, academic research, management development programs, and public sector projects. The department places heavy emphasis on experiential and process oriented learning,

and the pedagogical tools include extensive use of case studies, simulation exercises, industry oriented project works to facilitate the same. Besides honing up the skills of individual decision making, enough emphasis is laid on developing team skills and value focused decision making. Continuous industry interaction, seminars and live projects are a regular part of the curriculum. Organizational environments are simulated to sharpen the skills of decision making, leadership and team building. Teamwork, group assignments, case studies, participation in class discussions and real business issues are strong features of the management program at SMBS.

(a) Programme's mission & objectives :

Business Analytics is the process of converting data into insights. It is “the extensive use of data, statistical and quantitative analysis, explanatory and predictive models, and fact based management to drive decisions and actions.” With the increase in the availability of data, Analytics has now become a major differentiator in both the top line and the bottom line of any organization. It is hence not surprising that research has shown that data-driven companies perform 5%-6% better per annum. The objective of the course is to help participants to understand Large Data, its elements, and usage, from multiple perspectives—as analysts, decision maker, corporate leaders, investment banker, consumer analyst and entrepreneurs.

(b) Relevance of the program with HEI's Mission and Goals :

The enormous amount of data generated digitally can be used by business enterprises to generate new insights, enable better decision making and improve processes of organizations. Business analytics refers to the analysis of data using statistical, machine learning and quantitative techniques with the purpose of understanding past performance of the business and generating new insights for the future. According to a forecast made by IDC, the global spending on business analytics services is expected to rise from US\$ 51.6 billion in 2014 to US\$ 89.6 billion in 2018. Despite the growing significance of business analytics, the supply of trained analytics professionals is lagging far behind the demand for such professionals. The objective of the Programme is to provide a wide spectrum of knowledge, skills and technological advances while fostering literacy in the broadest sense, . which go in-line with the mission of the Institution - To provide skilled manpower to the professional, industrial and service sectors to meet global demands.

(c) Nature of prospective target group of learners:

Students with a minimum of Bachelor's Degree with Statistics, Mathematics, Management, Economics, Commerce, Engineering, Computer Science, IT, and related disciplines. Graduate Students studied mathematics and statistics as one of the subjects either in plus two level or graduate level can also apply. Students pursuing their Master's degree and Working professionals can also apply.

(d) Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence :

As the programme is targeting for working people and those engaged in regular studies the only way to deliver the programme is through week end contact classes and through distance learning mode like on-line lectures and sharing of video and audio files. Today's internet and networking availability is strong in our country which is reachable to most of the common man we can effectively utilize this facility as a medium for course delivery, evaluation and for other administrative requirements. On completion of this course the students can work as

- Data Mining Expert
- Business Intelligence Expert
- Data Scientists
- Business Analyst and Domain expert

(e) Instructional Design :

- i. Duration of the Programme: One Year –Two Semesters
- ii. Eligibility: Students with a minimum of Bachelor's Degree with Statistics, Mathematics, Management, Economics, Commerce, Engineering, Computer Science, IT, and related disciplines. Graduate Students studied mathematics and statistics as one of the subjects either in plus two level or graduate level

Number of Courses : 8

Scheme and Evaluation

Course Code	Course Type	Contact Classes (Hrs)	Course Name	Credits	IA Marks	ESE Marks	Total Marks
PGD DBA-101	Common Core course (Theory)	12	Data Base Management System	4	20	80	100
PGD DBA-102	Common Core course (Theory)	12	Exploratory Data Analysis	4	20	80	100
PGD DBA-103	Common Core course (Theory)	12	Data Visualization and Reporting	4	20	80	100
PGD DBA-104	Common Core course	12	Data Mining	4	20	80	100
PGD DBA-105	Common Core course	12	R Programming	4	20	80	100
PGD DBA-106	Common Core course	12	Business Forecasting	4	20	80	100

PGD DBA- 107	Common Core course	12	Big Data Technologies	4	20	80	100
PGD DBA- 108	Common Core course (Practical)	60	Practical & Project Work	Practical -2 Project Work -2	20	80	100
Total		144		32	160	640	800

(f) Procedure for admissions, Curriculum Transaction and Evaluation

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. Bachelor's Degree with Statistics, Mathematics, Management, Economics, Commerce, Engineering, Computer Science, IT, and related disciplines. Graduate who have studied mathematics and statistics as one of the subjects either in plus two level or graduate level can also apply. Fee structure will be decided by the University. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc. The course contents will be delivered through online and print formats. For practicals, 20% will be virtual and remaining will be by direct laboratory work. This course will have three types of graded activities that will be included in overall course grade. These include: **Assignments:** Answer monthly quizzes that account for 20% of the course total grade. Each quiz includes 20 multiple choice questions that examines your understanding of the learning materials. **Final project:** At the end of the course the candidate will be asked to complete a final project. It will consists of a written report that focuses on the utilization of computational /analytical techniques for various applications.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/Presentation of case study for each course. Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

'P' grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Diploma programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

GPA =

$$\frac{\text{Total credit points earned by the student from all the required courses of the programme}}{\text{Total credits of all courses required in the programme}}$$

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

$$\text{Equivalent Percentage} = (\text{GPA obtained}) \times 10$$

(g) Details of Laboratory support required for the programme

The computational facility available in School of Management and Business Studies shall be used. The computing facility available in the campus as well as the regional centers can also

be used for this purpose. Some external computing facilities may be hired based on the number of enrolment.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library is providing service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. The libraries of teaching departments are open during working hours of the Schools. Reading space is provided in all the three floors housing the various sections of the library. The library provides reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016.

The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338

DVDs: Educational Videos	293
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B	Name of School/Centre	Total No. of books
	School of Management and Business Studies	7549

(h) Cost estimate of the programme and the provisions:

Budget estimate (for 100 students)

S.No.	Item	Amount (Rs. in Lakhs)
1.	Manpower	5
2.	Study material/on line materials	3
3.	Laboratory/Virtual lab	5
4.	Internal assessment/on-line quizzes	0.5
5.	End semester examination	1.5
	Total	14.00

Total Programme fee: Rs.15000/-

(i) Quality assurance mechanism and expected programme outcomes

The quality of the programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the programme, the subject experts, Director, School of Distance Education and Head of the School of Management and Business Studies. The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

The P.G. Diploma programs will educate the aspirants who want to make an impact in the corporate and academic world in the domain of data analytics as data scientist and researcher, big data leads/ administrators/ managers, business analysts and data visualization specialist. The course is also suitable for those who are already working in analytics to enhance their theoretical and conceptual knowledge as well as those with analytical aptitude and would like to start career in big data analytics in different business sectors.

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Syllabus

POST GRADUATE DIPLOMA IN DATA AND BUSINESS ANALYTICS (PGDDBA)

PGDDBA-101 Data Base Management System

Principles, Tools and Platforms / (Database Management Systems): Database concepts, Basic components of DBMS, sources of data, logging, cleaning data, data representation, data models – (hierarchical, network, XML), and Stores, NoSQL database, design for performance / quality parameters, documents and information retrieval related tools – (Postgres, OLTP, OLAP, Hadoop, Mapreduce).

PGDDBA-102 Exploratory Data Analysis:

Mathematics for Data Analytics: Basic probability theory, distributions and their properties, Simple and multiple regression analysis, hypothesis testing and sampling, estimation theory, least square methods. Descriptive statistics – uni-variate and bi-variate, residual analysis, confidence and prediction intervals regression, associations, sequencing, introduction to forecasting, design of experiments and performing basic statistical analysis of data experiments (both field and laboratory) to investigate business issues, tools for conducting basic statistics (Excel, R, SPSS)

PGDDBA-103 Data Visualization and Reporting:

Purpose of visualization, Multidimensional visualization, tree visualization, graph visualization and time series data visualization techniques, visual perception, cognitive issues, evaluation as well as other theory and design principles behind information visualization, understanding analytics output and their usage, basic interaction techniques such as selection and distortion, evaluation, examples of information visualization applications and systems, user tasks and analysis

PGDDBA-104 Data Mining:

Clustering, Association rules, factor analysis, scale development, survival analysis, data reduction using PCA, scoring new data and model implementation, improving predictive models, association and market basket analysis, advanced regression models: concepts and applications, conjoint and discrete choice analysis, design and analysis of experiment.

PGDDBA-105 R Programming

History and overview of R , Install and configuration of R programming environment , Basic language elements and data structures , R+Knitr+Markdown+GitHub , Data input/output , Data storage formats , Subsetting objects , Vectorization , Control structures , Functions , Scoping Rules , Loop functions , Graphics and visualization , Grammar of data manipulation (dplyr and related tools) , Debugging/profiling , Statistical simulation.

PDDBA-106 Business Forecasting :

The Importance of Forecasting-Time Series Data-Component Factors of the Time-Series Model Trend Analysis-Seasonal and Cyclical Behaviour-Smoothing of Annual Time Series: Moving averages, Exponential smoothing -Least-Squares Trend Fitting and Forecasting: Linear, quadratic and exponential models , Autocorrelation and Auto regression-Autoregressive Models - ARIMA time-series Model Time-Series Forecasting of Monthly or Quarterly Data-Accuracy Statistics and Forecast Model Selection-Families of Forecasting Models –Hierarchical Forecasting-Adjustments to Statistical Forecasts, Event Variables-Outlier Variables and Other Model Inputs-Using Event Variables, Based on Calendar Effects-Combined Model Forecasts-Honest Assessment

PDDBA-107. Big Data Technologies:

Big data definition, enterprise / structured data, social / unstructured data, unstructured data needs for analytics, Big data programming (Hadoop / HDFS, Map-reduce, event stream processing, complex event processing), evolution, purpose and use, application data stores, (NSQL databases, in-memory databases), data computing appliance (DCA) and OLAP, massive parallel processing, in-memory computing / analytics, data science, enterprise / external search, HDFS – Overview and concepts, data flow (read and write), interface to HDFS (HTTP, CLI and Java API), high availability and Name Node federation, Map Reduce developing and deploying programs, optimization techniques, Map Reduce Anatomy, Data flow framework programming Map Reduce best practices and debugging.

PDDBA-108. Practical & Project Work

A business Analytics solution to the issues of typical company has to be identified and have to be implemented using Tools studied. A project report has to be submitted at the end of the programme.

Books Recommended:

1. Vignesh Prajapati, “*Big Data Analytics with R and Hadoop*”, 1st Edition, Shroff / Packt Publications
3. Chuck Lam, “*Hadoop in Action*”, Dreamtech Press Publisher.
4. Michele Chambers, Michael Minelli, Ambiga Dhiraj., “*Big Data BigAnalytics, Emerging Business Intelligence and Analytic Trends for Today's Businesses*” , 1st Edition, Wiley Publications
5. Gert H. N. Laursen, Jesper Thorlund, “*Business Analytics for Managers*” Taking Business Intelligence Beyond Reporting, Wiley Publications.
6. Damodar Gujarati & Dawn Porter, Sangeetha Gunasekar, “*Basic Econometrics*”, 5th Edition McGraw Hill Education (India) Private Limited
- 7 Levine, Stephan, Krehbiel and Berenson., “*Statistics for Managers using Microsoft excel*”, PHI Learning Private Limited, 2010.

Programme Project Report (PPR)
for
DISTANCE LEARNING PROGRAMME UNDER SCHOOL OF
DISTANCE EDUCATION

Post Graduate Diploma In Educational Administration
(PGDEA)

Course Co-ordinator: Prof. (Dr.) T.V. Thulasidharan

Academic support by

School of Pedagogical Sciences (SPS)

Mahatma Gandhi University

Kottayam, Kerala

POST GRADUATE DIPLOMA IN EDUCATIONAL ADMINISTRATION

(Distance Learning Programme - Diploma Programme)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Post Graduate Diploma programme has been designed by the School of Pedagogical Sciences and is to be conducted by the School of Distance Education with the academic support of the School.

The School of Pedagogical Sciences under Mahatma Gandhi University, Kottayam started functioning in 1992 with the vision of transforming teacher education into a vocation that is solidly grounded in research. It is expected to meet the challenges facing education by attaining / establishing and maintaining high quality education and excellence in today's educational institutions.

a) Programme's mission & objectives

The post graduate diploma in educational administration is designed with a vision to enhance skills and competencies and sensitivity of an educational administrator by undertaking exhaustive professional learning and development through a post graduate diploma course that impacts our leadership practices and managerial style for building our

institutions in every aspect.

The one year post graduate diploma is designed to prepare education professional for managerial roles within the primary, secondary and tertiary education sector. The course provides participants with an opportunity to develop their insights in to leadership in education and also to undertake effective administration in education sector. The course is designed particularly for teachers, head teachers, prospective teachers, leaders in primary, secondary and higher education sectors.

(b) Relevance of the program with HEI's Mission and Goals :

The course is mainly focussing on teachers , head teachers, prospective teachers , heads in primary, secondary and higher education sectors.

The overall objective of the programme is to promote professional competency and the capacity of the education functionaries in the areas of educational administration.

- Upgrade and enhance the knowledge of the participants on educational policies and programmes in India and abroad.
- Deepens the understanding on educational administration.
- To develop and upgrade the skill of human resource development in order to nurture diversity holistically and create a cader of committed and competent educational managers and leaders.

(c) Nature of prospective target group of learners:

The course is mainly targeting on teachers, Head teachers, Administrative Staff members with graduation and policy makers in educational sector

(d) Appropriateness of the programme to be conducted in open and distance learning mode to acquire specific skills and competence:

The course will enrich teachers, administrative officers and policy makers a strong understanding on educational administration that will ensure their capacity in quality decision making

(e) Instructional Design

The course is a two semester 32 credits programme offered through distance mode - Print, Audio, Video, Computer aided e-learning are different modes of communications. There are contact classes and the assessment involves both internal as well as external components. Each student has to submit five assignments. Each student has to conduct a case study, Project work and submit a dissertation based on their project work.

Course Summary of PG DIPLOMA IN EDUCATIONAL ADMINISTRATION

Course Co-ordinator: Dr. T.V. Thulasidharan, Professor, School of Pedagogical Sciences, Mahatma Gandhi University

Course Duration: 12 months

Semester I

Course Code	Course Type	Course Name	Contact Classes (Hrs)	Credits	Internal Marks	External Marks	Total Marks
PGDEA-1	Common Core course	Educational Administration: A Systemic View	12	4	20	80	100
PGDEA-2	Common Core course	Leadership in Educational Administration	12	4	20	80	100
PGDEA-3	Common Core course	Research and Innovations in educational administration	12	4	20	80	100
PGDEA-4	Case Study	Case Study (Documentary best practices in Educational Management and leadership)	6	2	50		

		Panel Discussion, Weekly seminar, Role Plays and simulation exercises, Personality development workshop	6	2	50		100
			48	16			400

Semester II

PGDEA-5	Common Core course	Organizational Behaviour and management in Education	12	4	20	80	100
PGDEA-6	Common Core course	Quality Assurance and Governance in Education	12	4	20	80	100
PGDEA-7	Common Core course	Resource Management in Education	12	4	20	80	100
PGDEA-8	Project Work	Project Work On the current practices/ Trends in fields of Educational Leadership and Administration	12	4	100	100	100
Total			48	16			400

Semester wise credits and marks

<i>Semester</i>	<i>Credits</i>	<i>Marks</i>
<i>Semester I</i>	<i>16</i>	<i>400</i>
<i>Semester II</i>	<i>16</i>	<i>400</i>
<i>Total</i>	<i>32</i>	<i>800</i>

(f) Procedure for Admissions, curriculum transaction and evaluation:

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. Graduation in any subject is the minimum eligibility for the admission. Fee structure will be decided by the University. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book review/Debate/Seminar/Presentation of case study for each course. Assignments/book review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9

75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

'P' grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Certificate programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

$$\text{GPA} = \frac{\text{Total credit points earned by the student from all the required courses of the programme}}{\text{Total credits of all courses required in the programme}}$$

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only

5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

$$\text{Equivalent Percentage} = (\text{GPA obtained}) \times 10$$

(g) Details of Laboratory support required for the programme

The computational facility available in School of Management and Business Studies shall be used. The computing facility available in the campus as well as the regional centers can also be used for this purpose. Some external computing facilities may be hired based on the number of enrolment.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

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A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
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Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	School of Pedagogical Sciences	6109

(h) Cost estimate of the programme and the provisions:

Budget estimate (for 100 students)

S.No.	Item	Amount (Rs. in Lakhs)
1.	Manpower	2

2.	Study material	1.5
3.	Laboratory	3
4.	Internal assessment	0.5
5.	End semester examination	1
	Total	8.00

Total Programme fee: Rs.8000/-

(g) Cost estimate of the programme and the provisions:

Budget estimate (for 100 students)

Sl. No.	Item	Amount (Rs. in Lakhs)
1.	Manpower	2
2.	Study material	2
3.	Laboratory	1
4.	Internal assessment	1
5.	External examination	2
	Total	8

i) Quality assurance mechanism and expected programme outcomes:

The quality of the programme will be ensured through strict monitoring by an executive committee including the Coordinator of the programme, the subject experts, Head of the School of Distance Education, and Director of the School of Pedagogical Sciences (SPS). The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

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DETAILED SYLLABI

P.G. DIPLOMA IN EDUCATIONAL ADMINISTRATION

SEMESTER I

COMMON CORE COURSE

PGDEA- 1 : EDUCATIONAL ADMINISTRATION: A SYSTEMATIC VIEW

COURSE OUTLINE

Contact Hours :120

Maximum Marks : 100

External-80,Internal-20 Duration of

Examination : 3 Hrs

Number of Credits : 4

Course Objectives

On completion of this course, the student will be able

1. to understand the concept of Educational Administration
2. to assimilate with the principles and challenges in the field of education administration and supervision.
3. to improve the individual performance as educational administrators and leaders.
4. to help them understand the system of educational administration in India and Central and State machinery of educational administration and management.

Mode of Transaction

Lecture cum-discussion, group presentation, seminars, debates, reading print materials, multimedia and assignments.

Unit 1 : Educational Administration and Management

- Educational Administration – Conceptual Background
- Meaning, nature, scope and functions
- Historical Perspectives
- Concept of Educational Management

- Difference between management and administration
- Basic functions of administration , planning, organizing, directing and controlling
- Theories of Educational Management- Classical, Non-classical and Modern and their implications for education
- Administrative structure of Education at different levels

Unit II. Specific Trends in Educational Administration

- Decision making
- Organisational Compliance
- Organisational Development
- PERT, Total Quality Management
- Transparency in Educational Administration
- Theory and research relating to Educational Administration

Unit III : Educational Planning

- Approaches to Educational Planning
- Institutional planning : Concepts and scope : Concepts and practices relating to planning,
- Micro planning, School Mapping and development plans.
- Decentralized planning and concept and scope.
- Management of Physical Resources
- Human Resources Management
- Financial management and Budgeting.
- Office Management overview of office functions , record management and material management, work simplification.

Unit IV :Application of ICT in Educational Administration

- Maintenance of Resources in an institution
- ICT-A tool for Resource Management
- Effective use of Technology
- Software for Record Keeping

Reference

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MAHATMA GANDHI UNIVERSITY

PG Diploma in Educational Administration

SEMESTER - 1

Common Core Course

PGDEA 2 –LEADERSHIP IN EDUCATIONAL ADMINISTRATION

COURSE OUTLINE

Contact Hours : 120 hours

Maximum Marks : 100

External-80,Internal-20 Duration of

Examination : 3 hours

Number of Credits : 4

COURSE OBJECTIVES

On completion of this course the student will be able

- ✚ To develop understanding the core and contemporary leadership theories relevant to educational practice and setting.
- ✚ To sensitize the student about new changes and challenges in leadership of institutions.
- ✚ To develop capacities for being efficient and effective educational leaders.

Mode of Transaction

Lecture cum discussion, reading printed materials and Assignments

Unit 1 : Leadership : Concept and Dynamics

- Concepts and functions of leadership
- Nature of leadership. Leadership and Management. Importance of Leadership.
- Formal and Informal Leadership.
- Leadership styles and their implications.
- Theories of Leadership- Trait Theory, Contingency Theory, Leadership Behaviour Theory, Path goal theory of Leadership.

Unit II : Leadership Roles : Challenges and Perspectives

- Leadership for learning community
- Developing leadership and management skills and insights
- Values, vision and moral purpose in educational leadership.
- Issues of diversity in educational organisations including issues related to gender and multiculturalism

Unit III. Leadership and Organisational Behaviour

- Basic attributes of organizations : Organizational Design and Learning, Organizational culture
- Diversity and Individual differences : Perception and attribution , Motivation
- The nature of Groups: Team work and work groups Design
- Conflict Negotiation and stress management

Unit IV: Leadership for Sustainable Development

- Peace education for promoting tolerance
- Disaster Management
- Human Rights Education
- Environmental Education : Challenges and prospects for institution

Reference

- Beady, C.E.(1967).Theories of Educational Management. London : Harper & Row Publication.
- Mineas, J.A.(2006).Organisational Behaviour : Essential Theories of Motivation and Leadership. New Delhi : Prentice Hall.
- Mukpadhyaya,M.(2005).Total Quality Management to Education.New Delhi : Sage Publications.
- Northouse,P.C.(2010).Leadership and Practice. New Delhi : Sage Publications.

MAHATMA GANDHI UNIVERSITY

PG Diploma in Educational Administration

SEMESTER - 1

COMMON CORE COURSE

PGDEA-3 RESEARCH AND INNOVATIONS IN EDUCATIONAL ADMINISTRATION

Contact Hours : 120 hours

Maximum Marks : 100

Examination : 3 hours

External-80,Internal-20 Duration of

Number of Credits : 4

Course Objectives

On completion of this course, the student will be able to

- to understand the concepts of education
- to develop skill in selecting a relevant research problem.
- to understand the innovations in Education
- to apply statistical analysis for inference and prediction to solve typical problems in educational administration and leadership.

Mode of Transaction

Lecture cum discussion, reading, print material and assignment

Unit I. Educational Research

- Historical development of educational Research
- Research as a scientific process
- Classification of Research
- Quantitative and quantitative Research

Unit II. Review of Related literature

- Purpose and Need of review of related literature
- Research problem and variables

- Formulation of research variables
- Types of variables
- Hypotheses and sources of hypothesis
- Types of hypothesis

Unit III. Research Design

- Sampling and methods of sampling
- Sampling techniques
- Tools and techniques of research
- Analysis and interpretation of Data
- Research proposal and Research report

Unit IV. Innovations and Best Practices

- Innovations at primary, secondary and tertiary level in Administration and Leadership.
- Best Practices and Case studies
- Models and Governance and Educational Administration
- Models of Educational Management and Leadership.

REFERENCE

- Best, J.W. & Kahn, J.V. (2006). Research in Education (10th ed.). New Delhi : PHI Learning Private Limited.
- Cohen, L. & Manion, L. (1994). Research Methodology in Education (4th ed.). London : Routledge.
- Garrett, H.E. (1966). Statistics in Psychology and Education (6th ed.). Bombay : Vakils, Feffer and Simons Ltd.
- McBurney, H.D. (2001). Research Methods. Australia : Wordsworth.
- Good, C.V. (2006). How to do Research in Education. New Delhi: Cosmo Publication.

Mahatma Gandhi University

P.G. Diploma in Educational Administration

SEMESTER - II

Common Core Course

**PGDEA-5 -ORGANIZATIONAL BEHAVIOUR AND MANAGEMENT IN
EDUCATION**

COURSE OUTLINE

Contact Hours :120

Maximum Marks : 100

External-80,Internal-20 Duration of

Examination : 3 Hrs

Number of Credits : 4

Course Objectives

On completion of this course, the student will be able

- to understand the behaviour of organisational members in a variety of cases and contexts
- to develop a personal perspective on the behaviour of organisational settings.
- to analyse the effects of individual characteristics , group interactions, and organisational structure of the individuals within organisation.

Mode of Transaction

Lecture cum discussion, reading print materials, multimedia and assignments.

Unit 1 : Organisational Behaviour

Concept , Nature and scope

Definition and Meaning of Organisational Behaviour

Shortcomings. Contemporary Organisational Behaviour

Organisational Model.

Historical Evaluation of Organisational Behaviour

The human Relations Movements ; Harthorne studies

Foundations of Individual Behaviour

Unit II : Communication and Decision –Making

Types of communication, Factors influencing organisational communication, communication flows, communication network, Informal communication, Communication media, Information technologies.

Decision making. Types of Decision making conditions.

Models of Decision making

Decision making process

Decision making styles.

Motivation, Nature and importance of motivation

Theories of motivation.

Unit III : Management and managers

Nature of management, functions of management

Management skills

Management Roles, Types of managers.

Changing Hierarchies of Managers.

Evolution of Management Theory.

Organisation structure, Importance of organisation.

Key factors of Organisational Design

Unit IV : Organisational Change and Development

Nature and levels of change, Organisational Culture

Integration of TQM and Re-engineering

Factors of change in organisation

Organisational Development

International Organisational Behaviour.

Trends in International Behaviour : Cultural Differences and Similarities-
Behaviour across countries.

Reference

John A.Wagner and John R.Hollenbeck,Organisational Behaviour,Horcourt
College Publisher,2002.

Don Hellriegel et al.,Organisational Behaviour,Southwestern,2001.

Nancy J.Adler,International Dimensions of Organisational Behaviour.
Southwestern,2002.

HR.Bobbitt,et al., Organisational Behaviour, Prentice Hall,1978.

The done T.Herbert, Dimensions of Organisational Behaviour,McMillan,1976.

Mahatma Gandhi University

P.G.Diploma in Educational Administration

SEMESTER - II

COMMON CORE COURSE

PGDEA-6 –QUALITY ASSURANCE AND GOVERNANCE IN EDUCATION

Contact Hours :120

Maximum Marks : 100

External-80,Internal-20 Duration of

Examination : 3 Hrs

Number of Credits : 4

Course Objectives

On completion of this course, the student will be able

- To understand the meaning and concepts related to quality and quality assessment in Education
- To to understand the importance of total quality management and competency required for it.
- To understand the role of Indian, international agencies in higher education institutions in quality maintenance sustenance
- To understand the innovative dimensions of governance in Education

Mode of Transaction

Lecture cum discussion, group presentation, seminars ,debates panel discussions, assignments, case study, survey and dialogue

Unit I Quality in Education

Concept of quality in Education

Dimensions and characteristics of Quality

Nature and scope of quality in Education

Concept of quality learning environment

Quality teaching, quality learning, quality curriculum

Assessment and accreditation

Unit II Concept of Total quality management (TQM)

Strategic planning : leadership, identifying the mission, creating the vision, generating the quality culture

Essential competence, creative thinking and interpersonal skills

Educational quality management system

International organisation for standardisation (ISO)

Reward and recognition

UNIT III Quality Maintenance and sustenance

Bench mark in Higher education (IIMS, IITS)

Agencies of education : Quality crises in Teacher education

National Assessment Accreditation Council (NAAC)

Quality Control of India (QCI)

National Accreditation Board of education and Training (NABET)

Institutional Net work for quality assurance agencies in higher education (INQAHEE)

UNIT IV Educational Governance

Acts and regulations (Special reference to RTI and RTE)

Advisory and regulatory boards in Education (State and National Level)

Role and responsibilities of Heads of the Institutions

Contemporary issues in Educational governance

Understanding the social and economic context of Indian Education.

Responding to diversity through Inclusive education

Reference

1. Arcaro, J. (1997) ... in education An implementation Hand book, Vanity Books International New Delhi
2. Booter field D.etal. (2010) Total Quality Management, Pearson education Asia, Third Edition, New Delhi: Prentice Hall is an imprint of
3. Burl Scanlan, B.K (1987) Management and organizational behaviour, second Edition. Florida: Roberte Krieger Publishing company
4. Bush T, L.B. (2003). The principles and Practice of educational management (edited ed.) New Delhi: Sage Publications
5. Lewis, R and Smith D. (1998) Total quality in Higher education, Vanity Books International New Delhi.

Mahatma Gandhi University
P.G Diploma in Educational Administration
Semester II
Common Core Course

PGDEA 7: RESOURCE MANAGEMENT IN EDUCATION

Contact Hours 120 hrs

Maximum Marks 100

Duration of exam : 3 hours

(external 80 Internal 20)

Number of credits – 4

Course Objectives

On completion of this course, the student will be able

- to understand the aims and objectives of Resource Management
- to understand the fundamentals of Human Resources Management
- to develop soft skills
- to familiar with an inter national working environment and operating effectively in a multicultural settings

Mode of transaction

Lecture cum discussion, reading, print material multimedia, Assignments

Unit I Resource Management in Education

- Meaning, Nature and scope of Resource Management
- The goals of Human Resources Management
- Human Resources structures
- Staff Administration
- Job Satisfaction
- Recruitment
- Promotion
- Pre Service training
- In-service training and orientation
- Retirement
- Role of DIETS, SCERT

Unit II Human Resource in the education sector

- The goals of Human Resources ministries

- Human Resources structure
- Staff administration
- Job classification
- Categories of Staff
- Disciplinary Measures
- Termination
- Staff rotation and Professional mobility

Unit III Administration of School/ College/ higher education

- Salary and emoluments
- Teacher education
- Taxonomy of Teacher Behaviour
- Performance Reports
- Working place relations
- Working conditions

Unit IV :Role of teacher in school management and administration

- Staff development Programmes
- Professional growth of teachers
- Teaching as a vocation
- Teaching as a profession
- Teaching as a job
- Kinds of on- job- or in-service staff development programme
- Refresher course, summer institutes

Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

**Post Graduate Diploma in Food Analysis and Quality Control
(PGDFAQC)**

Course Co-ordinator: Dr. Jisha.M.S

Academic support by
National Institute of Plant Science Technology (NIPST)
Mahatma Gandhi University
Kottayam, Kerala

**POST GRADUATE DIPLOMA IN FOOD ANALYSIS AND QUALITY CONTROL
(PGDFAQC)
(Distance Learning Programme –Post Graduate Diploma Programme)
Programme Project Report**

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Post Graduate Diploma Programme has been designed by the National Institute of Plant Science Technology and to be conducted by the School of Distance Education with the academic support of the School.

National Institute of Plant Science Technology (NIPST), an Inter-School centre of Mahatma Gandhi University. The course established on 20th August 2014. The Institute enrolling students through competitive examinations at the National level in the campus of Mahatma Gandhi University for advanced education in plant science, promoting research in Interdisciplinary areas of ‘Plants and their Environment Relations’ towards developing ‘Plant-based Eco-technologies’.

The Institute will inspire students to apply their creative talents to research potentials of the rich botanical wealth of Kerala in the development of globally significant technologies useful in sustainable agricultural, phyto-medicinal, bio-fuel, bio-based industrial and eco-remediation purposes. Instead of keeping science and technology as watertight compartments in conventional programmes, this institute will enable science students to end up their post graduation to a productive research on plant-based eco-technology and entrepreneurship based on the technology that they develop. Overall, the Institute aims at boosting entrepreneurship in the country through productive research in plant science.

A. Need and scope of the course

In the world, India is the second largest producer of food after China. The country has achieved the potential of being the biggest, with the food and agricultural sector. Indian food industry is considered to supply about two third of total Indian retail market needs. In addition to that, modern skills and equipments have been introduced in food industries such as canning, dairy, cereal processing, specialty processing, packaging, frozen food, refrigeration and thermal processing. India's food processing industry has been growing at the rate of 13% despite the global slowdown. And now the government is aiming to double the turnover in the next five year by setting up mega food parks to attract even global capital.

At present the export from agro-sector represents about 16% of total Indian exports. The primary export commodities are cereals, fruits, vegetables and their processed products, and marine products but fast growing specialty products have also penetrated into the foreign markets. Considering the contribution of these products in Indian export, it is necessary to have appropriate technology for handling and processing of agricultural produce.

Food technologist develops the manufacturing process and recipes. They work on existing and newly discovered ingredients and technologies to invent new products, recipes and concept. They are involved in conducting experiments and producing sample products as well as designing the processes and machinery for making products with a consistent flavor, color and texture.

- Modifying existing products, processes and new product development (NPD).
- Checking and improving quality control procedures from raw material stage to the finished product incorporating traceability.
- Addressing issues of safety and quality.
- Selecting raw material and other ingredients.
- Maintaining proper hygienic condition of entire food industry.
- Develop steps undertaken to meet the requirements with respect to hygiene, sanitation, good manufacturing practices, HACCP and nutritional quality.

B. Purpose of course

The purpose of this course is to enable the graduate to acquire the scientific, technical and professional skills for teaching/research/executive career in the food industry/food research and teaching institutions through an of science underlying food technology together with a deeper comprehension of food quality assurance.

The expected outcomes are that students acquire and demonstrate:

- Knowledge and competence in the principles of quality assurance and quality management system as they are applied in the food manufacture and distribution to produce safe food meeting quality and legal requirements.
- Thorough knowledge of chemical, biological and physical principles which underlie food processing, package and storage.

- Ability to apply the principles of chemical analysis, microbiological and statistical control techniques to analyze and assure the quality and safety of food.

C. Nature of prospective target group of learners:

Candidates who have passed B.Sc./M.Sc. in Food Science and Nutrition/Food Science and Technology/ Biotechnology/Biochemistry/ Microbiology or B.Tech./M.Tech. in Food Technology/ Biotechnology/ Lifesciences with minimum of 50% marks

D. Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence:

The course provides an outline of State-Of-Art theoretical information and practical experience, directly and indirectly related to a better understanding of food safety problems, their origin and solutions. The program is framed for transmission of both knowledge and know-how of local importance and global significance to the students.

E. Instructional design:

The programme is of 1 year duration comprising eight courses with a total of 32 credits. There are adequate contact classes and the assessment involves both internal as well as external components. Each student has to submit a report based case studies or project.

Duration-1 Year							
Course Code	Course Type	Course Name	Contact Sessions (hours)	Credits	*Internal Marks	External Marks	Total Marks
PGDFAQ C 101	Core course	Food fundamentals and chemistry	12	4	20	80	100
PGDFAQ C 102	Core course	Food microbiology	12	4	20	80	100
PGDFAQ C 103	Core course	Food analysis	12	4	20	80	100
PGDFAQ C 104	Core course	Quality management and product development	12	4	20	80	100
PGDFAQ C 105	Core course	Food safety and allied laws	12	4	20	80	100
PGDFAQ C 106	Core course	Food safety & quality assurance	12	4	20	80	100
PGDFAQ C 107	Core course	Food safety and quality auditing	12	4	20	80	100
PGDFAQ C 108	Practical and Project report	Practical and Project work	60	4 (2+2)	20	80	100
Total			144	32	160	640	800

*Through assignments

F. Procedure for admission, curriculum transaction and evaluation:

Eligibility: Candidates who have passed B.Sc./M.Sc. in Food Science and Nutrition/Food Science and Technology/ Biotechnology/Biochemistry/ Microbiology or B.Tech./M.Tech. in Food Technology/ Biotechnology/ Lifesciences with minimum of 50% marks are eligible for admission.

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. Candidates are eligible for admission irrespective of age. The fee structure will be decided by the University. The study materials will be delivered through online and print formats. The School will prepare an academic calendar/activity planner that will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/Presentation of case study for each course. Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

'P' grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Certificate programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

GPA =

Total credit points earned by the student from all the required courses of the programme
Total credits of all courses required in the programme

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

Equivalent Percentage = (GPA obtained) X 10

G. Requirement of the laboratory support and library resources:

The library and infrastructure support of the Centre and the University will be extended to the learners as per the requirement.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library is providing service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. The libraries of teaching departments are open during working hours of the Schools. Reading space is provided in all the three floors housing the various sections of the library. The library provides reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016.

The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-ShodhSindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	National Institute of Plant Science Technology	420

H. Cost estimate of the programme and the provisions:

Budget estimate (for 100 students)

S.No.	Item	Amount (Rs. in Lakhs)
1.	Manpower	6
2.	Study material	3
3.	Laboratory	4.5
4.	Internal assessment/Project	1
5.	Examination &Evaluation	1.5
6.	Books and Periodicals	1.5
	Total	17.5

Total Programme fee: Rs. 18000/-

I. Quality assurance mechanism and expected programme outcomes:

The quality of the programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the programme, the subject experts, Director, School of Distance Education and Head of the National Institute of Plant Science Technology. The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

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Syllabus

Post Graduate Diploma in Food Analysis and Quality Control (PGDFAQC)

PGDFAQC 101.FOOD FUNDAMENTALS AND CHEMISTRY

(4+0: Theory Course)

Unit1. Introduction to Food Science and Food Chemistry

Chemical composition of food: Carbohydrates, lipids, proteins, fiber, vitamins, and minerals – characteristics, sources, physiological and biochemical functions, daily requirement, digestion and absorption. Biological value of proteins (BV), Protein efficiency ratio (PER), Digestibility coefficient, Net protein Utilization, Net Protein Ratio(NPR), Chemical Score, Free Radicals and Antioxidants. Energy value of foods, Respiratory Quotient (RQ), Determination of Basal Metabolic Rate (BMR), Determination of energy metabolism during work, Energy expenditure for various types of activities, Recommended Daily Allowance (RDA), Specific Dynamic Action (SDA) of foods, Balanced diet formulation.

Unit2.Food additive

Food additives, antioxidants, sequestrants, preservatives, nutrient supplement, emulsifiers, stabilizers and thickening agents, bleaching and maturing agent, sweeteners, humectants and anti caking agents coloring and flavoring substance. Analytical techniques used in detection of adulteration of food: Principle, procedure and detectors of chromatographic techniques (Column, paper, TLC, HPLC and GC), Spectroscopic techniques (IR, UV, MS and AAS).

Unit 3. Food adulteration

Types of adulterants- intentional and incidental adulterants, methods for detection of common adulteration, contamination and pesticide. Oils and Fats - Iodine value and saponification value

Unit 4. Food Processing and Preservation

Introduction to Food Preservation and Processing, Food Packaging, Waste Management in Food Processing Industry

References.

- Goldberg, I. Functional foods, Designer foods, pharma foods and nutraceuticals. An aspen publication, gaithers burg, maryland, 1999.
- Roday, S., food science and nutrition. Third edition, Oxford University Press, New Delhi, 2008.
- Khader, V. Text book of Food science and Technology. Published by India Council of Agricultural Research, NewDelhi 110012, 2001

PGDFAQC 102. FOOD MICROBIOLOGY

(4+0: Theory Course)

Unit1. Fundamentals of Food Microbiology

Introduction to Food Microbiology, Sources of microorganisms in food, perishable, semi perishable and non- perishable foods, intrinsic and extrinsic parameters influencing microbial content of food

Unit 2. Spoilage of food and food Borne Diseases

Food borne pathogens and their control. Spoilage organisms in food and food products. Types of organisms in meat and meat products, seafoods, fruits and vegetables, milk and dairy products. Microbial infection and intoxication. Food intoxication- Staphylococcal intoxication, botulism. Food infection- *Salmonellosis*, *Clostridium perfringens*, *Bacillus cereus* gastroenteritis, *E. coli* infection and others

Unit 3. Analytical Techniques in Microbiology

General Techniques of Detection and Enumeration of Micro-organisms in Food, Screening and Enumeration of Spoilage Micro-organisms in Food, Detection of Pathogens in Food, Rapid Detection Technique for Food Micro-organisms .Sampling methods for microbial analysis of foods, testing methods, total plate count (TPC), coliform count, MPN techniques, Enumeration and detection of salmonella and shigella

Unit 4. Microbiological Safety of Foods

Collection of food samples – sampling, collection, transport and storage. Enumeration of microorganisms. Direct count, Total aerobic count, Selective media. Identification of pathogenic microorganisms – Selective media, PCR based identification, ELISA. Isolation and identification of virulent *E. coli* from foods. Detection of microbial metabolites- HPTLC, HPLC, ELISA; Bacterial toxins: Ceralides, *E coli* Toxins, Mycotoxins, Aflatoxins, Trichotheenes

References

- Frazier, W.C. Food Microbiology. 4th edition. McGraw Hill. New York, 2008
- Khetarpaul, N. Food microbiology, Daya publishing house, New Delhi, 2009
- Pelzar, H.J. and Rober, D. Microbiology 5th edition McGraw Hill. New York, 2009
- Prescott, L.M., Harley, J.P. and Klein, D.A. Microbiology. 4th edition McGraw-Hill, New York. 1999

PGDFAQC 103. FOOD ANALYSIS

(4+0: Theory Course)

Unit 1. Sensory Evaluation

Subjective evaluation, Sensory evaluation: Definition, and applications, Sensory attributes of food: Appearance, Texture and Flavor; Factors affecting sensory measurements: Psychological- Expectation error, Mutual suggestion effect, Distraction error, Stimulus error, Logical error, Attribute dumping, Halo effect and proximity error, Error of habituation, Order/Position effect, Contrast & convergence effect, Central tendency error, Motivation error; Physiological: Adaptation, Mixture interactions- Enhancement, Synergy & Suppression, Health; Environmental-Gender, Genetics, Age & Culture.

Objective evaluation, Rheology- capillary viscometer, falling ball viscometer, rotational viscometer, Texture: viscometer, consistometer, penetrometer, succulometer, tenderometer, fibrometer, shortometer, texturometer.

Colour measurement- Spectroscopic Techniques, emission and absorption spectroscopy, visual colorimeters, spectrophotometers-, photoelectric colorimeters, CIE: tristimulus colorimetry, applications. Absorption spectrometry: Beer's law, identification of compounds

Unit2. Composition of foods

Chemical Composition and Characteristics of foods: Titratable acidity, Moisture and total solids- Importance of moisture assay, Oven drying, Indirect, Physical, Chemical, azeotropic distillation, water activity. Ash analysis: Purpose, Total ash, soluble and insoluble ash, ashing procedures, minerals atomic absorption

Carbohydrate analysis: Importance, Sample preparation, Method of analysis- Calculation by difference, Chemical, Enzymatic, Physical and Modern analytical methods, Starch, Fiber

Unit 3. Chemical analysis

Crude fat analysis- solvent and nonsolvent wet extraction and instrumental methods, Fat characterization

Protein analysis- Total organic nitrogen, proteins, peptides, amino acids, other non-protein nitrogen, Protein separation and characterization- separation by differential solubility, size, adsorption and electrophoresis, Protein quality tests

Vitamin analysis- Bio and chemical assay

Mineral analysis, Analysis of Pigments, Chemical preservatives, Pesticide Residues and Filth

Heavy metals such as Hg, Cd, Pb, Cr⁶⁺, As& Se: importance and analysis, Total Volatile Base Nitrogen (TVBN): importance and analysis

Unit 4. Analytical Instrumentation

Analytical Instrumentation: Chromatographic techniques, and Electrophoretic techniques

Densitometry: specific gravity of liquids and of solids, pycnometer, buoyancy, specific gravity balance, hydrometer

Refractometry: Refractive index, Lorenz equation, refractometers- Abbe, Pulfrichrefractometers

Centrifugation- relative centrifugal force, types of centrifuges, rotor heads

Unit5. Microbiological evaluation

Microbiological evaluation: Total viable count by TPC and pour plate, quality indices-indicator microorganisms- *E. coli*, faecal streptococci, *Staphylococcus aureus*, sulfite reducing bacteria-*Clostridium perfringens*, MPN. New concepts in indicators-bacteriophages

References

- Kalia, M. Food Analysis and Quality Control. Kalyani Publishers, New Delhi. 2002.
- Winton, A.L and Winton, K.B. Techniques of food analysis. Allied Scientific Publishers, New Delhi. 1999.
- Nielsen, S.S. Introduction to the chemical analysis of foods. Jones and Bartlett Publishers, Boston, London. 2003.
- Connell, J.J. Control of fish quality. Blackwell Scientific Publications, Cambridge.2000.

PGDFAQC 104QUALITY MANAGEMENT AND PRODUCT DEVELOPMENT

(4+0: Theory Course)

Unit 1. Quality Standards

Legal Standards, Voluntary Label Standards, Industry Standards, Grade standards. Methods for determining quality: objective and subjective methods.Definition and

organization of the quality control function in the food industry. Preparation of specifications. In-plant Quality Control and end product inspection. Instrumental and sensory methods for evaluation. Statistical process control (SPC). Regulations and standards for raw and finished products.

Unit-I2. Total quality management in food industry

Food quality assurance programme: Quality Control, Quality Evaluation and Quality audits. ISO 9000, 22000 and HACCP systems. Food safety and HACCP principles. Biological, chemical and physical and chemical hazards in food processing. Ingredient specification. Product formulation, product tracability, Documentations. Good Manufacturing Practices (GMP). In process monitoring and records. SOP & SSOP, Packaging quality. Product recall.

Unit 3. Food laws and Standards

FDA regulations, USDA regulations, EPA regulations, Codex Alimentarius, Food Safety and Standards regulations, The Prevention of Food Adulteration Act, Export & Import Laws and Regulations, Export (Quality Control and Inspection) Act, 1963., etc. Packaging and labeling Laws, regulations.

Unit 4. Factory layout and design.

Regulations for processing units, Flow sheet of operations, Drainage and sweet water connections. Ware housing of products and raw materials. Utilities for manufacturing units. Water treatment, boilers, types of boilers, quality of steam.

Product development, identification and testing of new product concepts, basic process design, and pilot plant studies, scaling up and trial plant production. Application and integration of food technology, engineering, and safety and packaging technology to develop a new product from concept to pilot plant scale up.

References

- Godbole, N.N; Milk – The Most Perfect Food ; Biotechnology books, 2007
- Manay, N.S, Shadaksharaswamy, M., Foods- Facts and Principles, New Age International Publishers, New Delhi, 2004.
- Potter, N. N, Hotchkiss, J. H. Food Science. CBS Publishers, New Delhi. 2000.
- Hui, Y H and Associate Editors; Hand Book of Food Products Manufacturing Vol I, Wiley- Interscience, New Jersey 2007.
- Hui, Y H and Associate Editors; Hand Book of Food Products Manufacturing Vol II, wiley- Interscience, New Jersey 2007.
- Srilakshmi, B. Food Science (3rd edition), New Age International (P) Limited Publishers, New Delhi, 2003.

PGDFAQC105 FOOD SAFETY AND ALLIED LAWS

(4+0: Theory Course)

Unit 1. General principles for food safety and hygiene

Principles of food safety and quality - Food Safety System - Quality attributes - Total Quality Management. Good Hygienic Practices, Good Manufacturing Practices - Risk Analysis, Risk Management, Risk Assessment, Risk Communication - Traceability and authentication.

Unit 2. General principles for food safety regulation at national/regional level

The Structure of Food Law, Food Regulation What Should be Regulated?, Laws and Regulations to Prevent Adulteration and Cross Contamination, Microbial Contamination, Hygienic Practice, Chemical and Environmental Contamination, Food Additives, Labeling, Food Laws and Regulations at the International Level for Harmonization.

Unit3. National standards

Food Safety and Standard Authority of India regulations - Agricultural and Processed food Export Development Authority - Marine Product Export Development Authority - Export Inspection council and Export Inspection Agency. International food standards., Trends in Food Standardization, An Overview and structure of 9001:2000/2008, Clause wise Interpretation of ISO 9001:2000, Case Studies, An overview and Structure of 22000:2005, Clause wise Interpretation of ISO 22000:2005, Case Studies.

Unit4. International bodies dealing in standarization

International Standardization Organization (ISO), Joint FAO/WHO Food Standards Program. Codex Alimentarius Commission (CAC), Other International Organizations Active in Food Standard Harmonization. Advantages of Utilizing International Standards. Rapid Alert system.

Unit 5. Country specific standards

European Committee for Standardization (CEN), PAN American Standards Commission (COPANT), Euro-Asian Council for Standardization, FDA, EPA, EU, ASEAN, EFSA (European Food Safety Authority)

References

- The training manual for Food Safety Regulators. Vol.II- Food Safety regulations and food safety management. (2011) Food safety and Standards Authority of India. New Delhi
- Mortimore, S., and Wallace, C., (2005) HACCP: A practical approach, 2nd Ed, Aspen Publication
- Surak, J.G., and Wilson, S. (2007) American Society for Quality, 2nd Ed., Quality Press

PGDFAQC 106. FOOD SAFETY & QUALITY ASSURANCE

(4+0: Theory Course)

Unit 1 Food Safety and Quality Management Systems

Introduction to Food Safety, Food Safety System, Total Quality Management, Project Management, Risk Analysis, An Introduction to Risk Analysis, Risk Management, Risk Assessment, Risk Communication, Philosophy of Good Manufacturing Practices (GMP), current good manufacturing practices (cGMP), Good Laboratory Practices (GLP), ISO 22000 FSMS

Unit 2 Physical and Chemical Hazards

Definition of food safety and concept of safe food; characterization of food hazards- Physical hazards (Glass, Wood, Stones, Metal Fragments, Insulation Materials, Plastic and Bones)

Chemical hazards:

1. Naturally occurring chemical hazards – Natural occurring toxicants in foods and antinutritional factors in foods.
2. Unintentional Chemicals: Pesticides, Fertilizers, Pollutants, Toxic metals (Lead, Cadmium, Mercury, Aluminium and Arsenic)
3. Intentional Chemicals (Food preservatives Food additives)

Unit 3 HACCP

History, Background and Structure of HACCP, HACCP Prerequisites and Good Hygienic Practices, Principles and Implementation of HACCP, Case Studies on HACCP Food standards - Voluntary and mandatory food laws and Food Safety and Standards Act of India, 2006

Unit 4. Quality Control & Standard Tests for Quality Assessment.

Definition, Statistical Quality Control: Definition, How to determine the need for SQC and the Control chart – definition, uses, process control. Standard tests for quality assessment, Microanalytical tests, Microbiological tests, Histological tests, Standard test methods

Unit 5. Laboratory Quality Management System

An Overview and Requirements of ISO 17025, Requirements Specific to Food Testing Laboratories - Physical and Chemical Parameters, Requirements Specific to Food Testing Laboratories - Biological Parameters

Unit6. Retailer Standards

BRC Food and BRC/IoP Standards - An Overview, International Food Standard (IFS), SQF 1000 and SQF 2000, Global GAP and India GAP.

Understanding ISO 17025 requirements for FSMS and QMS .Audits relating to clause 7.6 in ISO 9001 and clause 8.3 in ISO 22000(Establishing Traceability to national/international standards)

References

- Bhatia,R. and Ichhpujan,R.L. Quality assurance in Microbiology. CBS Publishers and Distributors, New Delhi. 2004.
- Kher, C.P. Quality control for the food industry. ITC Publishers, Geneva. 2000.
- Philip,A.C. Reconceptualizing quality. New Age International Publishers,Banglore. 2001.

PGDFAQC 107. FOOD SAFETYAND QUALITYAUDITING

(4+0: Theory Course)

Unit 1 Standard Operating Procedures

Preparing scope, quality policy and quality objectives of food processing company, Defining Standard operating procedure – purpose- Format - developing and implementing, effective writing. SOP for purchasing raw materials, receiving raw materials, storage, cleaning, holding, cooling, freezing, thawing, reheating, personal hygiene, facility and equipments. Systems in laboratory accreditation

Unit 2. Audit Check List

Preparation of HACCP based SOP checklist - personal hygiene, food preparation, hot holding, cold holding, refrigerator, freezer and milk cooler, food storage and dry

storage, cleaning and sanitizing, utensils and equipments, large equipments, garbage storage and disposal and pest control.

Unit 3

Pre-requisite Program -Good Manufacturing Practices - Personal hygiene – occupational health and safety specification, Food Plant Sanitation Management - Plant facilities construction and maintenance - exterior of the building- interior of the building- equipments. Storage, transportation, traceability, recalling procedures, training.

Unit 4. HACCP principle

Conduct a hazard analysis, CCP identification, establish critical limits for each CCP, establish CCP monitoring procedures, establish corrective actions procedures, establish procedures for HACCP verification and validation, documenting the HACCP Program.

Unit 5.

Implementation of HACCP and conducting audit --HACCP for jam, biscuit, bread, dairy, meat, fish and egg industries. Conducting of open meeting and close meeting in auditing, preparation of audit reports for different department- audit exercise

References

- Gazette of Food Safety and Standards Act, (2006) Food Safety regulations and food safety management. Food Safety and Standards Authority of India. New Delhi
- The training manual for Food Safety Regulators. (2011) Vol.III, Food Safety regulations and food safety management. Food Safety and Standards Authority of India. New Delhi.

PGDFAQC 108. Practicaland Project work

(2+2: Practical)

A. Practical exercises –Microbiology

1. Introduction to the Basic Microbiology Laboratory Practices Experiment
2. Cleaning and Methods of Sterilization Experiment
3. Cultivation and Sub-culturing of Microbes Experiment
4. Staining Techniques Experiment
5. Standards Plate Count Method Experiment
6. Direct Microscopic Examination of Foods Experiment

7. Enumeration of Fungi (Yeasts and Molds) Experiment
8. Assessment of Air using Surface Impingement Method Experiment
9. Assessment of Surface Sterilization using Swab and Rinse Method Experiment
10. Detection of Coliforms and Indicator Organisms (1) Most Probable Number Experiment
11. Detection of Coliforms and Indicator Organisms (2) Confirmed and Completed Tests, Membrane Filter Techniques Experiment
12. Interpretation of Microbiological Data and its Inferences

B. Food analysis

- 1) Estimation of proximates from food samples
- 2) Estimation of vitamins from food samples
- 3) Estimation of minerals from food samples
- 4) Estimation of trace elements from food samples
- 5) Estimation of mycotoxins from food samples

C. Project work and report submission

Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

Post Graduate Diploma in Food Safety Management and Regulations
(PGDFSMR)

Course Co-ordinator: Dr.Jisha M.S

Academic support by
National Institute Of Plant Science Technology (NIPST)
Mahatma Gandhi University
Kottayam, Kerala

**POST GRADUATE DIPLOMA IN FOOD SAFETY MANAGEMENT AND
REGULATIONS (PGDFSMR)
(Distance Learning Programme–Diploma Programme)**

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Post Graduate Diploma Programme has been designed by the National Institute of Plant Science Technology and to be conducted by the School of Distance Education with the academic support of the School.

National Institute of Plant Science Technology (NIPST), an Inter-School centre of Mahatma Gandhi University. The course established on 20th August 2014. The Institute enrolling students through competitive examinations at the National level in the campus of Mahatma Gandhi University for advanced education in plant science, promoting research in Interdisciplinary areas of ‘Plants and their Environment Relations’ towards developing ‘Plant-based Eco-technologies’.

The Institute will inspire students to apply their creative talents to research potentials of the rich botanical wealth of Kerala in the development of globally significant technologies useful in sustainable agricultural, phyto-medicinal, bio-fuel, bio-based industrial and eco-remediation purposes. Instead of keeping science and technology as watertight compartments in conventional programmes, this institute will enable science students to end up their post graduation to a productive research on plant-based eco-technology and entrepreneurship based

on the technology that they develop. Overall, the Institute aims at boosting entrepreneurship in the country through productive research in plant science.

a) Programme's mission & Objectives :

The Food Safety and Standards Act, 2006 which is a consolidating statute related to food safety and regulation in India. FSSAI is responsible for protecting and promoting public health through the regulation and supervision of food safety. Now Food Safety Regulations in India has reached global standards with the introduction of Food Safety and Standards Act 2006. With this, requirement of adequately trained manpower to be a part of Food Safety Quality Assurance and Regulatory Systems has increased immensely. With the enormous expansion of food sector and customer awareness, safety and quality assurance has become a very vital hitch to be addressed in the current decade. This has opened an enormous job opportunities for adequately trained human resource in the area.

b) Relevance of the programme with HEI's Mission Goals :

Mahatma Gandhi University has started one year PG Diploma in Food Quality and Safety Management in view of making enormous opportunities in the food science & technology sector. The P.G Diploma programme is intended to prepare food scientists, food engineers, microbiologists and others with appropriate scientific backgrounds for active job opportunities in food safety and quality assurance, monitoring and certification process in the food industry and in the Government.

c) Nature of prospective target group of learners:

Candidates who have passed B.Sc/M.Sc in Food Science and Nutrition/ Food Science and Technology/ Biotechnology/ Biochemistry/ Microbiology or B.Tech./M.Tech. in Food Technology/ Biotechnology/ Life sciences.

d) Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence:

The course provides an outline of State-Of-Art theoretical information and practical experience, directly and indirectly related to a better understanding of food safety problems, their origin and solutions. The programme is framed for transmission of both knowledge and know-how of local importance and global significance to the students.

e) Instructional design:

The programme is of 1 year duration comprising eight courses with a total of 32 credits. There are adequate contact classes and the assessment involves both internal as well as external components. Each student has to submit a report based case studies or project.

(Course Co-ordinator: Dr.Jisha M.S)							
Duration-1 Year							
Course Code	Course Type	Course Name	Contact Sessions (hours)	Credits	*Internal Marks	External Marks	Total Marks
PGDFSM R 101	Core course	Fundamentals of food quality	12	4	20	80	100
PGDFSM R 102	Core course	Food laws and standards	12	4	20	80	100
PGDFSM R 103	Core course	Principles of food safety and quality management	12	4	20	80	100
PGDFSM R 104	Core course	Quality assurance in food laboratories	12	4	20	80	100
PGDFSM R 105	Core course	Food safety and quality management systems	12	4	20	80	100
PGDFSM R 106	Core course	Chemical and Microbiological safety of foods	12	4	20	80	100
PGDFSM R 107	Core course	Food safety and quality auditing (practicals)	60	2	20	80	100
PGDFSM R 108	Project report	Case study/ Project work and Report		6	20	80	100
Total			132	32	160	640	800

*Through assignments

f) Procedure for admission, curriculum transaction and evaluation:

Eligibility: Candidates who have passed B.Sc/M.Sc in Food Science and Nutrition/ Food Science and Technology/ Biotechnology/ Biochemistry/ Microbiology or B.Tech./M.Tech. in Food Technology/ Biotechnology/ Life sciences are eligible for admission.

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. Fee structure will be decided by the University. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/Presentation of case study for each course. Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

'P' grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Certificate programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

GPA =

Total credit points earned by the student from all the required courses of the programme
Total credits of all courses required in the programme

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

$$\text{Equivalent Percentage} = (\text{GPA obtained}) \times 10$$

g) Requirement of the laboratory support and library resources:

The library and infrastructure support of the Centre and the University will be extended to the learners as per the requirement.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library is providing service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. The libraries of teaching departments are open during working hours of the Schools. Reading space is provided in all the three floors housing the various sections of the library. The library provides reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016.

The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-ShodhSindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	National Institute of Plant Science Technology (NIPST)	420

h) Cost estimate of the programme and the provisions:

Budget estimate (for 40 students)

S.No.	Item	Amount (Rs. in Lakhs)
1.	Manpower	6
2.	Study material	3.5
3.	Laboratory	5

4.	Internal assessment / Project	1.5
5	Examination & Evaluation	1.5
6.	Books and Periodicals	1.5
	Total	19

Total Programme fee: Rs.20000/-

i) Quality assurance mechanism and expected programme outcomes:

The quality of the programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the programme, the subject experts, Director, School of Distance Education and Head of the National Institute of Plant Science Technology. The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

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SYLLABUS

POST GRADUATE DIPLOMA IN FOOD SAFETY MANAGEMENT AND REGULATIONS (PGDFSMR)

PGDFSMR101 : FUNDAMENTALS OF FOOD QUALITY

(4+0: Theory)

Part- 1 Food Sanitation and safety:

Factors contributing to physical, chemical and biological contamination in food chain, Prevention and control of food borne hazards, Definition and regulation of food sanitation, sources of contamination, personal hygiene-food handlers, cleaning compounds, sanitation methods, waste disposal strategy (solid and liquid waste) and pest control

Part- 2 Food adulteration:

Common adulterants, Simple tests for detection of adulteration, Food additives-classification, functional role and safety issues, types of adulteration and recent trends in food adulteration.

Part- 3 Food Safety and Quality Assurance:

Quality control of raw materials, in-process food control, Quality control of finished products

Part- 4 Food Quality Indices:

Meat and meat products, Fish and fish products, Milk and dairy products, Vegetables , fruits and their products, Grain , pulses and oil seeds, Coffee, tea and spices

Text books

- Early, R. (2006) Guide to Quality Management Systems for the Food Industry, Blackie, Academic and professional, London.
- Gould, W.A and Gould, R.W. (2005) Total Quality Assurance for the Food Industries, CTI Publications Inc. Baltimore.
- Pomeraz, Y. and MeLoari, C.E. (2008) Food Analysis: Theory and Practice, CBS publishers and Distributor, New Delhi.

- Bryan, F.L. (2007) Hazard Analysis Critical Control Point Evaluations A Guide to Identifying Hazards and Assessing Risks Associated with Food Preparation and Storage. World Health Organization, Geneva.
- Kirk, R.S and Sawyer, R. (2005) Pearson's Composition and Analysis of Foods, Longman Scientific and Technical. 9th Edition, England.
- FAO (2006) Manuals of Food Quality Control. 2-Additives Contaminants Techniques, Rome.

PGDFSMR102 : FOOD LAWS AND STANDARDS

(4+0: Theory)

Part- 1 History of food regulations in India:

Legislations- Prevention of Food Adulteration act 1954, Food product order (1955), Solvent Extracted Oil, De-oiled Meal and Edible Flour (Control) Order, 1967, Meat Food Products Order (1973), Edible Oils Packaging, 1998, Edible Oils Packaging, 1998, Vegetable Oil Products Order, 1998, Milk & Milk Product Amendment Regulations – 2009

Part- 2 Food Safety and Standards Authority of India (FSSAI)

Repealed Acts / Orders and other live standards / Acts

Part- 3 Global Scenario

Codex Alimentarius Commission (CAC), CAC: Implications, Other International Standards Setting Bodies

Part 4 Export & Import Laws and Regulations

FTDR Act, 1992 and Foreign Trade Policy, Export (Quality Control and Inspection) Act, 1963, Export Related Regulations and Standards Set by Export Promotion Bodies, Plant and Animal Quarantine, Customs Act and Import Control Regulations

Part- 5 Other Laws and Standards Related to Food

Other Laws Related to Food Products, Voluntary National Standards: BIS and AGMARK, National Agencies for Implementation of International Food Laws and Standards, Accreditation System for Conformity Assessment Bodies

Text Books

- The training manual for Food Safety Regulators. Vol.II- Food Safety regulations and food safety management. (2011) Food safety and Standards Authority of India. New Delhi
- Mortimore, S., and Wallace, C., (2005) HACCP: A practical approach, 2nd Ed, Aspen Publication
- Surak, J.G., and Wilson, S. (2007) American Society for Quality, 2nd Ed., Quality Press

PGDFSMR103 : PRINCIPLES OF FOOD SAFETY AND QUALITY MANAGEMENT

(4+0: Theory)

Part-1 Fundamentals of Food Microbiology

Introduction to Food Safety, Food Safety System, Total Quality Management, Project Management

Part- 2 Analytical Techniques in Microbiology

An Introduction to Risk Analysis, Risk Management, Risk Analysis, Risk communication

Part- 3 HACCP

History, Background and Structure, Pre-requisites, Principles, Case studies

Part- 4 Other Food Safety Practices

Good Agriculture Practices, Good Animal Husbandry Practices /Good Manufacturing Practices / Good Hygiene practice / Good Distribution Practice, Good Retail Practices, Good Transport Practices and Nutrition Labelling, Traceability Studies

Text Book

- Gazette of Food Safety and Standards Act, (2006) Food Safety regulations and food safety management. Food Safety and Standards Authority of India. New Delhi
- The training manual for Food Safety Regulators. (2011) Vol.III, Food Safety regulations and food safety management. Food Safety and Standards Authority of India. New Delhi.

PGDFSMR104 : QUALITY ASSURANCE IN FOOD LABORATORIES

(4+0: Theory)

Part- 1 Food Laboratories

Accreditation of food laboratory, referral laboratories, functions of food analysts, hierarchy of food safety authorities, analysis of food samples and reports, other regulatory provisions pertaining to analysis of food

Part- 2 Validation of analytical methods:

Good Laboratory Practices (GLP)- history of GLP, areas of application, facilities, test systems, test and reference items, Standard Operating Procedure (SOP), study performance and reporting.

Part- 3 Analytical method used for quality determination:

Chemical and physical, microbiological, biochemical and sensory analysis.

Part- 4 Analytical methods of determination of basic food components:

Protein, saccharides, lipids, vitamins, water, minerals and trace elements, sensory active compounds, anti-nutritive and natural toxic compounds, food additives and food contaminants.

Part- 5 Advanced laboratory techniques:

Principle, working and application of GC, HPLC, HPTLC, LC/MS, inductively coupled Plasma Mass Spectroscopy and PCR, real time PCR, ELISA, Triple Quadrupole system.

Text books

- Luning, Pieter A., Willem J. Marcelis, and Wim MF Jongen. *Food quality management: a techno-managerial approach*. WageningenPers, 2002.
- Funk, Werner, Vera Dammann, and GerhildDonnevert. *Quality assurance in analytical chemistry: applications in environmental, food and materials analysis, biotechnology, and medical engineering*. John Wiley & Sons, 2007.
- Tothill, I., ed. *Rapid and on-line instrumentation for food quality assurance*. Elsevier, 2003.

PGDFSMR105 : FOOD SAFETY AND QUALITY MANAGEMENT SYSTEMS

(4+0: Theory)

Part-1 Management Systems, Auditing and Accreditation

Introduction to Management Systems, Standard and Accreditation, ISO 9001 , ISO 9001 : 2015 – An Overview, ISO 9001 : 2015 – Structure, Clause –wise Interpretation of ISO 9001 : 2015, ISO 9001 : 2015 –Case Studies, ISO 22000: 2005, ISO 22000: 2005 – An Overview, Clause –wise Interpretation ISO 22000: 2005, ISO 22000: 2005- Case Studies

Part- 2 Laboratory Quality Management System

An Overview and Requirements of ISO 17025, Requirements Specific to Food Testing Laboratories – Physical and Chemical Parameters, Requirements Specific to Food Testing Laboratories-Biological Parameters, General Topics: Related to Food Testing Laboratories

Part- 3 Retailer Standards

BRC Food and BRC IOP Standards: An Overview, International Food standards (IFS), SQF

Text books

- Barendsz, A. W. "Food safety and total quality management." *Food Control* 9.2 (1998): 163-170.
- Spears, Marian C. *Foodservice organizations: A managerial and systems approach*. 1995.
- Akkerman, Renzo, PooryaFarahani, and Martin Grunow. "Quality, safety and sustainability in food distribution: a review of quantitative operations management approaches and challenges." *Or Spectrum* 32.4 (2010): 863-904.
- Henson, Spencer, and Julie Caswell. "Food safety regulation: an overview of contemporary issues." *Food policy* 24.6 (1999): 589-603.

PGDFSMR106 :CHEMICAL AND MICROBIOLOGICAL SAFETY OF FOODS

(4+0: Theory)

Part 1 :Chemical contaminants

Pesticides and veterinary drugs: Detection and quantification of carbamates, organochlorine and organosulphur, organohalogens, nitrites, herbicides, hormones, antibiotics, steroids, environmental chemicals - heavy metals, toxic residues, radioactive isotopes. Processing contaminants: Detection, quantification and health hazards of direct contaminants – acrylamide, PAHs, oxyhalides, and haloacetic acids, preservatives,

flavor enhancers, color additives. Food additives colorants and sweeteners : Detection, quantification and health hazards, Emulsifiers, stabilizers, thickening and gelling agents:

Part 2: Protection and preservation of foods:

Hurdle technology, chemical, modified atmosphere, irradiation, thermal and non thermal techniques.

Part 3 : Food borne diseases:

Importance and significance of microorganisms in food safety, Intrinsic and extrinsic factors affecting the growth of micro organisms in food. characteristics and incidence of Food borne diseases - global and Indian scenario, food poisoning and food intoxications of microbial origin, bacterial food borne diseases; viral food borne diseases; protozoa animal parasite food borne diseases; mycotoxicoses; mushroom poisoning; investigation and management of food borne diseases.

Part 4 : Food spoilage:

Characteristic features, dynamics and significance of spoilage of different groups of foods - cereal and cereal products, vegetables and fruits, meat poultry and sea foods, milk and milk products, packed and canned foods.

Part 5 : Determination of micro organisms and their products in food:

Sampling, sample collection, transport and storage, sample preparation for analysis. microscopic and culture dependent methods- direct microscopic observation, culture enumeration and isolation methods ; culture independent techniques – PCR Based, DGGE, metagenomics, etc.; chemical, physical, immunological methods for microbial metabolites- microbial metabolites.

Part- 5 Microbiological techniques:

Collection of food samples – sampling, collection, transport and storage. Enumeration of microorganisms: Direct count, Total aerobic count, Selective media. Identification of pathogenic microorganisms – Selective media, PCR based identification, ELISA . Isolation and identification of virulent E. coli from foods. Detection of microbial metabolites- HPTLC, HPLC, ELISA; Bacterial toxins: Ceralides, E coli Toxins ; Mycotoxins: Aflatoxins, Trichotheenes

Text books

- Pelczar, M.I., and Reid, R.D. (2009) Microbiology, 5th Ed., McGraw Hill Inc., New York.

- James, M.J. (2007) Modern Food Microbiology, 2nd Ed., CBS Publisher, New Delhi
- Adams, M.R., and Moss, M.G., (2005) Food Microbiology, 1st Ed., New Age International (P) Ltd., New Delhi.
- Frazier, W.C. (2008) Food Microbiology, 4th Ed., McGraw Hill Inc., New York.
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**PGDFSMR 107: FOOD SAFETY, QULAITY CONTROL AND QUALITY AUDITING
(PRACTICALS)**

(0+4: Practicals)

I. CHEMISTRY PRACTICALS

1. Calibration of pipettes, scales and dispensers
2. Calibration of selected equipments
3. Equipment Maintenance, record keeping and reporting of results
4. Estimation of proximates from food samples
5. Estimation of vitamins from food samples
6. Estimation of minerals from food samples
7. Estimation of trace elements from food samples
8. Estimation of mycotoxins from food samples

II. MICROBIOLOGY PRACTICALS

1. Collection of food samples – sampling, collection, transport and storage
2. Enumeration of microorganisms:
 - a. Direct count
 - b. Total aerobic count
 - c. Selective media
3. Identification of pathogenic microorganisms
 - a. Selective media
 - b. PCR based identification
 - c. ELISA
4. Detection of microbial metabolites: HPTLC, HPLC, ELISA
 - a. Bacterial toxins: Ceralides, *E Coli* Toxins
 - b. Mycotoxins: Aflatoxins, Trichotheenes
 - c. Histamine

5. Isolation and identification of virulent *E. Coli* from foods
6. Investigation of suspected food borne disease outbreak

III. QUALITY CONTROL AND QUALITY AUDITING

1. Development of GHP and GMP Plan for a food outlet.
3. Development of GHP and GMP Plan for a food factory
4. Development of FSMS
5. Application of ISO 9001 Model
6. Food Laws: Identification of legal requirements for following food groups product standards:
7. Food Retail management– basis requirements
8. Establishing Traceability to national/international standards:
9. Auditing: Planning, Execution & Reporting

PGDFSMR108. CASE STUDY / PROJECT AND REPORT

(0+4: Project)

The project could be undertaken in establishments like: diagnostic/Testing labs, Research institutions, Manufacturing, Hospitality, Retail and Street food hawkers. The suggestive lists of topics are as follows.

- Food quality control and testing
- Food diagnostics methods
- Food Safety Regulations in Manufacturing Sector
- Food Safety in Retail Sector and in Catering Sector
- HACCP and Food Safety Auditing

Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

POST GRADUATE DIPLOMA IN GUIDANCE AND COUNSELLING
(PGDGC)

Course Coordinator: Dr. Rajeev Kumar N.

Academic support by
School of Behavioral Sciences
Mahatma Gandhi University
Kottayam, Kerala

Post Graduate Diploma in Guidance and Counselling

PROGRAMME PROJECT REPORT

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Post Graduate Diploma Programme has been designed by the School of Behavioural Sciences and is to be conducted by the School of Distance Education with the academic support of the School.

School of Behavioural Sciences established in 1988 under Mahatma Gandhi University has a variety of unique higher education programmes aimed at developing human resources in the field of disability rehabilitation and mental health for the upliftment of the weaker sections of the society. In India, there are many National Institutions functioning with the objective of the care of the disabilities. School of Behavioural Sciences is one of the first University departments in India that started academic programmes in this field and addressed the problems and issues in all disabilities under a single roof with a holistic nature. Academic programmes offered by the School are interdisciplinary in nature. Research is undertaken by potential scholars in the various aspects of Disability Rehabilitation, Psychology, Special Education, Mental Health, Behavioural Medicine and Rehabilitation Nursing. The School intends to develop rehabilitation professionals and researchers in different areas namely Rehabilitation Psychology, Special Education, Behavioural Medicine, Rehabilitation Nursing, and Guidance Counselling. The School conducts community extension programmes at three levels- School (regular and special schools), college

and community. The School has a Vocational Rehabilitation Centre for the adults with intellectual disability.

a) Programme's Mission & Objective

The post graduate diploma in counseling is designed to train students to develop the required essential professional knowledge, understanding, skills and competencies in the field. The programme will help to mould the students to understand the basic foundations of human behavior, adjustment mechanisms and adaptive functions of human behavior and mental health issues. The programme help students to learn competencies like interview the client, understand the adaptive and maladaptive functions of behavior, help to function effectively with appropriate strategies in the helping process. This programme is also helping the students to use appropriate tests in the counseling setting.

b) Relevance of the program with HEI's Mission and Goals: School of Behavioural Sciences vision is to mold a new generation of youngsters with higher level knowledge and commitment towards mental health and disability rehabilitation. The unique mission of the school is to conduct higher education and research Programme in Behavioural Medicine, Rehabilitation Nursing, Psychology, and Special Education. Undertake Extension activities of mental health, disability rehabilitation and empowerment. Develop and implement of innovative approaches in mental health and rehabilitation. In this line of thinking the programme Post Graduate Diploma in guidance and counseling is help the students to work in the field of mental health.

c) Nature of prospective target group of learners: Post graduate degree in Psychology, Social work, Teachers who have Degree in any discipline, Medical practitioners of any branch of Medicine with graduate degree, Nurses, and LLB holders.

d) Appropriateness of programme to be conduct in Open and Distance Learning mode to acquire specific skills and competence. Social transition related personal adaptation and adjustments are always pose challenge to everybody in our society The Post graduate Diploma In Guidance and Counselling is envisage to prepare and train students to develop greater knowledge and understanding and specific skills in the field of guidance and counseling.

e) Instructional Design : It is a two semester programme with 16 credits and 48 hours of contact classes in each semester. The details are given in the following Table.

Structure and Framework of the Programme

Sl No	Course Code	Title	Contact Classes (Hours)	Credit	Marks		
					Internal	External	Total
1	SBEDGEDGC1701*	Developmental psychology	12	4	20	80	100
2	SBEDGEDGC1702	Dynamics of Mental Health	12	4	20	80	100
3	SBEDGEDGC1703	Illness Behaviour	12	4	20	80	100
4	SBEDGEDGC1704	Practical	60	4	20	80	100
5	SBEDGEDGC1705	Guidance and counseling principles and practices and services	12	4	20	80	100
6	SBEDGEDGC1706	Counselling process	12	4	20	80	100
7	SBEDGEDGC1707	Counselling skills	12	4	20	80	100
8	SBEDGEDGC1708	Practicals and Project	60	4	20	80	100
Total			192	32	160	640	800

**SBE in the course code stands for the School of Behavioural Sciences, DE stands for Distance Education, DGC stands for Diploma in guidance and counselling, 17 stands for the year 2017 in which the curriculum is developed, and the last two digits of the code indicates the numerical order of course in the programme.*

f) Procedure for admissions, curriculum transaction and evaluation :

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. Graduation is the minimum eligibility requirement of the programme. Fee structure will be decided by the University. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/Presentation of case study for each course. Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

‘P’ grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Diploma programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

$$\text{GPA} = \frac{\text{Total credit points earned by the student from all the required courses of the programme}}{\text{Total credits of all courses required in the programme}}$$

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only

5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

Equivalent Percentage = (GPA obtained) X 10

g) Requirement of the laboratory support and Library Resources:

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library is providing service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. The libraries of teaching departments are open during working hours of the Schools. Reading space is provided in all the three floors housing the various sections of the library. The library provides reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016.

The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, Pro Quest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	School of Behavioural Sciences	3347

h) Cost estimate of the programme and the provisions:

Budget estimate (for 100 students)

Sl.No.	Item	Amount (Rs. in Lakh)
1.	Manpower	3.0
2.	Study material	1.0
3	Internal assessment	0.5
4	Library	1.5
5	laboratory resources	1.5
6	End semester examination	1.5
	Total	9.0

Total programme fee: 9000/-

i) Quality Assurance Mechanism and expected outcome

The quality of the programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the programme, the subject experts, Director, School of Distance Education and Head of the School of Behavioural Sciences. The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analysed to draw

conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

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POST GRADUATE DIPLOMA IN GUIDANCE AND COUNSELLING

Syllabus

SEMESTER I

COURSE I

DEVELOPMENTAL PSYCHOLOGY

Objectives

The students should develop:

1. Adequate understanding of different periods of development.
2. Proper understanding of various developmental stages.
3. Understanding of the various developmental processes.
4. Knowledge on development helps to understand behavior

Unit I

Introduction to Developmental Psychology (20 hours)

History and methods of developmental psychology-Specific Determinants of Development: Ecology- Heridity- Environment- family and the community- Theories of Human Development: Psycho Dynamic Theories- Behaviourist Theories – Social Learning Theories- Cognitive Theories- Humanistic Theories- Developmental principles- Stages of Development-Prenatal Development and Pregnancy: Stages of prenatal development- stages of labour- Birth Difficulties.

Unit II

Infancy and baby hood (15 hrs)

Child Birth-Characteristics of Infancy and Babyhood-Characteristics of Infancy- Physical Development - Motor Development - Cognitive and language Development:- Brain maturation- Piaget's Sensory - motor stage - Learning and language beginnings:- Emotional Development - Psycho-Social Development:- Social milestones-Bonding and attachment-Erikson's Trust Vs mistrust- Temperament- Factors influencing infant development-Adjustment problems.

Unit III

Early childhood (15 hrs)

Characteristics of early childhood : Developmental tasks of early child hood- Physical development: Physical Growth-Motor development- Nutrition- Health maintenance.

Cognitive and language development: Language and communication- Influences on language development- Gender and communication patterns – Piagetian perspective of cognitive development- information processing- Intelligence- Early schooling.

Emotional Development: Attachment – Separation anxiety- Temperament- factors influencing emotional development-psycho- Social Development: Erikson's perspectives- Parent-child relationship- Sibling relationship- Peer relations- Moral development- Families role – Gender difference. Physical, Social, mental, emotional and Behavioural problems of Early childhood.

Unit IV

Late child hood (15 hrs)

Characteristics of late child hood- Developmental tasks of late childhood- Physical Development: Physical growth- motor development- Nutrition- Health maintenance.

Cognitive and Language Development: The learning process- language- Gender and Communication pattern- Intelligence- Early schooling- Emotional development: Factors influencing emotional development- Temperament- Development of self concept.

Psycho-Social Development: Family relationships- Peer relations- Role of School- Moral Development- Gender differences- Effect of media and Technology.

Physical, Psychological, Social Emotional and Behavioural problems of late child hood.

Unit V

Puberty and Adolescence (15 hrs)

Characteristics of puberty and Adolescence- Physical Development- Role of glands in Physical development- Maturation of Sex organs- menstruation- Early and Late Maturation- Physical attractiveness- Nutrition.

Cognitive Development: Education-Scholastic Aptitude- Intelligence- Gender differences.

Emotional Development: The component of emotions- Self-concept and self –esteem- Parental influences- During abuse and Delinquency.

Psycho Social development: Family relationships- peer and school interactions- Sexual interests- moral judgment.

Physical, Psycho-social, emotional and Behavioural problems of Adolescence.

Unit VI

Early Adult hood (10 hrs)

Characteristics of early adulthood- Developmental tasks of early adulthood- Physical Development: growth and aging- Nutrition-Sexual relationships- senses and perception.

Cognitive Development – Intelligence- memory- creativity- Education- gender Differences.

Emotional Development: Subjective well-being- stress and its management- family adjustment- substance abuse

Psycho-social development: Searching for intimacy – Marriage, Family and parent-Career Establishment. Problems of early adulthood: Social Psychological- Physical emotional and behavioral.

Unit VII

Middle Age (10 hrs)

Characteristics of middle age: Development tasks of middle age- Physical development: Physical changes- Reproductive changes- menopause.

Emotional Development: Family adjustment patterns- emotional stability.

Psycho- social development- Relations with adult children- stability of personality- grand parenthood –Career concerns- midlife transition-Social concerns.

Problems of middle age: Physical- social- psychological- emotional and behavioural.

Unit VIII

Old age (10 hrs)

General characteristics of old age- Physical changes in old age: adjustment to physical changes- motor abilities in old age, Cognitive changes in old age – Emotional changes in old age- Psychological Development. Personality in old age- Retirement – loneliness- External family relationships – social relationships- Needs of old age.

Geriatric problems- physical social – Emotional- Psychological- and Behavioural.

DYNAMIC OF MENTAL HEALTH

Objectives

The students develop :

1. An understanding of various psychological processes
2. An understanding of socio-cultural aspects of behavior
3. Ability to understand human behavior under various contexts.

Unit I

Behavioural Inheritance (5 hrs.)

Nature Vs Nurture- Role of heredity in behavior- inheritance of behavioural disorders- Mechanism of heredity.

Unit II

Personality (10 hrs)

Definition and Nature-structure of personality- Traits and Type-Factors contributing to personality development- Theories of personality: Sigmund Freud, Erik Erikson, Abraham Maslow, Albert Bandura, William Sheldon.

Unit III

Emotion (5 hrs)

Definition- functions of emotion- Psychological and physiological changes in emotion.

Unit IV

Motivation (5hrs.)

Definition- Motivational cycle- Classification of motives- Theories of motivation

Unit V

Intelligence (15 hrs)

Definition- influence of heredity and environment on intelligence- Theories of intelligence- Assessment- Critical evaluation of intelligence tests.

Unit VI

Learning (15 hrs)

Definition and Nature- Theories of learning- Factors conducive for learning.

Unit VII

Social attitudes (15 hrs)

Attitude formation- changes in attitude- Errors in attitude- prejudice-Formation, reduction of prejudice.

Unit VIII

Social Perception (20 hrs)

Factors influencing social perception- Interpersonal skills- significance of communication in interpersonal skills- effective communication- Interpersonal allergies- Non compliance behavior of clients- Reducing non compliance behavior.

Unit IX

Health Psychology (20 hrs)

Concept of health- Health behavior – Health models- Normality Vs Abnormality- Attitude towards disabled and mentally disordered people – psychological factors in health and disease- mind- Body relationship – psychological factors and immune system- lifestyle and health.

Unit X

Psychological factors of (10hrs.)

Heart Disease- Anorexic and Bulimic syndromes – Essential hypertension- Peptic Ulcer- Recurrent headache- pain.

ILLNESS BEHAVIOUR

Objectives

The student develops.

1. Proper understanding of psychopathology of various mental illnesses.
2. Greater ability in the assessment and evaluation of human health and diseases.

Unit I

Mental Health (5 hrs.)

Concepts and practices- Factors promoting mental health – Attributes of a mentally healthy persons.

Unit II

Child hood disabilities (10 hrs)

Orientation of the following disabilities, neuro developmental and neuro cognitivedisorders:

Mental Retardation – Learning disabilities – Speech and hearing handicap- visually handicap- Orthopedic handicap- cerebral palsy- Autism – AD/HD.

Unit III

Organic, Including Symptomatic Mental Disorders (10 hrs)

Nature, cause and characteristics of:

Dementia – Amnesia – Delirium.

Unit IV

Mental and Behavioural Disorders due to Psychoactive substance Use (10hrs.)

Nature, cause characteristics and management of :

Mental and behavioural disorders due to use of alcohol- opioids- sedatives or hypnotic and tobacco.

Unit V

Schizophrenia, Schizotypal and Delusion Disorders (20 hrs)

Nature, cause and characteristics of:

Paranoid schizophrenia – Hebephrenic- Catatonic- undifferentiated Residual – simple- Schizo affective disorders.

Nature, cause and characteristics of:

Paranoid schizophrenia- Hebephrenic- Catatonic-undifferentiated Residual –simple- Schizo affective disorder.

Unit VI

Mood (Affective) Disorders(10 hrs)

Nature, cause and characteristics of:

Manic Episode- Hypomania- Mania without psychotic symptoms- Mania with psychotic symptoms- Bipolar affective disorder- Bipolar affective disorder -current episode manic without psychotic symptoms- Bipolar affective disorder-current episode mild or moderate depression- Bipolar affective disorder-current episode severe depression without psychotic symptoms- Bipolar affective disorder-current episode mixed- Bipolar affective disorder, currently in remission.

Depressive Episode: Mild depressive episode- Moderate depressive episode-Severe depressive episode without psychotic symptoms- severe depressive episode with psychotic symptoms.

Unit – VII

Anxiety, Stress- Related and Somatoform Disorders (10hrs.)

Nature, cause, characteristics and management of:

Phobic anxiety disorders-Agoraphobia- Social phobias-specific phobias- other anxiety disorders- Panic disorders-Generalized anxiety disorder- Mixed anxiety and depressive disorder-obsessive- compulsive disorders- Predominantly obsessional thoughts or ruminations- predominantly compulsive acts – Mixed obsessional thoughts and acts. Reaction to severe stress and adjustment disorder: Acute stress reaction- Post- traumatic stress disorder- Adjustment disorders.

Dissociative Disorders: Dissociative Amnesia- Dissociative fugue- Dissociative stupor trance and possession disorders- Dissociative Motor disorders- Dissociative anesthesia and sensory loss- Mixed Dissociative disorders- Other dissociative disorders.

Somatoform disorders: Somatization disorder-Undifferentiated Somatoform disorder- Hypochondriacal disorder-Somatoform automatic dysfunction- persistent somatoform pain disorder.

Unit VIII

Behavioural Syndromes Associated with Physiological Disturbances and Physical Factors (10 hrs.)

Nature, cause, characteristics and management of:

Eating disorders: Anorexia nervosa- Atypical anorexia nervosa- Bulimia nervosa- Atypical bulimia nervosa-overeating associated with other psychological distribution. Vomiting associated with other psychological disturbances.

Non organic sleep disorders: Non organic insomnia –Non organic hypersomnia- Non organic disorder of the sleep wake schedule- sleepwalking- sleep terrors- Nightmares – Sever dysfunction not caused by organic disorder or disease.

Unit IX

Disorders of Adult personality and Behaviour (10hrs)

Nature, cause, characteristics and management of:

Specific personality disorder –paranoid personality disorder- Schizoid personality disorder – Emotionally unstable personality disorder- Histrionic personality disorder- Avoidant personality disorder- Dependent personality disorder.

Habit and Impulse disorders: Pathological gambling- pathological fire- setting- Gender Identity Disorders- Trans sexualism- Dual – role transvestitism- Gender identity disorder of childhood- Sexual Disorder- Fetishism – Fetishistic transvestitism- Exhibitionism- Voyeurism- Pedophilia – Sadomasochism – Multiple disorders of sexual preference

Unit X

Disorders of Psychological Development (10 hrs)

Orientation of the following:

Specific developmental disorders of speech and language: Specific speech articulation disorder- Expressive language disorder- receptive language disorder- Acquired aphasia with epilepsy- Specific developmental disorders of scholastic skills- Specific reading disorder- Specific spelling disorder- specific disorder of arithmetical skills- Mixed disorder of scholastic skills- Special developmental disorder of motor function- Mixed

specific developmental disorders- pervasive developmental disorders- childhood autism- Atypical autism- overactive disorder.

Unit XI

Behavioural and Emotional Disorders (15 hrs)

Nature, cause, characteristics and management of:

Hyper Kinetic disorders- Disturbance of activity and attention- Hyper kinetic conduct disorder conduct Disorder- conduct disorder confined to the family context, un socialized conduct disorder- Oppositional deficient disorder- Mixed disorders of conduct and emotions- Depressive conduct disorder- Emotional disorders with onset specific to childhood- separation anxiety disorder of childhood- Phobia anxiety disorder of childhood – Social anxiety disorder of childhood- Sibling rivalry disorder- Disorders of social functioning with onset specific to child hood and adolescence- Elective mutism- Reactive attachment disorder of childhood- Disinhibited attachment disorder of childhood.

SEMESTER- I

COURSE - IV

PRACTICAL

OBJECTIVES

The Student develop:

1. A sound knowledge in the concept of testing in counseling setting
2. An understanding to administer various psychological tests
3. Ability to assess, interpret and plan counseling programmes.

Unit I

1. Intelligence Tests
2. Personality Tests
3. Self Concept Questionnaire
4. Attitude Scale
5. Emotional Maturity Scale
6. Achievement Motivation scale
7. Adjustment Inventory
8. Social Maturity Scale
9. Anxiety Rating Scale
10. Depression Rating Scale
11. Aptitude Tests
12. Ability Tests
13. Memory Tests
14. Decision Making Questionnaire

Unit II

1. One day observation visit to a pre-school
2. Administration of all the above mentioned tests on two cases each.

Unit III

Under the supervision of counselors in the following setting

1. One week posting in a regular school and study the issues of children, teachers, and administrators. Prepare report
2. two week posting in a special school for familiarize the various disabilities, and prepare report
3. One week posting in a de-addiction centre and prepare report

STUDY PAPER

Objective

The students develop:

An in depth knowledge about a specific problem of counseling in interest.

1. Two week posting in a mental health setting
2. A study paper on a topic relevant for counseling.

SEMESTER II

COURSE I

GUIDANCE AND COUNSELING PRINCIPLES AND PRACTICES AND SERVICES

Objectives

1. To make the student understand about the evolution and historical perspective of guidance and counseling.
2. To make the student understand about the nature, need and functions of counseling.
3. Proper understanding of the use of Psychometric evaluation in counseling
4. To make the student understand about theories of counseling.

Unit I

Evolution of Guidance and counseling. (5 hrs)

Factors contributing to the emergence of guidance and counseling- moral and Philosophical issues- Economic change- Educational challenges- Mental hygiene- Modern trends in guidance and counseling.

UNIT II

Historical perspective (5hrs)

Beginning of counseling – Counseling as a profession- Community counseling – Organizing community counseling programmes.

UNIT – III

Nature, Need and Functions of Counseling (10 Hours)

Nature, Need and functions – Facts and fallacies of counseling needs – Needs for shared approach- Counseling goals – achievement of positive mental health-

Resolution of problems – Improving personal effectiveness- Decision making skills – Behaviour modification – Achievement motivation.

UNIT IV

Current Trends in Counseling (10 hrs)

Counseling in Indian context- Counseling and related fields – Advising – Psychotherapy- Trends and issues – Multi cultural counseling – Feminist theories in counseling – Accreditation and licensing of counseling.

UNIT – V

Psychometry 1 (20 hours)

Orientation to Psychometry- Qualities of good tests – Classification of tests- Intelligence tests- Personality tests- Aptitude tests- Achievement motivation tests- Memory tests- Attention – Interest inventories.

UNIT VI

Psychometry – II (20 Hours)

Rating scales – Anecdotal records cumulative records – sociometric techniques – Case studies – Common diagnostic classification systems in counseling.

UNIT – VII

Counseling Theories (20 Hours)

Definition and purpose of counseling theory- Developing a personal counseling theory – Psycho Analysis and Psycho- dynamic theories – Behavioural, Cognitive Behavioural and Developmental theories – Humanistic theories.

UNIT VIII

Types of Counseling (10 Hours)

Group Counseling – Assumptions of group counseling – Merits and Demerits

Individual Counseling- Assumptions of individual counseling – Merit and Demerits.

Issues involved in group and individual counseling – Counseling special groups – issues and problems.

UNIT – IX

Ethical and Legal Aspects of counseling (10 Hours)

Professional Ethics in counseling – Values counseling – Making ethical decisions – Guide lines for acting ethically – Legal considerations.

UNIT – X

Research and Evaluation (10 Hours)

Evaluation – Research – Major research methods- Importance of evaluation and research in counseling.

SEMESTER II

COURSE II

COUNSELLING PROCESS

Objectives

The student develops

1. A greater understanding about various steps involved in counseling process
2. Greater understanding and the ability to use different approaches in counseling.
3. To equip the students' with adequate skill in counseling and psychotherapeutic measures.

UNIT – I

Preparation for counseling (5 Hours)

Initial interview – Case history taking – Exploration and identification of goals – Ice-breaking – Winning confidence – Value orientation – Acceptance – Report

UNIT II

Steps in counseling (10 hours)

Client self exploration – First interview – initial counseling session – Diagnosis of problem – Deeper exploration and Analysis – Transference Counter Transference-Resistance – Implementation – Follow up – Termination of Counseling relationship.

UNIT III

Approaches of Counseling (20 hours)

Directive approach (Psycho Analytic approach) Freud's theory of psycho analysis – analytical therapy – relevance of Psycho analysis in counseling.

UNIT IV (10 hours)

Behavioural Approach : Theory of Behaviorism – Behaviour modification techniques – Relevance of behavior modification on counseling.

UNIT V (10 hours)

Humanistic Approach: Roger's Self- theory – Client centered therapy – existential and Logo therapy – Minnesota point of view – Relevance of Humanistic approach in counseling.

UNIT VI (10 hours)

Cognitive – Behavioural Approach – Ellis’ theory – Rational emotive therapy (RET)
Relevance of cognitive – behavioural approach in counseling - eclectic Approach

UNIT VII

Counseling groups and individuals (10 Hours)

Types of groups – process of group counseling – scientific approach for diagnosis of individual cases – process of individual counseling.

UNIT – VIII

Counseling Special groups (25 hours)

Process of counseling with special reference to the issues and problems related to special groups. HIV/AIDS patients- Alcohol and drug abusers- Rape Victims – People with sexual dysfunctions- Disabled – People suffering from chronic illnesses- Suicide attempters- Adolescents – Elderly – Counseling emotionally handicapped – Learning disabled- culturally backward people – care givers of chronically ill patients.

Unit IX

Psychotherapy (20 hours)

Relaxation training – Systematic desensitization – modeling – RET – Transactional analysis- Relapse prevention- play therapy- Hypnosis-Psychotherapy for sexual dysfunction – Role play – stress management – Assertiveness training – Biofeedback – Cognitive restructuring – flooding therapy- Insight therapy – shaping, time out – Token economy – Family Therapy.

SEMESTER – II

Course III COUNSELLING SKILLS

Objectives

The students develop-

1. Greater understanding of client-counselor interaction and counseling relationships.
2. To equip the students adequate skills in counseling and techniques of interviewing.
3. Understanding about communication skills and self-disclosure.
4. Understanding about crisis intervention.

UNIT – 1 Client Counselor Interaction (10 hrs)

Characteristics of counseling process – Characteristics of a client- characteristics of a counselor- Qualities of an effective counselor- Role of a counselor- professional variables of a counselor- Limitations of a counselor.

UNIT – II Counselling Relationship (10hrs)

Physical setting- Privacy- Contracting- Value orientation – Attitude change- Empathy- Rapport building- Transference- counter transference- Resistance.

UNIT – III

Interviewing Skills (10hrs)

Fact finding interview. Interview with significant people- testing interviews- pre-counseling interviews- Counselling interview- Effective interviewing skills- Attending and influencing, Counselee- Counselor relationship in interview- Integrating positive skills- Interview techniques- Structuring the interview- Degree of lead- Handling pauses.

UNIT- IV - Communication Skills.(10 hrs)

Factors of communication- Types of communication- verbal and non-verbal communication- Significance of body language in communication- communication skill development- Interpersonal Allergies- Effective interpersonal relationships.

UNIT- V

Self Disclosure (10 hrs)

Nature of self disclosure- Methods of disclosure- Client self Disclosure- Client self disclosure and counseling- TA- Johari window.

UNIT- VI

Helping skills (10 hrs)

Rationals for skill Training- listening- Reflecting- summarizing – Confronting – Interpreting – Informing.

UNIT VII

Helping skills for Crisis Intervention (20hrs)

Situations of crisis - Strategies for helping in crisis- Skills for support- skills for crisis management.

UNIT- VIII

Helping Skills for Behavioural Change (20 hrs)

Problem solving skill- Decision making skill- planning-Attitude change- Assertiveness- Behaviour change.

UNIT IX (20 hrs)

Psychotherapy Introduction to psychotherapy, Principles of Psychotherapy. Major types of Psychotherapy

SEMESTER II

COURSE IV

PRACTICAL

Objectives:

The students should develop adequate counseling skills

The students should develop interviewing skills

The student should develop the ability to taking cases, diagnosis and Counselling.

Students should develop through understanding of counseling in various settings.

Unit – I Skill Training (Conduct interview with client and prepare audio/video and prepare the verbatim and present to the faculty concerned) (40 hours)

1. Interviewing skill training
2. Communication skill training
3. Communication skill training
4. Self disclosure training
5. Helping skill training
6. Assertiveness training
7. Listening and leading skills
8. Session on Crisis Management
9. Stress management programme
10. Training on T.A and RET.

Unit II (10 hrs)

1. Achievement analysis
2. Interviewing

Unit – III

Case taking, diagnosis and evolving counseling strategies of the following (30hrs)

1. Student Counselling (5 cases)
2. Marriage Counselling(5 cases)
3. Family Counselling (5 cases)
4. Occupational Counselling(5 cases)
5. Counselling of Alcoholics/Drug abuses(5 cases)
6. Parent Counselling (5 cases)
7. Patient Counselling(5 cases)
8. Counselling disabled (5 cases)

Unit – IV

Sessions on various types of Counselling (30 hours)

1. Individual Counselling (5 cases)
2. Group counseling (5)
3. Rehabilitation Counselling (5 Nos)
4. Mental wealth Counselling
5. Career Counselling

Unit –V

Placement in a Counselling centre- One month (30 hours)

REFERENCE

Narayana Rao and Prem Shajpal_(2013)Counselling and guidance, New Delhi: McGraw Hill Education(India) Pvt.Ltd

John McLeod. (2003)_An introduction to counselling New York: Open University Press

Srivastava (2011)Principles of guidance and counselling_ New Delhi, Kanishka Publishers

Kochhar (1989) Guidance and Counselling in Colleges and Universities, Sterling Publishers.

Gibson & Mitchel (1990) Introduction to Counselling and Guidance, Mac Millan

Nelson- Jones (2003) Introduction to Counselling Skills, Sage

Nelson- Jones (2005)Practical Counselling and helping skills, Sage

McLeod(2008) An Introduction to Counselling, Rawat Pub

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Gilliland, James & Bowman (1994) Theories and strategies in Counselling and Psychotherapy, Allyn & Bacon

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Sejwal, P & Arora, M (2012) Child Psychology. Crescent, New Delhi.

Feldman, R.S (2011) Development across the life span. Prentice Hall. New York.

Feldman, R.S (2010). Discovering the life span. Pearson India.

Keenan & Evans (2009) An Introduction to Child development. London, Sage Pub.

Bearison & Zimbardo (1986) Thought and Emotion developmental perspective, New York, Psychological Press.

Elizabeth. B. Hurlock (2011) Developmental Psychology A Life Spans Approach. Tata McGraw Hill Publishing, New Delhi.

Shulman (2010) Language Development: Foundations, Process and clinical applications. Boston, Jones and Bartlett publishers

Carson Robert C, Butcher James & Nisecki. Abnormal Psychology and Modern life. 10th edition.

Sarason. B. & Sarason. I. (2002). Abnormal behaviour: the problem of maladaptive behaviour (10th Ed). Singapore: Pearson Education Asia Pvt Ltd.

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Kaplan and Sadock's Synopsis of Psychiatry Tenth Edt 2007, Cippincott Williams and Wilkins.

Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

POST GRADUATE DIPLOMA IN HUMAN RIGHTS (PGDHR)

Course Co-ordinator: Dr. M V Bijulal

Academic support by

School of International Relations and Politics

Mahatma Gandhi University

Kottayam, Kerala

POST GRADUATE DIPLOMA IN HUMAN RIGHTS

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Diploma Programme has been designed by the School of International Relations and Politics and is to be conducted by the School of Distance Education with the academic support of the School.

School of International Relations and Politics (SIRP) was established in 1983 as one of the first statutory postgraduate teaching and research Schools of Mahatma Gandhi University. The objective of the School is to provide the highest quality post-graduate and MPhil/PhD programmes in the frontier areas of Political Science, International Relations and Human Rights shaped by the distinctive perspectives of the Faculty of the School. To provide education of the highest quality with the emphasis on mutual respect, social harmony, sustainable development and world peace, SIRP's mission keeps in perspective the dynamic role of a caring Faculty committed to creating an open and cooperative learning environment. The teaching learning process at SIRP is shaped by a view of higher education as a process of developing a critical faculty on questions of polity, culture, economy and international society so that the students will become involved learners.

a) Mission and Objectives of the Programme

This programme envisages the mission of integrating advanced knowledge in Human Rights to various fields of education, skills up gradation and social analysis. The programme seeks to develop an in-depth critical interest in Human Rights and to provide skills in understanding the historical evolution, theory, major issues, movements, instruments and mechanisms, related to Human Rights. The main purpose of this course is to provide students with an opportunity to have practical knowledge and intellectual aptitudes in human rights activities, especially in the fields of socio-cultural, political and legal dimensions of human Rights Issues. It also attempts to enable students with skills for developing a professional acumen in dealing with social, political and legal issues.

b) Relevance of the Programme, Goals and Mission

Education and training in Human Rights is essential to understand the emerging social and institutional contexts where mechanisms of protection of individual and collective rights progressively evolving. Human Rights education is one of the widely accepted and growing sector in International education. Professional knowledge in Human Rights is essential to negotiate with various issues in the field of civil, political and cultural rights.

c) Prospective Target Group of Learners

Students from various streams can join for the programme. The prospective target group of learners include Graduates, Post Graduates, Students pursuing post graduation in Mahatma Gandhi University, researchers and general public who possess Graduate degrees.

d) Appropriateness of Programme to be conducted in open and distance learning mode to acquire specific skills and competence.

In the wider scenario of the increasing importance of human rights in all fields of professional and social life, it is essential to diversify the accessibility of the discipline. It helps people involved in research, and learning as well as professionals to calibrate their potentials in their respective fields of learning and action.

(Course Co-ordinator: Dr. M.V Bijulal)							
Duration – 6 months							
Course Code	Course Type	Course Name	Contact Sessions (hours)	Credits	*Internal Marks	External Marks	Total Marks
IRD01	Core course	Introduction to Human Rights	12	4	20	80	100
IRD02	Core course	Constitution, Law and Human Rights	12	4	20	80	100
IRD03	Core course	International Organisation and Human Rights	12	4	20	80	100
IRD04	Core course	Group Rights	12	4	20	80	100

IRD05	Core course	Human Rights Protection: Socio-Legal perspective	12	4	20	80	100
IRD06	Core course	Human Rights and Sustainable Development	12	4	20	80	100
IRD07	Core course	Discrimination and Rights Mechanisms	12	4	20	80	100
IRD08		Case Study/ Project Work and Report	12	4		100	100
Total			96	32			800

*Through assignments

f) Procedure for admission, curriculum transaction and evaluation

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. Candidates (graduates) are eligible for admission irrespective of age. Fee structure will be decided by the University. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book Review/Debate/Seminar/ Presentation of case study for each course. Assignments/Book Review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6

45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

'P' grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Diploma programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

GPA =

$$\frac{\text{Total credit points earned by the student from all the required courses of the programme}}{\text{Total credits of all courses required in the programme}}$$

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

$$\text{Equivalent Percentage} = (\text{GPA obtained}) \times 10$$

g) Requirement of the library resources:

The library and infrastructure support of the Centre and the University will be extended to the learners as per the requirement. Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library

which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library is providing service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. The libraries of teaching departments are open during working hours of the Schools. Reading space is provided in all the three floors housing the various sections of the library.

The library provides reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016.

The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener. The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-Shodh Sindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
		School of International Relations and Politics

h) Cost estimate of the programme and the provisions.

Budget estimate (for 100 students)

S.No.	Item	Amount (Rs. in Lakhs)
1.	Manpower	2
2.	Study material	2
3.	Internal assessment / Project	.5
4.	Examination & Evaluation	1.
5.	Books and Periodicals	1.5
	Total	7.

Total Programme fee: Rs.7500/-

i) Quality assurance mechanism and expected programme outcomes:

The quality of the programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the programme, the subject experts, Director, School of Distance Education and Head of the School of International Relations and Politics. The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

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Syllabus

Post Graduate Diploma in Human Rights

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Course 1. Introduction to Human Rights

Unit I: Meaning and Concept – Nature, Scope and Limitations – Classification; Positive and Negative Rights: Human Rights and Human Values, Ethics, Ideals etc. - Universalism and Cultural Relativism in Human Rights

Unit II: Genesis of Human Rights, Historical Development: Magna Carta, Bill of Rights, Petition of Rights, Declaration of the Rights of Man and Citizen, American Declaration of Independence

Unit III: Generations of Human Rights; First, Second and Third Generations

Unit IV: Theories of Human Rights – Natural theory- Liberal theory- Marxist Theory- Feminist Theory- Rights and Duties Relationship

Reference

1. Encyclopaedia of human rights by *Lawson, Edward*
Publisher: London, Taylor and Francis Inc; 1991.
2. The idea of human rights: four inquiries by *Perry, Micheal J*
Publisher: New York, Oxford University Press
3. The Theory and practice of human rights by *Macfarlane, L.J*
Publisher: London, Maurice Temple Smith 1985.
4. Human rights: free and equal by *Giriraj Shah*
Publisher: New Delhi, Anmol Publications Pvt.Ltd; 2001
5. The essentials of human rights by Anker, Christien van den
Publisher: London, Hodder Arnold; 2005
6. Fundamental Human Rights: the Right to Life and Personal Liberty by *Kiran Deshta*, New Delhi; Deep and Deep publications Pvt.Ltd; 2004.

Course 2. Constitution, Law and Human Rights

Unit I. Impacts of Colonial Legislations in Human Rights, Socio-Political Movements and Human Rights: Karachi Declaration

Unit II. Civil and Political Rights: Fundamental Rights- Socio, Economic and Cultural rights in the Directive Principles

Unit III. Adjudication of Rights: Judiciary- Writs and Protection of Rights, Judicial Activism and Public Interest Litigation

Unit IV. Protection of Human Rights Act 1993- National Human Rights Commission and State Human Right Commission- Power and Functions Role of National Institutions in Protection of Rights, SC -ST Commission, Minorities Commission

Reference

1. Common man's guide to rights and facilities by *Manoj Pandey*.
Publisher: New Delhi, Ministry of Information and Broadcasting; 1997
2. Directive Principles and fundamental rights: relationship and policy perspectives by *Sudesh Kumar Sharma*
Publisher: New Delhi, Deep and Deep Publications Pvt. Ltd 1990
3. Human rights; year book
Publisher: Moscow, Nauka Publishers, 1986.
4. Indianization of rights and duties by Gokulesh Sharma, New Delhi, Manas Publications; 2003
5. Fenwick Helen Civil Liberties and Human Rights, , New York, Routledge Cavendish, 2008
6. Author " (Shashi Nath Saraswathy), Right to Equality in the Indian constitution, Concept Publishers, New Delhi, 2002.

Course 3. International Organisation and Human Rights

Unit I. Role of United Nations in Human Rights- Rights in the UN charter- Universal Declaration of Human Rights 1948 (UDHR) International Covenant on Civil and Political Rights- International Covenant on Economic, Social and Cultural Rights

Unit II. Role of UN agencies- UN High Commissioner of Human Rights, UN Human Rights Council UNESCO, UNHCR

Unit III. Conference Mechanism on Human Rights- Tehran Conference Vienna conference 1993- Copenhagen Declaration 1995-Beijing Conference- Rio Conference- CEDAW-ICERD

Unit IV. Regional Human Rights system- EU and Human Rights- Role of NGOs in Human Rights Protection- Human Rights Watch- Amnesty International

Reference

1. Human rights in Pakistan by *Chitkara, M.G*
Publisher: New Delhi, APH Publishing Corporation 1997
2. Human rights in the world: an introduction to the Study of the international protection of human rights by *Merrills J G, Robertson A H.*
Edition: 4, Publisher: Manchester, Manchester University Press; 1996
3. Human rights and international co-operation by *Nagendra Singh*
Publisher: New Delhi, S Chand and Company Ltd.
4. International Law by *Shaw, Malcolm N*
Publisher: Cambridge, CLIP; 1998
5. Mullarson Ren Human Rights Diplomacy, New York, Routledge, 1997
6. Baxi, Upendra *Human Rights In A Posthuman World: Critical Essays.* Oxford University Press (India), 2007.

Course 4. Group Rights

Unit I. Concept of Group Rights/Collective Rights- New Social Movement and Group Rights- Feminist discourses- Violence against Women

Unit II. Environmental Movements in India- Chipko Movement- Narmada Bachavo Andolan- Appiko Movement

Unit III. Civil Rights Movements in India- RTI Movement and Mazdoor Kisan Shakti Sanghathan- Third gender movements- Land Alienation of Tribes- Forest Rights Bill (FRA)

Unit IV. Environmental Degradation and its impacts in Human Rights- Climate Change, Green House Effect and Global Warming

Reference

1. Repression and resistance in India; violation of democratic rights of the working class.rural poor, adivasis and dalits by *Desai, A.R*
Publisher: Bombay, Popular Prakasha;1990
2. Human rights: commitment and betrayal by *Chitkara M.G*
Publisher: New Delhi, APH Publishing Corporation

3. Monitoring International human rights by *Rahul Rai* New Delhi, Authors Press, 2002.
4. Baxi, Upendra *The Rights of Subordinated Peoples*(Co-written with O. Mendelsohn). Oxford University Press, 1994.
5. Philipalston *Labour Rights are Human Rights*, Oxford Press, 2005.
6. Baxi, Upendra *The Future of Human Rights*. Oxford University Press, 2002.

Course 5. Human Rights Protection: Socio-Legal perspective

Unit I. Offences involving Human Rights- types of offences and Violence – offences against state, persons and property – offences against women, Children, minorities and socially disadvantaged groups – juvenile delinquency.

Unit II. Human Rights Jurisprudence – Role of Courts in Human Rights Protection- Crimes Against Humanity- Human Rights Perspective of Capital Punishment

Unit III. Procedural and Penal Justice – Rights of accused and under trial persons- Rights of Prisoners

Unit IV. Legal Status of National Commissions- NHRC, Women’s commission, Child Rights commission- Limitations

Reference

1. Tibet: human rights and the rule of law.
Publisher: Geneva, International Commission of Jurists: 1997
2. The protection of Human Rights Act, 1993 with Kerala Rules 1998 & Kerala Regulations 2001.
Publishers: Cochin, Suvarna Publications; 2002.
3. Human rights and Social Security by Yadav J P
Publsiher: New Delhi, Anmol Publications Pvt.Ltd; 2004.
4. Nepalese legal system; human rights perspective by *Yuburaj Sangroula*, Kathmandu, Kathmandu School of Law; 2005.
5. Pollis & Peter Schwab *Human Rights New Perspectives*, Lynne Rienner Publishers, 2000.
6. Debi Chattergi *Human Rights Theory and Practice*, South Asian Publishers Pvt. Ltd., New Delhi, 2002.

Course 6. Human Rights and Sustainable Development

Unit I. Concept of Developmental Sustainability- Relation between Development and Human Rights- Theories of Development

Unit II. UN Declaration of Right to Development (1986): Globalisation and Human Rights; Development Communication- Millennium Development Goals and Sustainable Development Goals

Unit III. Models of Development- Centralised and Decentralised Planning and its inclusiveness- Physical Quality of Life Index and Human Development Index

Unit IV. Trans National Corporations and Human Rights- TNCs and its Effects on Local Community

Reference

1. Human rights in a developing society by Sankar Sen; Author
Publisher: New Delhi, APH Publishing Corporation; 1998
2. Human rights and the grass roots
Publisher: Philippines, SALAG inc; 1989
3. Human rights: new perspective, new realities by *Pollis, Adamantia*; Editor
Publisher: New Delhi, viva books; 2002
4. Rethinking human rights for the new millennium by *Fields, A Beldon* New York,
Palgrave MacMillan; 2003.
5. Obrien Karen Climate Change, Ethics and Human Security, Cambridge, Cambridge
University Press, 2010
6. Arjun Sen Gupta Reflections on The Right to Development, ,New Delhi,Sage
Publications India Pvt.Ltd,2005

Course 7 Discrimination and Rights Mechanisms

Unit I: Concept of Discrimination- Discrimination on the Basis of Colour, Language, Sex, Religion, Race and Caste

Unit II: Rights of Children- Role of UNICEF- Convention on Rights of Children- Problems of Child Labour- Right to Education Act

Unit III. Rights of Women and Girl Child- Reproductive Rights- Threat of Trafficking – Convention on Elimination of Discrimination against Women

Unit IV. Rights of Marginalised People- Minorities, Differently Abled and Dalit's- Rights of Stateless Persons and Indigenous People

Reference

1. The rights of subordinated peoples by *Mendelsohn Oliveri*.
Publisher: New Delhi, Oxford University Press 1994.
2. The Politics of victimization: victims victimology and human rights by Elias, Robert
Publisher: London, Zed Books; 1988]
3. Indigenous People sustainable devt and human rights by Das J K.
Publisher: Cambridge University Press; 2001.
4. Women and the human rights by Khanna, S.K
Publisher: New Delhi, Commonwealth Publishers; 1998.
5. Forced migration in the South Asian region displacement, human rights and conflict resolution by *Om Prakash Misra*
Publisher; Delhi, Manas Publications
6. *Inconvenient Forum and Convenient Catastrophe: The Bhopal Case*. Bombay: NM Tripathi, 1986.

Course 8. Project and Report

As a part of the course completion students are required to submit a monograph a key concept in Human Rights solely based secondary data.

Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

Post Graduate Diploma in Law and Political Economy of GST

Course Co-ordinator: Ms. Mrudula Mohan

Academic support by

**KN Raj Centre for Planning and Centre
Mahatma Gandhi University
Kottayam, Kerala**

**POST GRADUATE DIPLOMA IN LAW AND POLITICAL ECONOMY OF GST
(Distance Learning Programme – Post Graduate Diploma Programme)**

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Post Graduate Diploma Programme has been designed by the K N Raj Centre for Planning and Centre- State Financial Relations and is to be conducted by the School of Distance Education with the academic support of the Centre.

K N Raj Centre for Planning and Centre-State Relations started in 2012 is committed to generating, disseminating, and preserving knowledge, and to working with others to bring this knowledge to bear on the world's great challenges. The main objective in establishing the Centre is to create a Centre of Excellence in Economics and Public Policy with specialization in Planning and Fiscal Federalism in the country. Fiscal federalism is an important area of study in Public Economics that has been greatly influenced by the current policy changes in the economy. It has also added a new dimension to the discourse on Centre-State financial relations. The devolution of resources/power from the Centre to sub-national units (States/PRI), under the aegis of the Planning Commission/Finance Commission/ Central Ministries has been an integral part of this discourse. Issues related to public debt of the centre and State governments, transfer of power/resources to PRIs etc are also discussed as part of multi-level finance or Fiscal Federalism in the country. The K.N. Raj Centre (KNRC) will contribute, in a major way, towards strengthening the study and research in these areas of planning and fiscal federalism.

a) Programme’s mission & Objectives :

The objective of this Course is to enhance the knowledge as well as to provide benefit to the students and stakeholders. This course helps to acquire the basics of GST. The course deals with basic concepts, structure of GST, Economics and legal aspects of GST in India. The participants are expected to have basis knowledge of the subject, providing specialized and updated knowledge in the area of GST in a systematic manner, enhancing analytical and problem solving skills for decision making.

b) Relevance of the programme with HEI’s Mission and Goals:

The programme imparts conceptual and theoretical understanding to both academicians and practitioners regarding different aspects of GST. Graduates who wish to become proficient in Economics and Law of GST can make benefit out of this course.

c) Nature of prospective target group of learners:

The prospective target group would include graduates in Economics, and the general public who has graduation with economics as a part of the programme. Students from various streams interested in acquiring advanced knowledge on GST are also welcome.

d) Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence:

This course enables to develop knowledge about basic concepts of GST,structure of GST, Economics of GST and Law of GST. On successful completion of this course, a student will be able to

- (i) Understand the basic concepts and structure of GST in India.
- (ii) Enables to develop idea about Levy, Time of Supply, Place of Supply, Input Tax Credit, Transitional issues
- (iii)Develop basic knowledge about the legal aspects of GST in India.

e) Instructional design:

The programme is of 1 year duration comprising eight courses with a total of 32 credits. There are adequate contact classes and the assessment involves both internal as well as external components.

Course Code	Duration-1 Year						
	Course Type	Course Name	Contact Sessions (hours)	Credits	*Internal Marks	External Marks	Total Marks
DE-KNRC-1	Core course	Theory of taxation	12	4	20	80	100
DE-KNRC-2	Core course	Indian Tax system	12	4	20	80	100
DE-KNRC-3	Core course	Fiscal Federalism	12	4	20	80	100
DE-KNRC-4	Core course	Fiscal Federalism in India	12	4	20	100	100
DE-KNRC-5	Core	Planning and	12	4	20	80	100

	course	Fiscal Federalism					
DE-KNRC-6	Core course	Overview of GST	12	4	20	80	100
DE-KNRC-7	Core course	Economics of GST	12	4	20	80	100
DE-KNRC-8	Core course	Law of GST	12	4	20	80	100
Total			96	32			800

f) Procedure for admission, curriculum transaction and evaluation:

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. Graduation in Economics or any graduation with economics as a part of the Programme is the minimum eligibility for the admission. Fee structure will be decided by the University. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book review/Debate/Seminar/Presentation of case study for each course. Assignments/book review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4
< 40	F	Fail	0
Absent	Ab	Absent	0

'P' grade is required for a minimum pass in a course. The minimum GPA required for a pass in a course is 4.

Calculation of Grade Point Average (GPA):

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

$$\text{GPA} = \frac{\text{Total credit points earned by the student from all the required courses of the programme}}{\text{Total credits of all courses required in the programme}}$$

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

$$\text{Equivalent Percentage} = (\text{GPA obtained}) \times 10$$

g) Requirement of the laboratory support and library resources:

The library and infrastructure support of the Centre and the University will be extended to the learners as per the requirement.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library is providing service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. The libraries of

teaching departments are open during working hours of the Schools. Reading space is provided in all the three floors housing the various sections of the library. The library provides reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016.

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The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	KN Raj Centre for Planning and Centre-State Financial relations	1146

h) Cost estimate of the programme and the provisions:

Budget estimate (for 100 students)

S.No.	Item	Amount (Rs. in Lakh)
1.	Manpower	3
2.	Study material	2
3.	Internal assessment	1.5
4.	End semester examination	1.5
5.	Books and Peiodicals	1.
	Total	9.00

Total programme fee: Rs.9000/-

i) Quality assurance mechanism and expected programme outcomes:

The quality of the programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the programme, the subject experts, Director, School of Distance Education and Head of the KN Raj Centre for Planning and Centre-State Financial relations. The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

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Syllabus

Post Graduate Diploma in Law and Political Economy of GST

Course I: Theory of Taxation

Unit I: Theories of Taxation: - Theory of optimal taxation -Trade-off between equity and efficiency, Excess burden of taxes; elasticity and tax buoyancy, Trade off between equity and efficiency, Theory of measurement of dead weight losses; the problem of double taxation.

Unit II: Theory of incidence; Alternative concepts of incidence and effects of taxation— Allocative and equity aspects of individual taxes; Benefit and ability to pay approaches, taxable capacity. Impact and Incidence-- Modern Theory of incidence

Unit III: Tax base and tax yield, Principles of taxation, Canons of taxation, Elasticity of tax to changes in tax base.

Reference

1. Cutt, J. (1969), Taxation and Economic Development in India, Frederick A Praegar Publishers, New York.
2. Kaldor, N. (1955), An Expenditure Tax, George Allen and Unwin, London.
3. Musgrave, R.A. and C. Shoup (Eds.) (1970), Readings in the Economics of Taxation, George Allen and Unwin, London.
4. Barman, K. (1986), Public Debt Management in India, Uppal Publishing House, New Delhi.
5. Buchanan, J.M. (1958), Public Principles of Public Debt, A Defence and Restatement, Richard D. Irwin Homewood.
6. Ferguson, J.M. (Ed.) (1964), Public Debt and Future Generations, North Carolina University Press, Chapel Hill.
7. Sreekantaradhya, B.S. (1972), Public Debt and Economic Development in India, New Delhi.

Course II- Indian Tax System

Unit I : Major taxes in India: base of Taxes, direct and indirect taxes, taxation of agriculture, expenditure tax, reforms in direct and Indirect taxes, taxes on services; Non-tax revenue of Centre, State and local bodies;

Unit II : Tax Reforms in India, Chelliah Committee Report – Kelkar committee report I &II -Recent-trends-DTC-Incidence of Major taxes in India

Unit III : Value Added Tax : Design Issues and Options,CEN VAT,MOD VAT,Value Added Tax and Federalism

Reference

1. Bhargava, R.N. (1969), Indian Public Finances, B.D. Bhargava and Sons, Chandausi.
2. Bhargava, P.K. (1976), Taxation of Agriculture in India, Vora and Co. Bombay.
3. Bhargava, P.K. (1984), Some Aspects of Indian Public Finances, Uppal Publishing House, New Delhi.
4. Bhargava, P.K. (1991), India's Fiscal Crisis, Ashish Publishing House, New Delhi.
5. Borkar, V.V. (1971), Income Tax Reform in India, Popular Prakashan, Bombay.

6. Chelliah, R.J. (Ed.) (1997), Towards Sustainable Growth, Oxford University Press, New Delhi.
7. Datt, R. (Ed.) (2001), Second Generation Economic Reforms in India, Deep & Deep Publications, New Delhi.
8. Gandhi, V.P. (1970), Some Aspects of India's Tax Structure, Vora and Company, Bombay.
9. Government of India (1992), Reports of the Tax Reforms Committee — Interim and Final (Chairman: Raja J. Chelliah).

Course III Fiscal Federalism

Unit I: Theory of Fiscal Federalism: The Decentralization Theorem,

Unit II : Theories of multilevel-finance Economic Efficiency Issues in Multilevel Governance, Assignment Issues in Multilevel Government, Theory of Intergovernmental Transfers

Unit III: Principles of federal finance in India, Comparison of federal, unitary and confederal system of government, Characteristics of federalism, Categories, Principles of federalism

Unit IV: Federalism -a comparative study (USA, UK, Australia, Canada, and India)

Course IV: - Fiscal Federalism in India

Unit I: Centre- state financial relations in India- constitutional provisions and various committee recommendations on sharing of revenue- Sarkaria Commission

Unit II: Division of functions and resources asymmetry Vertical and horizontal imbalances

Unit III : Issues of Indian Federalism and Intergovernmental Transfers in India

Unit IV : Issues in Fiscal Decentralization in India in the context of 73rd and 74th Constitutional Amendments- Panchayati Raj

1. Chelliah, Raja J. (1971), Fiscal Policy in Underdeveloped Countries, George Allen and Unwin, London.
2. Government of India (1985), Long Term Fiscal Policy, New Delhi.
3. Peacock, A. and G.K. Shaw (1976), The Economic Theory of Fiscal Policy, George Allen and Unwin, London.
4. Bhargava, R.N. (1967), The Theory and Working of Union Finance in India, Chaitanya Publishing House, Allahabad.
5. Chelliah, Raja J. et. al (1981), Trends and Issues in India's Federal Finance, National Institute of Public Finance and Policy, New Delhi.
6. Gulati, I.S. (1979), Centre State Financial Relations : An Assessment of the Role of Finance Commission, M.S. University of Baroda, Baroda.
7. Lakdawala, D.T. (1967), Union State Financial Relations, Lalwani Publishing House, Mumbai.
8. Musgrave, R.A. (1977), Essays in Fiscal Federalism, Greenwood West Port.
9. Oates, W.E. (1972), Fiscal Federalism, Harcourt Brace and Johanowich, New York.

10. Reports of various Finance Commissions

Course V: Planning and Federalism

Unit I :Finance Commission, structure and functions,Reports of Finance Commission in India,14th Finance Commission- major recommendations

Unit II :Planning Commission,Structure and functions, Planning commission,Five year plans, Devolution of resources and grants, Ayog Resource transfer from Union to States — Criteria for transfer of resources; Problems of states' resources and indebtedness; Transfer of resources from Union and States to local bodies.

Unit III-NITI Ayog-Structure and functions,Co-operative federalism

Course -VI Overview of GST

Unit I: GST in India: An overview- origin- salient features,Structure- components, GST- benefits and issues,GST Council,GSTN

Unit II: CGST, SGST&IGST,Dual GST,Indirect Taxes subsumed under GST

Unit III: GST- A comparative study of selected countries.

Reference

1. Amaresh Bagchi (2006): Towards GST: Choices and Tradeoffs, Economic and Political Weekly, April 8
2. Kavita Rao R and Pinaki Chakraborty (2010): Goods and Services Tax in India: An Assessment of the Base, Economic and Political Weekly, Vol XIV, No 48, November 27
3. Robin Boadway and Ronald L. Watts : Fiscal Federalism in Canada, the USA, and Germany,Working Paper 2004 (6) © 2004 IIGR, Queen's University
4. Bhajan Grewal and Peter Sheehan :The Evolution of Constitutional Federalism in Australia: An Incomplete Contracts Approach, CSES Working Paper No. 22, Victoria University (Melbourne)
5. C P. Chandrasekhar and Girish Kumar R, (2016) GST: Fiscal Centralism in a Federal Polity, M G University

Course VII: Economics of GST

UNIT I: Tax Imposition and Exemption, Evaluation of GST, E-Commerce, Job work, Input service distributors,

Unit II - Levy, Time of Supply, Place of Supply, Input Tax Credit, Transitional issues, Valuation,

Unit III: Customs Duty, Ethical Practice, Compensation cess to States Act, 2017, Exemption List of goods and Services, Miscellaneous Provision.

Reference

1. Kavita Rao R and Pinaki Chakraborty (2010): Goods and Services Tax in India: An Assessment of the Base, Economic and Political Weekly, Vol XIV, No 48, November 27

2. Empowered Committee of State Finance Ministers (2009). First Discussion Paper on GST, Government of India, New Delhi

Course VIII: Law of GST

Unit I-122nd Amendment bill- Legislation, 101 Amendment Act, IGST Act

Unit II- Registration, Returns, Payment, Refund, Assessment, Offences, Penalties, Advance Ruling.

Unit III – Review, Revision, Appeals of GST legislation, Settlement Commission, Inspection, Search, & Arrest, Offences and Fines.

Reference

1. Empowered Committee of State Finance Ministers (2009). First Discussion Paper on GST, Government of India, New Delhi
2. Kavita Rao R and Pinaki Chakraborty (2010): Goods and Services Tax in India: An Assessment of the Base, Economic and Political Weekly, Vol XIV, No 48, November 27.

Programme Project Report (PPR)
for
Distance Learning Programme under School of Distance Education

Post Graduate Diploma In Management of Learning Disability (PGDMLD)

Course Co-ordinator: Dr.K. Muhamad Mustaffa

Academic support by
Institute of Research in Learning Disability (IRLD)
School of Behavioral Sciences
Mahatma Gandhi University
Kottayam, Kerala

**PG DIPLOMA IN MANAGEMENT OF LEARNING DISABILITY
(PGDMLD)**

(Distance Learning Programme – Diploma Programme)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Post Graduate Diploma Programme has been designed by the School of Behavioural Sciences and is to be conducted by the School of Distance Education with the academic support of the School.

School of Behavioural Sciences established in 1988 under Mahatma Gandhi University has a variety of unique higher education programmes aimed at developing human resources in the field of disability rehabilitation and mental health for the upliftment of the weaker sections of the society. In India, we have many National Institutes instituted for the care of each of the disabilities. School of Behavioural Sciences is one of the first University departments in India that started academic programmes in this field and addressed the problems and issues in all disabilities under a single roof with a holistic nature in the 1980's itself. Academic programmes offered by the School are interdisciplinary in nature. Research is undertaken by potential scholars in the various aspects of Disability Rehabilitation, Psychology, Special Education, Mental Health, Behavioural Medicine and Rehabilitation Nursing. The School intends to develop rehabilitation professionals and researchers in different areas namely Rehabilitation Psychology, Special Education, Behavioural Medicine, Rehabilitation

Nursing, and Guidance Counselling. The School conducts community extension programmes at three levels- School (regular and special schools), college and community. The School has a Vocational Rehabilitation Centre for the adults with intellectual disability.

a) Programme's Mission & Objective

The field of Learning Disability (LD) is a challenging, rewarding, and sometimes frustrating endeavor. It is a reality that there are a number of learners who have difficulty in processing information that is presented to them auditorily, or visually. Some cannot learn efficiently when their auditory, visual and tactual kinesthetic process is not synchronized to operate as functional unit when attempting to learn or perform a task. In order to address the academic issues of Learning Disability especially in the identification and management. We need learned and trained persons.

Post Graduate Diploma in Learning Disability is to develop an insight and understanding on the theoretical foundations of Learning Disability as well as competencies of effective Assessment and management. Following are the specific objectives of the programme.

On completion of the programme the students will develop:

- Understanding on the nature and importance of various disabilities.
- Skill to identify children with Learning Disabilities and assess their academics.
- Understanding the management of Children with Learning Disabilities theoretically and practically.
- Understanding on the importance of Rehabilitation of individuals with Learning Disabilities and develop skill for educational rehabilitation

b) Relevance of the program with HEI's Mission and Goals:

Since Learning Disability included as one of the category from disability in the Right to Person with Disability Act 2016. Later awareness and understanding among the public and the parents has become essential to ensure the right of Person with Learning Disability. Moreover in our country there is lack of sufficient institutions which runs the educational programmes for the management of Learning Disability. We need professionals in the field to educate in rehabilitate person with disabilities. Especially person with learning disability. And it is understood that no universities in Kerala provide educational facilities in distant mode those who are rarely needs of training and education, but engaged in various jobs, and livelihood activities to meet the above purpose the academic programme-post graduate diploma in management of learning disability has been designed. This will be very beneficial to all interested candidates having under graduation in any subjects and those who are willing to contribute the educational rehabilitation of individual with learning disability. So university decided to provide an opportunity to join in the distance programme of PG Diploma in Management of Learning Disability.

c) Nature of prospective target group of learners:

This programme is open to all those who are interested in developing knowledge and understanding in the identification and management of Learning Disabilities. Candidates who have passed Graduation in any subject are eligible for admission to the Post Graduate Diploma in Learning Disability

d) Appropriateness of Programme to be conducted in open and distance learning mode to acquire specific skill and competence:

The course gives emphasis to both theory and practical aspects. After completion of the course the students can perform as a remedial instructor and as a rehabilitation worker in the field of education. The programme is designing such a way that the candidate with required qualification can obtain the knowledge understanding and skills in the identification, assessment, and management of learning disabilities. The study material and the practical activities are designed and arranged appropriately by considering the distant learners.

e) Instructional Design

The School with its rich experience of the past 29 years and with its multidisciplinary resources including faculty members and research students developed a curriculum and syllabi of the programme. The proposal was presented by the programme coordinator in the Faculty Council meeting and the Council approved the same and recommended to the University for Further Actions.

It is a one year programme with 32 credits and 192 hours of contact classes. Each credit is assumed as equivalent to 30 hours of students study comprising of learning activities such as reading, comprehending the print material, using of multimedia, attending counseling sessions and writing assignment responses. Thus a 4 credit course involves 120 hours of study.

Structure and Framework of the Programme

Course Duration: 1 year							
SEMESTER 1							
Sl. No.	Course Code	Title	Instructional hours	Credit	Marks		
					Internal	External	Total
1	SBDEPGD1701	Introduction to disability and Special Education	12	4	20	80	100
2	SBDEPGD1702	Institutional Visit/project	12	4	20	80	100
3	SBDEPGD1703	Identification and assessment of Learning Disability	12	4	20	80	100
4	SBDEPGD1704	Practical -Assessment of LD	60	4	20	80	100

Total			96	16	80	320	400
SEMESTER 2							
5	SBEDPGD1705	Management techniques of learning disability	12	4	20	80	100
6	SBEDPGD1706	Practical -Management of LD	60	4	20	80	100
7	SBEDPGD1707	Principles of Rehabilitation	12	4	20	80	100
8	SBEDPGD1708	Case Study/project	12	4	20	80	100
Total			96	16	80	320	400
Grand Total			192	32	160	640	800

**SBE in the course code stands for the School of Behavioral Sciences, DE stands for Distance Education, PGD stands for Post Graduate Diploma, 17 stands for the year 2017 in which the curriculum is developed, and the last two digits of the code indicates the numerical order of course in the programme.*

f) Procedure for Admission, Curriculum Transaction and Evaluation

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. Graduation is the minimum eligibility for the admission. Fee structure will be decided by the University. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

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Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

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< 40	F	Fail	0
Absent	Ab	Absent	0

'P' grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Certificate programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

GPA =

$$\frac{\text{Total credit points earned by the student from all the required courses of the programme}}{\text{Total credits of all courses required in the programme}}$$

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

Equivalent Percentage = (GPA obtained) X 10

(g) Requirement of the laboratory support and Library Resources:

All infrastructural support of the Centre will be extended to the learners as per the requirement.

Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

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A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000
Journals	232
Bound Journals	7500
Ph.D Theses	2135

E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books	Books added during the last three years
	School of Behavioural Sciences	1464	202

g) Cost estimates of the programme and the provisions

Budget estimate (for 100 students)

Sl.no	Item	Amount(Rs.in Lakhs)
1.	Manpower	4
2	Study Material	2
3	Practicals	1.5
4	Internal assessment	.5
5	End semester examination	1
	Total	9

Total Programme fee: Rs.9000/-

h) Quality Assurance Mechanism and Expected Programme Outcomes

The quality of the programme will be ensured through strict monitoring by an executive committee including the Coordinator of the programme, the subject experts, Head of the School of Distance Education, and the head of IRLD. The Coordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analyzed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

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SYLLABUS

PG DIPLOMA IN MANAGEMENT OF LEARNING DISABILITY (PGDMLD)

SBEDEPGD1701

INTRODUCTION TO DISABILITIES AND SPECIAL EDUCATION

Objectives

The student is expected to acquire a basic knowledge on identification and characteristics of various disabilities such as

1. Blindness and Low Vision
2. Hearing Impairment
3. Mental Retardation and Mental Illness
4. Locomotors, Neurological and Leprosy Cured
5. Neuro-developmental Disorders
6. Multiple Disabilities, Deaf blindness

Course Content

Unit 1: Blindness and Low Vision

- 1.1 Definition and Identification
- 1.2 Incidence and Prevalence
- 1.3 Characteristics
- 1.4 Causes and Prevention
- 1.5 Intervention and Educational Programmes

Unit 2: Hearing Impairment

- 2.1 Definition and Identification
- 2.2 Incidence and Prevalence
- 2.3 Causes and Prevention
- 2.4 Types of Hearing Loss and Characteristics
- 2.5 Modes of Linguistic Communication and Educational Programmes

Unit 3: Mental Retardation

- 3.1 Definition and Identification of Mental Retardation and Mental Illness
- 3.2 Incidence and Prevalence, Causes and Prevention
- 3.3 Characteristics -Mild, Moderate, Severe, Profound
- 3.4 Types and Classification of Mental Retardation and Mental Illness
- 3.5 Intervention and Educational Programmes

Unit 4: Leprosy Cured, Neurological and Locomotor Disabilities

- 4.1 Definition and Classification
- 4.2 Incidence and Prevalence
- 4.3 Causes and Prevention
- 4.4 Types, Classification and Characteristics
- 4.5 Intervention and Educational programmes

Unit 5: Autism Spectrum Disorders

- 5.1 Concept and Definition of Autism.
- 5.2 Characteristics of Autism
- 5.3 Etiological Factors
- 5.4 Types and Associated Conditions
- 5.5 Intervention and Educational Programmes

Unit 6: Learning Disabilities

- 6.1 Concept and Definition of Learning Disabilities.
- 6.2 characteristics of LD
- 6.3 Etiological Factors
- 6.4 Types and Associated Conditions
- 6.5 Intervention and Educational Programmes

Practical 1- Field Visit (SBEDEPGD1702)

- Visit to any two Special Schools and Preparation of report.
- Visit to any two School having inclusive education and preparation of report.

Reference books

1. Mustafa and Jibin(2016)Inclusive education:thought and practices,IPH Publishes.New Delhi
2. Byrne, M., Shervanian, C., Introduction to Communicative Disorders. New York Harper & Row, 1977.
3. Mani, M.N.G., Techniques of teaching blind children, New Delhi Sterling Publishers, 1992.
4. Jangira, N.K., & Mani, M.N.G., Integrated Education of the visually Handicapped, Management Perspectives. Gurgaon Academic Press, 1991.
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7. Davis, (Ed.) Our forgotten children Hard-of hearing pupils in the schools. Minneapolis National Support Systems Project 1977.
8. Overton, T. (1992). Assessment in Special Education An Applied Approach. New York McMillan.

9. Panda, K.C. (1997). Education of Exceptional Children. New Delhi Vikas Publications.
10. mustafa Muhamad(2017)Education of differently abled(2016)and exclusive tendency in Inclusive Education,SBeS MG University,Kottayam
11. Subba Rao, T.A. (1992). Manual on Developing Communication Skills in Mentally Retarded Persons, NIMH, Secunderabad.
12. Van Riper, C.A. and Emerick. L. (1990), Speech Correction-An introduction to speech pathology and Audiology. Eighth Edition, Prentice Hall.
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14. Baine, D. (1988) Handicapped Children in Developing Countries, Assessment, curriculum and Instruction. University of Alberta, Alberta.
15. Longone, 3. (1990). Teaching Retarded learners Curriculum and Methods for improving instruction. Allyn and bacon Boston.
16. Narayan, & Kutty, A.T.T. (1989) Handbook for Trainers of the Mentally Retarded persons. Pre-primary level. NIMH, Secunderabad.
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19. Muricken, Jose S.J. and Kareparampil, G (1995). Persons with Disabilities in Society. Trivandrum Kerala Federation of the Blind.
20. Sivarajan and Mustafa(2017)Creating inclusive classrooms,Calicut University,cc publication.Thenhippalm
21. Myreddi, V. & Narayan, J. Educating Children, Secunderabad, NIMH
22. Narayan, J. Educating Children with Learning Problems in Regular Schools, Secunderabad, NIMH.

SBEDEPGD1703

IDENTIFICATION AND ASSESSMENT OF STUDENTS WITH LEARNING DISABILITIES

OBJECTIVES:

After studying this paper, the student is expected to

1. Explain the meaning and concept of screening, identification, assessment, measurement and evaluation of children with LD
2. Use the appropriate tools and techniques of assessment for children with learning disabilities.
3. Demonstrate skills in diagnosing the educational problems encountered by children with LD.
4. Demonstrate ability to construct / develop tools for assessment to identify areas of deficits in children with LD for the purpose of intervention.
5. Demonstrate the ability to write reports using the findings of the assessment.

Course Content:

Unit 1 : Assessment of Learning Disability

- 1.1 Concepts of screening, identification, assessment, measurement and Evaluation.
- 1.2 Assessment of educational needs of children with LD
- 1.3 Early identification and intervention of children with learning disabilities
- 1.4 Identification criteria – Inclusion, exclusion and discrepancy
- 1.5 Distinction between children with learning disabilities, slow learners and children with mental retardation

Unit 2 : Types of Assessment

- 2.1 Formal and informal Assessment
- 2.2 Criterion Referenced Tests (CRT) and Norm Referenced Tests (NRT)
- 2.3 Teacher made tests, Curriculum Based Assessment (CBA)
- 2.4 Functional assessment of life skills and ecological assessment.
- 2.5 Interpretation of tests reports and results for educational programming

Unit 3 : Assessment areas

- 3.1 Attention and Perception
- 3.2 Memory
- 3.3 Language – Listening, thinking and speaking
- 3.4 Social emotional aspects
- 3.5 Metacognitive skills.

Unit 4 : Assessment of basic curricular skills

- 4.1 Readiness skills – pre academics
- 4.2 Reading skills
- 4.3 Language (First language (L1) Second language (L2)
- 4.4 Writing and Spelling skills
- 4.5 Math skills

Unit 5 : Assessment Tools

- 5.1 Use of formal assessment tools
 - Wechsler's Intelligence Scale
 - Grade Level Assessment Device for children with learning problems in regular schools (GLAD)
 - Vineland Social Maturity Scale (VSMS)
- 5.2 Teacher made Tests
- 5.3 Additional tools of assessment – Observation, Interviews, Questionnaires, Rating Scales, Checklist.
- 5.4 Types of records-Assessment records, Primary and Secondary sources, portfolio assessment, Initial and Periodic assessment.
- 5.5 Interpretation of assessment and report writing

Practical 2 –Assessment of LD (SBEDEPGD1704)

- Preparation and use of interviews / observation schedule for informal assessment.(Apply Either in school or in Clinic)
- Preparation of a teacher made test on a given academic area
- Development of an assessment tool in the given area

References:

1. Ashlock, P. (1972). Errors Patterns in Competition. A Semi-Programmes Approach. `Columbus. Ohio-Charles
2. Mustafa and Jibin (2016)Inclusive education: thought and practices, IPH Publishes, New Delhi
3. Bender, W. N.,(199`5)Identification and Teaching Strategies Learning Disabilities, Characteristics, identification and coaching categories New York: Allyn bacon
4. Lerner, J. W(198`5). Learning Disabilities. Boston: Houghton Mifflin
5. Lindsay, G. (Ed.) (1984). Screening for children with Special Needs. London: Groom
6. Mustafa and Aiswarya. (2017)Learing Disabilities; Psychological and educational perspectives, IPH Publishers, New Delhi
7. Swady, E.R. (1989) Diagnosis & Correction of Reading, Difficulties, Boston: Allyn & Bacon
8. Mustafa Muhamad (2017)Education of differently abled (2016)and exclusive tendency in Inclusive Education, SBeS MG University, Kottayam
9. Lee. S H., Harris Karen R., Graham Steve. (2003) Handbook of Learning Disabilities, the Guilford Press, Ist Edition,
10. Taylor, B and others (1988) Reading Difficulties: Instruction and Assessment, Random House, New York.
11. Venkateswanshu, D.,(2005) Diagnosis and remediation of mathematical difficulties, New Delhi: Neel Kamal publications:
12. Sivarajan and Mustafa(2017)Creating inclusive classrooms, Calicut University, CC publication, Thenhippalam

SBEDEPGD1705 MANAGEMENT TECHNIQUES OF LEARNING DISABILITIES

OBJECTIVES:

After studying this paper, the student is expected to

1. Describe the principles, types and areas of curriculum development
2. Demonstrate skills in applying different intervention programmes for children with learning disabilities.
3. Make effective use of appropriate teaching strategies based on the child specific processing deficits.
4. Teach the curricular areas using appropriate remedial techniques
5. Demonstrate competencies in effective classroom management and collaboration with related professionals and community

Course Contents:

-

Unit 1: Curriculum Design

- 1.1 Curriculum Design: Concept, definition and principles.
- 1.2 Approaches to curriculum development: Developmental, Child centered, Subject based, Holistic and Eclectic
- 1.3 Types of curriculum – core, collateral and support
- 1.4 Curriculum adaptation: curricular and co-curricular - concept and process
- 1.5 Individual Education Plan (IEP) Further Education Plan (FEP) and Life Long Education

Unit 2: Remedial Approaches

- 2.1 Remediation: Concept, Principles and Perspectives
- 2.2 Behavioral approach
- 2.3 Cognitive approach
- 2.4 Multi sensory approach
- 2.5 Collaborative teaching approach

Unit 3: Remedial intervention in Cognitive and Meta-cognitive Processes

- 3.1 Attention and perception – strategies for enhancing arousal, sustenance, attention span and auditory and visual motor perception
- 3.2 Memory – strategies for enhancing short-term, long-term and sequential memory
- 3.3 Thinking and reasoning – strategies for enhancing thinking and reasoning skills
- 3.4 Language – strategies for enhancing receptive and expressive language
- 3.5 Metacognition – strategies for enhancing metacognition and study skills.

Unit 4: Remedial intervention in Curricular area / skills

- 4.1 Reading
- 4.2 Writing
- 4.3 Spelling
- 4.4 Math
- 4.5 Social skills

Unit 5 : Management of children with LD

- 5.1 Management of students with LD in the inclusive classroom:
Peer tutoring, cooperative learning, team teaching and shadow teaching
- 5.2 Cognitive Behavior Modification (CBM)
- 5.3 Guidance and Counseling: a) Definition, Scope and Technique
b) Guidance & Counseling for Parents
c) Guidance & Counseling for students with LD
- 5.4 Professional and Teacher Collaboration
- 5.5 Community Partnerships

Practical 3-Management of LD(SBEDEPGD1706)

• Conduct of Camps for remedial program for LD and for community awareness programme after internship in a reputed counseling / Clinical institution.

Reference books

1. Ashlock, P. (1972). Errors Patterns in Competition. A Semi-Programmes Approach. Columbus. Ohio-Charles.
2. Adamson & Adamson. (1979) Handbook of Specific Learning Disabilities, Gardner Press USA
3. Bender, W. N., (1995) Identification and Teaching Strategies Learning Disabilities, characteristics, identification and coaching categories New York: Allyn Bacon
4. Chadha A (2002) A guide to educating children with learning disabilities. New Delhi: Vikas publication.
5. Eddy G.L. (1997) Slow learners : Their psychology & instruction, New Delhi: Discovery Pub.
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7. Hayes and Stevenson (1980) Teaching ED/LD Child, Vol. I to IV, Acropolis Books Ltd.
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10. Lerner J. W. and Kliner. F (2005) Learning Disabilities and Related Disorder
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14. Myklebust, H (1983) Progress in Learning Disabilities, Gruene and Stratton, New York .
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17. Panda, K.C. (1997) Education of Exceptional Children. Vikas Publications, New Delhi:
18. Pandey J, Thapa Komilla. (2008) "Perspectives on learning disabilities in India: Current practices and prospects" Sage Publications, New Delhi.
19. Reddy G.L. and Rama R. (2000) Education of children with special needs New Delhi – Discovery Pub.
20. Reddy L. G., Rama R. and Kusuma A. (2000) Learning Disabilities: a practical Guide to Practitioners, New Delhi: Discovery Publishers.

21. Reid. K (1988) Teaching the Learning Disabled, Allyn and Bacon,Boston,.
22. Langone, J (1990)Teaching Students with Mild & Moderate Learning problems, New York: Allyn & Bacon, Boston.
23. Lerner, J. W(1985). Learning Disabilities. Boston: Houghton Mifflin
24. Smith, D.D. (1981) Teaching the Learning disabled Child. Eaglewood. Cliffs: N.J. Prentice Hall.
25. Strichart, S.S. (1993) Teaching Study Strategies to Students with Learning Disabilities, Allyn & Bacon Boston
26. Swady, E.R. (1989) Diagnosis & Correction of Reading, Difficulties, Boston: Allyn & Bacon
27. Lee. S H., Harris Karen R., Graham Steve. (2003) Handbook of Learning Disabilities, the Guilford Press, Ist Edition,
28. Taylor, B and others (1988) Reading Difficulties : Instruction and Assessment, Random House, New York,
29. Venkateswanshu, D .,(2005) Diagnosis and remediation of mathematical difficulties, New Delhi: Neel Kamal publications
30. Sivarajan and Mustafa(2017)Creating inclusive classrooms, Calicut University, CC publication, Thenhippalm
31. Raj, F (2010) Breaking Through – A hand book for parents and teachers of children with specific learning disabilities, Secunderabad: Vifa Pub
32. Mustafa and Aiswarya .(2017)Learing Disabilities;psychological and educational perspectives, IPH Publishers, New Delhi

SBEDEPGD1707

PRINCIPLES OF REHABILITATION

OBJECTIVES:

After studying this paper, the student is expected to

1. Describe the nature, concept and definition of rehabilitation
2. Describe theories used in the understanding of LD.
3. Narrate the causes of learning disabilities-medical, neurological and psycho- social.
4. List types of educational rehabilitation for children with learning disabilities.
5. Identify the areas of vocational rehabilitation.
6. Understanding of various legislations in the field of persons with disabilities.

Course Content:

Unit 1: Development in the field of rehabilitation

1. Nature, Concept, Definition of rehabilitation.
1. Historical overview of LD
 1. Contribution of Orton – Gillingham, Myklebust, Kephart, Fernald, Cruickshank, Kirk, Reid and Hreshko
 1. LD: issues in adulthood
 1. Services for LD -National and International scenario

Unit 2: Causes and associated conditions of LD

- 2.1 Medical
- 2.2 Social and psycho-neurological
- 2.3 Deficits in information processing
- 2.4 Language impairments and LD
- 2.5 LD and associated conditions (ADD & ADHD, Scotopic sensitivity)

Unit 3: Educational Rehabilitation

- 3.1 Special school education.
- 3.2 Integrated education
- 3.3 Inclusive education
- 3.4 Mainstreaming.
- 3.5 Normalization.

Unit 4: Vocational Rehabilitation

- 4.1 Concept and need of vocational rehabilitation
- 4.2 Type of vocational placement
- 4.3 Sheltered and home based employment
- 4.4 Open and competitive sector employment.
- 4.5 Co-operative employment

Unit 5: Legislation in special education and Rehabilitation

- 5.1 International initiatives
- 5.2 National policy on education 1986
- 5.3 RCI Act 1992
- 5.4 PWD Act 1995
- 5.5 National Trust Act 1999 and Right to Education Act

Practical 4-Case study(SBEDEPGD1708)

Case study from an Institution included

- Analyze the causes of LD
- Diagnose case based on profile given.
- Preparation of report

Reference books

1. Alfred Adamson & Adamson. (1979) Handbook of Specific Learning Disabilities, Gardner Press USA
2. Bryan, T. and Bryan, J.H. (1975). Understanding Learning Disabilities. New York
3. John, S.W and Morasky, R.L (1980) Learning Disabilities. New York: Allyn and Bacon
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5. Mustafa and Jibin (2016) Inclusive education: thought and practices, IPH Publishes. New Delhi
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8. Raj F (2010) Breaking Through – A hand book for parents and teachers of children with specific learning disabilities, Secunderabad: Vifa Pub
9. Reddy L. G., Ramaa R. and Kusuma A. (2000): Learning Disabilities: a practical Guide to Practitioners, New Delhi: Discovery Publishers
10. Mustafa Muhamad(2017)Education of differently abled(2016)and exclusive tendency in Inclusive Education, SBeS MG University, Kottayam
11. Gokhale.S.D(1984) Rehabilitation policies and programs Somaiya Publications New Delhi
12. Sunder S (2010) Text book of rehabilitation Jaypee . New Delhi
13. C John Goodwill and M. Anne Chamberlin(1988) Rehabilitation of physically disabled Adult Goom Helm, New south wales, Australia
14. Sivarajan and Mustafa(2017)Creating inclusive classrooms, Calicut University, CC publication, Thenhippalm

Programme Project Report (PPR)

for

Distance Learning Programme under School of Distance Education

Post Graduate Diploma in Science of Teaching (PGDST)

Course Co-ordinator: Dr. Sajna Jaleel

Academic support by

School of Pedagogical Sciences (SPS)

Mahatma Gandhi University

Kottayam, Kerala

POST GRADUATE DIPLOMA IN SCIENCE OF TEACHING

(Distance Learning Programme - Certificate Programme)

Programme Project Report

Mahatma Gandhi University started the School of Distance Education in 1989 with the vision of providing the opportunity for quality education to all realms of society. Since the beginning, thousands of students have availed themselves of this opportunity for higher education to a great extent throughout Kerala. Many students outside the State have also benefited from this. But after the new directions of the UGC in 2014, the University had stopped all the Off-Campus Centres of the School of Distance Education both inside and outside the State.

Now it is the new endeavour of the School to revamp its functioning by offering different types of Diploma and Certificate programmes very relevant to contemporary society, in addition to the conventional Graduate and Post Graduate programmes. This is being done with the academic and infrastructural support of the eminent Schools and Interdisciplinary Interuniversity Centres of the University. All these Schools/ Centres have already conducted similar Programmes or Post Graduate Programmes in the same area. This Post Graduate Diploma programme has been designed by the School of Pedagogical Sciences and is to be conducted by the School of Distance Education with the academic support of the School.

The School of Pedagogical Sciences under Mahatma Gandhi University, Kottayam started functioning in 1992 with the vision of transforming teacher education into a vocation that is solidly grounded in research. It is expected to meet the challenges facing education by attaining / establishing and maintaining high quality education and excellence in today's educational institutions.

a) Programmes' mission and objectives

To create professionally trained teachers who are in high demand in the global Scenario

The objectives of the course are,

- To provide knowledge , experience and guidance to teachers
- To impart an adequate knowledge in the art and science of teaching
- To equip the prospective teachers with necessary pedagogic skills
- To develop proper attitude towards teaching
- To enable the teachers to make use of instructional facilities
- To enable the teachers to understand the individual differences of the learner and teach better

b) Relevance of the programme with HEI's Mission and goals

The course is mainly focussing on teachers /aspiring teachers who have not got a professional training in teaching especially teachers working in Arts and Science colleges, Engineering and Medical field /law. There is a need for essential knowledge on Science of Teaching for all those who aspire to become teachers/ are chosen their profession as teachers. This programme is meant to those who are complete their professional courses(Engineering/Medicine/etc)/Master's degree (M. Sc/M.A/etc) and wish to become teachers in their respective field. The programme is offered through open and distance learning mode which will be easier for those who are working. Moreover, there is a necessity for the training to those who aspire to working abroad as teachers in HEI's. The course equip everyone to be a '21st century teacher'.

c) Nature of prospective target group of learners

The course is targeting on teachers who were working and those who wish to work in the teaching sector after completing their Professional courses and Masters Degree. As the course is offered in a distance mode, it will be easier for women, people working abroad, minorities etc .

d) Appropriateness of the programme to be conducted in open and distance learning mode to acquire specific skills and competence

Quality of an educational institution depends mainly on the quality of its teachers. It is well said that training makes man perfect. So training of in-service teachers and pre-service teachers in all sectors (School, Degree, post graduation and professional)are equally demanding.

e) Instructional Design

The course is 2 semester, 32 credits programme offered through distance mode. Print Audio , Video, Computer Aided and e-learning, e-contents are the different medias of communication . There are adequate contact classes and the assessment involves both internal as well as external components. Each student has to submit 8 assignments. Each student has to pass through 5 discussion, 5 demonstration and 10 teaching practice sessions. Each student

has to submit one e-content in their area of specialisation. Each student has to conduct a research work and submit a Dissertation based on their research work.

Course Summary of PG DIPLOMA IN SCIENCE OF TEACHING

Course Co-ordinator: Dr. Sajna Jaleel, Assistant Professor, School of Pedagogical Sciences, Mahatma Gandhi University,						
Course Duration:12 months						
Semester I						
Course Code	Course Name	Credits	Contact classes (Hours)	Internal Marks	External Marks	Total Marks
SDE-PS-1	Introduction to Art and Science of Teaching	4	12	20	80	100
SDE-PS-2	Components of Teaching	4	12	20	80	100
SDE-PS-3	Educational Technology	4	12	20	80	100
SDE-PS-4	Discussion , Demonstration	2	30	50		100
	Teaching Practice	2	60	50		
Total		16				400
Semester II						
SDE-PS-5	Instructional Design and e-contents in teaching	4	12	20	80	100
SDE-PS-6	Introduction to Educational Research and Statistics	4	12	20	80	100
SDE-PS-7	Educational Evaluation	4	12	20	80	100
SDE-PS-8	Research work and Dissertation	4				100
Total		16	162			400

Semester wise credits and marks

Semester	Credits	Marks
Semester I	16	400
Semester II	16	400
Total	32	800

Scheme of Evaluation

The academic growth of the student is assessed through internal evaluation and end semester examination.

f) Procedure for Admissions , Curriculum transaction and Evaluation

Candidates (graduates, postgraduates) and those who were in the field of teaching are eligible for admission irrespective of age. Programme delivery will be through distance learning along with the practical works .The study materials will be delivered through online and print forms. Assignments and reports can be submitted online. The candidate will be graded based on the indirect grading pattern.

Admission to the programme will be done by the University through a common procedure for all the programmes under the School of Distance Education. Fee structure will be decided by the University. The School will prepare an academic calendar/activity planner and will be circulated among all the learners at the time of admission itself. The academic calendar will include all the significant activities, important dates, schedule of submission of assignments, schedule of contact classes, schedule of examinations, etc.

Evaluation of the courses shall be done by the faculty themselves on the basis of internal assessment and end semester examinations. 20% of the marks will be decided by the internal evaluations and the remaining 80% by the end semester examinations which will be done by the University. The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points.

Each student shall be required to do one Assignment/Book review/Debate/Seminar/Presentation of case study for each course. Assignments/book review after valuation shall be returned to the students. The teacher shall define the expected quality of the above in terms of structure, content, presentation and the like, and inform the same to the students.

Grading System will be followed for the evaluation on a ten point scale. The details of the grading system are given in the following Table.

Percentage Equivalence of Grade:

Range of % of Marks	Grade Letter	Performance	Grade Point
95 - ≤ 100	O	Outstanding	10
85 - < 95	A plus	Excellent	9
75 - < 85	A only	Very Good	8
65 - < 75	B plus	Good	7
55 - < 65	B only	Above Average	6
45 - < 55	C	Average	5
40 - < 45	P	Pass	4

< 40	F	Fail	0
Absent	Ab	Absent	0

'P' grade is required for a minimum pass in a course. The minimum GPA required for a pass in the Certificate programme is 4.

Calculation of Grade Point Average (GPA) :

Credit Points for the Course = (No. of Credits assigned for the course x Grade Point secured for that course).

GPA indicates the performance of a student in the programme. GPA is based on the total **credit points** earned by a student in all the courses divided by the total number of credits assigned to the courses required in the programme.

Note: GPA is computed only if the candidate passes in all the required courses (gets a minimum required grade for a pass in all the required courses as per the curriculum).

$$\text{GPA} = \frac{\text{Total credit points earned by the student from all the required courses of the programme}}{\text{Total credits of all courses required in the programme}}$$

This formula shall be printed on the Grade Card issued to the student with a note that it could be used to convert the grades into mark-percentages. (The details of the grading system as indicated above shall also be printed on the Grade Card).

Conversion of GPA to Grade

GPA	Grade
10	O
9.0 - < 10	A plus
8.0 - < 9	A only
7.0 - < 8	B plus
6.0 - < 7	B only
5.0 - < 6	C
4.0 - < 5	P
< 4	F
Absent	Ab

Conversion of GPA to percentage

$$\text{Equivalent Percentage} = (\text{GPA obtained}) \times 10$$

g) Requirement of the Laboratory, Support and Library resources

The department offers a vast frontier of resources including a net connected library, fully equipped computer lab, Psychological lab and Technological lab to the learners.

Details of Laboratory support required for the programme

The School offers a vast repertoire of resources including a net connected library, fully equipped computer lab, psychological lab and technological lab to the learners.

The computing facility available in the campus as well as the regional centers can also be used for this purpose. Some external computing facilities may be hired based on the number of enrolment. Mahatma Gandhi University Library and Information System consists of University Library, libraries of the Schools and 4 study centre Libraries. The University Library was established in 1989. The University Library which is situated in the main campus occupies purpose-built accommodation, and provides a variety of facilities and has a user-friendly environment. These include individual work spaces, room for group study and teaching, audio-visual access and online information retrieval system. The building of the University Library is 2000 sq.m in area consisting of the cellar, the ground floor and the first floor.

Academic as well as public users are given the facility to use the library. Special category membership is provided to journalists. The library is providing service from 8 am to 8 pm in three shift timings for its staff. The library functions on an average of 345 days in a year. The libraries of teaching departments are open during working hours of the Schools. Reading space is provided in all the three floors housing the various sections of the library. The library provides reading facility to the visually impaired users too. For this, an electronic lab custom made for visually and physically challenged users has been set up during 2016.

The University Library has a Library Advisory Committee. It is an 18 member committee with Vice-Chancellor as Chairman and University Librarian as Convener.

The library has a collection of 59,000 books, 232 journals, 2,135 Ph.D. theses and has access to 15000+ e-journals under E-Shodh Sindhu. The activities of the Library are comprehensively automated using open source library management software KOHA. OPAC, Journal Article Index, By monthly Bibliography compilation and Literature Search Service are also available

The library is a member of the INFLIBNET Centre, Ahmedabad as well as DELNET (Developing Library Network). As a member of these networks, the library provides access to the resources of other major libraries in the country. In addition to the access to UGC INFONET consortium, it has access to major online databases, such as EBSCO, ProQuest dissertations and theses, Oxford Scholarship Online, IEEE All Society Periodicals Package etc. Mahatma Gandhi University had won the State IT Award during the year 2009 in the e-learning category for its university online theses digital library. The various department libraries have a good collection of subject specific books and journals.

A. MAHATMA GANDHI UNIVERSITY LIBRARY	
Category	No.
Books	59000

Journals	232
Bound Journals	7500
Ph.D Theses	2135
E-Journals (in UGC-Infonet, renamed as E-ShodhSindhu)	15000
Online databases (in UGC Infonet)	11
Online Archives subscribed	185 Titles
Online databases subscribed	4
E-books	7338
DVDs: Educational Videos	293

B	Name of School/Centre	Total No. of books
	School of Pedagogical Sciences	6109

h) Cost estimate of the programme and the provisions:

Budget estimate (for 100 students)

S.No.	Item	Amount (Rs. in Lakhs)
1.	Manpower	4
2.	Study material	3.5
3.	Library/Laboratory	1.5
4.	Internal assessment	1
5.	End semester examination	1.5
	Total	11.5

Total Programme fee: Rs.12000/-

i) Quality assurance mechanism and expected programme outcomes:

The quality of the programme will be ensured through strict monitoring by an executive committee including the Coordinator of the programme, the subject experts, Head of the School of Distance Education, and Head of the School of Pedagogical Sciences. The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analysed to draw conclusions for effecting improvement. Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality assurance Cell of the University from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.

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Detailed Syllabi

SEMESTER I COMMON CORE COURSE

SDE-PS-1: INTRODUCTION TO ART AND SCIENCE OF TEACHING COURSE OUTLINE

Contact Hours: 120 hrs

Maximum marks :100
(External-80,Internal-20)

Duration of Exam:3 hrs

Number of Credits:4

Courses Objectives

On completion of this course, the student will be able

1. to understand the concept of Pedagogy(Science of Teaching) and its various determinants.
2. to understand the implications of philosophical, Psychological and Sociological perspectives
3. to evaluate relevance of different Teaching Theories
4. to explore the process of curriculum development
5. to understand curriculum transaction in relation to its requirements, material and process

MODE OF TRANSACTION

Lecture cum discussion, reading, print materials, multimedia/e-contents, counselling sessions, Assignments

UNIT I- PEDAGOGY:SCIENCE OF TEACHING (20 hrs)

Concept of Pedagogy-Meaning, Scope and Relevance

Theoretical Bases of Pedagogy-Philosophical, Psychological and Sociological.

Pedagogy and Education-Education as an Interactive Process - Bi-polar-Tri-polar and Multipolar Process

Platforms of Pedagogy-Formal, Informal and Non- formal Institutions

Pedagogy and its relationship with other Disciplines.

Pre-service and In-service Teacher Education-Qualities and characteristics of effective Teacher

UNIT II-PHILOSOPHICAL PERSPECTIVES (20 Hrs)

Fields of Philosophical enquiry-metaphysics-meaning, area of operation.

Epistemology-Meaning and scope of knowledge, ways of knowing, types of knowledge.

Axiology-meaning and scope, place of ethics, aesthetics and logic in education.

Teacher and Educational Philosophy.

UNIT III-PSYCHOLOGICAL PERSPECTIVES (20 Hrs)

Educational Psychology: Application in the theory and Practice of Education.

Scope of Educational Psychology in terms of Knowledge centeredness, Learner centeredness, teacher centeredness, Environment centeredness and Assessment centeredness.

Learning and Instruction-Learning Styles, Teaching Styles, Transfer of Learning, Motivation.

Intelligence-Theories of Intelligence, Multiple Intelligence, Metacognition, creativity

UNIT IV- SOCIOLOGICAL PERSPECTIVES

(20 Hrs)

Relationship between Education and Sociology

Education as social System-Relationship between Education and other subsystems: Economy, Polity, Culture and religion-Role of Teacher

Socialisation and Social Change-Impact of Education in Modernising Indian Society

UNIT V- TEACHING THEORIES

(10 Hrs)

Mental-discipline theories- Naturalistic theories (Johann Heinrich Pestalozzi, Jean-Jacques Rousseau), Apperception theories(John Locke, Johann Friedrich Herbart, Jean Piaget,) Conditioning and behaviourist theories(Thorndike, Pavlov, Skinner and Hull), Cognitive theories(Tolman, Ausubel), Constructivist perspectives of Learning(Vygotsky, Bruner), Information Processing(Sternberg and Kosslyn, Donald Norman)-Gagne's hierarchy of learning

UNIT VI- CURRICULUM, RESEARCH METHODS IN PEDAGOGY(20 Hrs)

Curriculum-Components of Curriculum-curriculum Development-Models of curriculum Development(Technical Scientific and Non-Technical Model)-Approaches to Curriculum Development (experienced and Activity oriented curriculum, Humanistic Curriculum, Social Problems and Reconstructionist curriculum)-curriculum transaction-Curricular material-Teacher Guide-Curriculum Planning- Curriculum Evaluation

REFERENCE

1. Bourgonje, P. & tromp, R.(2011).Quality Educator: An International Study of Teacher Competencies and Standards. Education International, Oxfam Novib.
2. Bruner, J. (1975). The Process of Education. London: Harward University Press.
3. Dash, B.N.(2003). Principles of Education .New Delhi: Neelkamal Publications.
4. Palmer, J.A.(2001).Fifty Modern Thinkers on Education: From Piaget to the Present Day. London: Routledge.
5. Peters, R. S. (1975) The Philosophy of Education. London: Oxford University Press
6. Baron, R.A,& Misra, G.(2014.).Psychology(5th ed.).USA: Pearson.
7. Bruner, J.S.(1986).Actual minds, possible worlds. Cambridge: Harward University Press
8. Woolfolk, A.(2005).Educational Psychology(9th ed.).New Delhi:Pearson Education Pvt. Ltd.
9. Coffey, A.(2001). Education and Social Change. Open University press.
10. Peters, R.S.(1967). The Concept of Education. New York: Humanities Press.

SEMESTER I
COMMON CORE COURSE
SDE-PS-2: COMPONENTS OF TEACHING

Contact Hours: 120 hrs

Maximum marks :100
(External-80,Internal-20)

Duration of Exam:3 hrs

Number of Credits:4

Courses Objectives

On completion of this course, the student will be able

1. to understand the concept of Aims and Objectives
2. to understand the implications Blooms Taxonomy
3. to understand the process of Content Analysis
4. to understand and practice Maxims of Teaching
5. to understand and apply instructional Planning in regular teaching

MODE OF TRANSACTION

Lecture cum discussion, reading, print materials, multimedia/e-contents, counselling sessions, Assignments

UNIT I- AIMS AND OBJECTIVES

(20 hrs)

Concept of Aim

Concept of Objective

Difference between Aims and Objectives

Objective Based Instruction

UNIT II- BLOOMS TAXONOMY

(20 hrs)

Blooms Taxonomy

Cognitive Domain (Knowledge, Understanding, Application, Analysis, Evaluation and Create)

Affective Domain(Receiving, Responding, Valuing, Organizing)

Psychomotor Domain(Perception, Set, Guided response, Mechanism, Complex Overt Response, Adaptation, Origination)

Instructional Objectives, Stating Instructional Objectives

Specifications of Objectives

Interrelationship of Objective, Learning Experience and Evaluation

UNIT III- CONTENT ANALYSIS

(20 hrs)

Content Analysis

Basic Component of a content

Terms- Facts -Concepts - Principles- Process- Method-Definition-Symbols-Formulae-Theory-Law-Generalisation.

UNIT IV- CONTENT ANALYSIS

(20 hrs)

Maxims of Teaching

Known to Unknown

Simple to Complex:

Analysis to synthesis
Particular to General:
Empirical to Rational.
Induction to Deduction
Psychological to Logical
Actual to Representative.
Near to Afar.

UNIT V- PLANNING OF INSTRUCTION (20 hrs)

Year Plan

Unit Plan

Lesson Plan

Steps in Lesson Planning

UNIT VI- PRINCIPLES AND APPROCHES IN TEACHING (20 hrs)

Concretising abstract Ideas- use of aids, activities and illustrations., Questioning, Motivation, Gradation, Correlation, Mastery Learning approach, Team Teaching, Discussion- Collaborative learning, Peer Tutoring, Peer Learning, Homogeneous grouping, Supervised Study, Drill Work.

Deep approach and surface approach to learning

Methods of Teaching

REFERENCE

1. Bloom, B.S.(1956).Taxonomy of Educational Objectives. New York: Makay Co, inc.
2. Bruner, J.S.(1963). The Process of Education. New York: Vintage Books.
3. Gagne, M.R.(1965). Conditions of Learning. New York: Holt Rinehast and Winston
4. Loughran, J.(2006). Developing a Pedagogy of Teacher Education: Understanding Teaching and Learning about Teaching. New York: Routledge.
5. Dececo, J.P.(1977). The Psychology of Learning and instruction. Delhi: Prentice Hall.

SEMESTER I

COMMON CORE COURSE

SDE-PS-3: EDUCATIONAL TECHNOLOGY

Contact Hours: 120 hrs

Maximum marks :100

(External-80,Internal-20)

Duration of Exam:3 hrs

Number of Credits:4

Courses Objectives

On completion of this course, the student will be able

1. to understand the concept of Educational Technology
2. to understand the implications Communication Technology
3. to understand and Practice different Teaching Skills and Micro teaching
4. to understand and apply different teaching strategies.

MODE OF TRANSACTION

Lecture cum discussion, reading, print materials, multimedia/e-contents, counselling sessions, Assignments

UNIT I- INTRODUCTION TO EDUCATIONAL TECHNOLOGY (20 hrs)

Concept of Educational Technology-Product Vs Process

Forms of Educational Technology-Teaching Technology, Instructional Technology, behaviour Technology

Transactional usage of Educational Technology-complementary, supplementary, stand alone(independent)

Systems Approach to education and its components

Scope of Educational Technology in Evaluation.

UNIT II-COMMUNICATION TECHNOLOGY (20 hrs)

Concept, Nature, component , Types of Communication

Communication and Instructional System

Communication-modes, Barriers and Process of Communication.

Teaching and communication: Face-to-face, Distance and other alternative modes.

Observation Schedules of Interaction-FIACS, VICS,OSCAR

UNIT III-AUDIO-VISUAL AIDS (10 hrs)

Audio-visual aids

Different types of Audiovisual Aids-

The Importance and Use of Audio -Visual Aids in Teaching and Learning.

Dale's Cone of Experience.

UNIT IV-MICRO-TEACHING (40 hrs)

Underlying principles of Micro Teaching.

Procedure of Micro Teaching./micro teaching cycle.

Phases of Micro Teaching - Knowledge Acquisition, Skill Acquisition, Transferring phase.

Benefits or Advantages of Micro Teaching, Limitations or Disadvantages of Micro Teaching.

Teaching Skills

Link Practice-Macro- Teaching.

Simulation in Teaching

UNIT V TEACHING STRATEGIES (20 hrs)

Teaching Strategies-Meaning, Nature, Functions and Types,

Models of Teaching-Elements, Family of Models

Individualized Instruction-Principles, Programmed Instruction and types -Linear and branching

Audio Tutorial Approach, Learning Kits, Keller Plan

Memory, Understanding and reflective levels of Teaching

UNIT VI NEW HORIZONS OF EDUCATIONAL TECHNOLOGY (10 hrs)

Recent innovations in the area of ET.

Recent Trends of research in Educational Technology

Future trends in digital technology and learning applications.

Course Designing-Steps and approach

REFERENCE

1. Bansal, S.K.(2002). Fundamentals of information Technology. New Delhi: AHP Publishing Corporation.

2. Kumar, K.L.(2000).Educational Technology. New Delhi: New Age International.
3. Roblyer, H.D.,Edward,J. and Havriluk(1997).Integrating Educational Technology into teaching. New York:Merrill.
4. Sharma,R.A.(1996).Advanced Educational Technology. Meerut: Eagle Books International.
5. Sampath, K., Paneerselvam, A. and Santhanam, S.(1990).Introduction to Educational Technology. New Delhi: Sterling Publishers Private Limited

SEMESTER II
COMMON CORE COURSE
SDE-PS-5: INSTRUCTIONAL DESIGN AND E-CONTENTS IN TEACHING

Contact Hours: 120 hrs

Maximum marks :100
 (External-80,Internal-20)

Duration of Exam:3 hrs

Number of Credits:4

Courses Objectives

On completion of this course, the student will be able

1. to understand the concept of Instructional Design
2. to understand different competencies and skills in instructional design
3. to understand the modes and models of instructional design
4. to develop an understanding of role of teacher as an effective designer

MODE OF TRANSACTION

Lecture cum discussion, reading, print materials, multimedia/e-contents, counselling sessions, Assignments

UNIT I-INSTRUCTIONAL DESIGN (20 hrs)

Gagne's influence on Instructional Design Theories.

Learning Material Design

Learning Environment Design

UNIT II- DESIGNING INSTRUCTIONAL MATERIALS (20 hrs)

Characteristics of teaching -learning materials

Principles of Instructional Design

Selecting and developing teaching - learning materials

Design outcome-based assessments

UNIT III- INSTRUCTIONAL DESIGN SKILLS AND COMPETENCIES(20 hrs)

Planning a design

Developing learning materials

Outcome based assessments

UNIT IV- MODES AND MODELS OF INSTRUCTIONAL DESIGN (20 hrs)

Modes of Instructional Design-Self regulated learning, Independent learning, programmed learning, collaborative learning, participatory learning, discovery learning.

Models of Instructional Design-ADDIE,ASSURE,OAR

UNIT V- DESIGNING AND DEVELOPING E-CONTENTS (20 hrs)

Designing e-content-web design, software design, communication design and information design.

communication tools for e-learning
synchronous and asynchronous e-learning
Interactive e-lesson

Blended learning

UNIT VI- TEACHING AS DESIGN (20 hrs)

Interpreting Teaching as Design
Designing quality materials for teacher education
Pedagogical Design Capacity(PDC)

REFERENCE

1. Eggen, P.D., Donald, P.K. and Robert J.H.(1979). Strategies for Teachers. Englewood cliffs: Printice Hall
2. Bruce, J. and Marsha, W.(1985). Models of Teaching. New Delhi: Printice Hall of India Pvt. Ltd.
3. Gunter, M.A. Estes, T.H. and Schwah, J.(1990). Instruction. A Models Approach.(3rd Ed.).USA: Allyn and Bacon
4. Dick, W.& Carey, L. (1996).The Systematic Design of Instruction(4th Ed.).New York: Haper Collins College Publishers
5. Smith, P.L. & Ragan, T.J. (2004). Instructional Design (3rd Ed.)Danvers, MA: John Wiley & Sons.

SEMESTER II

COMMON CORE COURSE

SDE-PS-6: INTRODUCTION TO EDUCATIONAL RESEARCH AND STATISTICS

Contact Hours: 120 hrs

Maximum marks :100

(External-80,Internal-20)

Duration of Exam:3 hrs

Number of Credits:4

Courses Objectives

On completion of this course, the student will be able

1. to understand the concept of Educational Research and statistics
2. to develop skill in selecting a relevant research problem
3. to develop the ability to critically analyse and carry out research studies
4. to apprehend the relevance of statistics in data analysis for educational research

MODE OF TRANSACTION

Lecture cum discussion, reading, print materials, multimedia/e-contents, counselling sessions, Assignments

UNIT I-EDUCATIONAL RESEARCH (20 hrs)

Historical Development of Educational Research
Research as a scientific process

Characteristics of research .

Classification of Research Based on Purpose(Basic, Applied, Action),Method(Historical, Descriptive, Experimental),Data(Qualitative, Quantitative)

UNIT II- RESEARCH PROBLEMS AND VARIABLES (20 hrs)

Research Problem

Formulation of a research problem, statement on the basis of research questions

Definition of key terms/operational Definition

concept, nature and types of variables-independent, dependent, extraneous, confounding, intervening

Common errors in selecting and stating a research problem

Characteristics of a good research problem

Justification and delimitation of the problem

UNIT III- REVIEW OF RELATED LITERATURE (20 hrs)

Purpose and need of review of related literature

Sources-literary resources and electronic resources

Critical Analysis of related literature

UNIT IV- RESEARCH DESIGN (20 hrs)

Hypothesis, sources of hypothesis, characteristics of a good hypothesis.

Types of hypothesis-Directional, Non-directional, Declarative, null and alternative hypothesis

Research Design-Historical-Experimental-survey, causal comparative, correlation, case study, longitudinal, cross sectional, Ex-post facto

Sampling-sample size, Methods of sampling, sampling techniques-errors in sampling tools and techniques of research

Analysis and Interpretation of Data

Research proposal and research report

UNIT V- STATISTICS FOR EDUCATIONAL RESEARCH (20 hrs)

Statistics-descriptive and inferential statistics- scales of measurement -Nature of educational data

Descriptive Statistics-Need and significance of descriptive statistics in educational research-measure of central tendency-variability- relative position-correlation-regression equation and prediction-normal Probability curve

UNIT VI- INFERENCE STATISTICS (20 hrs)

Parametric and Non- parametric tests

parametric tests-Tests of Significance-Analysis of variance-Analysis of Co-variance

Non parametric tests-concept, chi-square test

Computer Analysis of Data

REFERENCE

1. Best, J.W. & Kahn, J.V,(2006). Research in Education.(10th ed.)New Delhi: PHI Learning Private Limited.
2. Cohen,L. &Manion,L.(1994). Research Methods in Education.(4th ed.).London:Routledge.
3. Garrett, H. E. (1966).Statistics in Psychology and Education(6th ed.).Bombay: Vakils, Feffer, and Simons Ltd.

4. Mc Burney, H.D.(2001).Research Methods. Australia: Wordsworth.
5. Good, C.V.(2006). How to do Research in Education. New Delhi: Cosmo Publications.

SEMESTER II
COMMON CORE COURSE
SDE-PS-7: Educational Evaluation

Contact Hours: 120 hrs

Maximum marks :100
 (External-80,Internal-20)

Duration of Exam:3 hrs

Number of Credits:4

Courses Objectives

On completion of this course, the student will be able

1. to understand the concept of measurement and Evaluation
2. to understand different Types of Evaluation
3. to understand the Tools and Techniques of Measurement and Evaluation
4. to develop an understanding of Modern trends in evaluation

MODE OF TRANSACTION

Lecture cum discussion, reading, print materials, multimedia/e-contents, counselling sessions, Assignments

UNIT I-MEASUREMENT AND EVALUATION (20 hrs)

Concept of measurement and Evaluation

Need and Scope of Measurement and evaluation

UNIT II- TYPES OF EVALUATION (20 hrs)

Formative Vs summative

Diagnostic Vs Prognostic,

Criterion referenced Vs Norm referenced

UNIT III- TOOLS AND TECHNIQUES OF MEASUREMENT AND EVALUATION

(20 hrs)

Tools of Evaluation

Techniques of Evaluation

UNIT IV- DEVELOPMENT OF SCHOLASTIC INSTRUMENTS (20 hrs) Developing

Achievement Tests

Classification of Tests

UNIT V- CONSTRUCTION AND STANDARDISATION OF EVALUATION

INSTRUMENTS (20 hrs)

Characteristics of good evaluating instruments

Steps in the construction and standardisation of tests and scales)

Steps in Administering tests to groups.

UNIT V- MODERN TRENDS IN EVALUATION (20 hrs)

Grading

Semester system

Continuous internal Assessment

Question bank

Continuous and comprehensive evaluation

open book examination

On line examination

REFERENCE

1. Cronbach, L.J.(1970). Essentials of Educational Measurement. New Delhi: Prentice Hall of India
2. Ebel, R.& Frisbie, D.(2003).Essentials of Educational measurements. New Delhi: Prentice Hall of India Pvt. Ltd.
3. Kubiszyn, T. & Borich, G.(1990). Educational Testing and Measurement..USA: Harper Collins publishers.
4. Soman, K.(1996).Educational Measurement and Evaluation .Calicut: Gautam Publications.
5. Stufflebeam, D. L. &Shinkfield, A.J.(2007).Evaluation theory, models and applications. San Francisco : Jossey-Bass