

## **PROGRAMME STRUCTURE AND SYLLABUS**

**(Mahatma Gandhi University 2019 Regulations:  
2020-21 Academic Year)**

### **MASTER OF ARTS BUSINESS ECONOMICS**



**EXPERT COMMITTEE FOR M.A. BUSINESS ECONOMICS**

**MAHATMA GANDHI UNIVERSITY**

**മഹാത്മാഗാന്ധി സർവ്വകലാശാല**

**MASTER OF ARTS**

**BUSINESS ECONOMICS**

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2020-2021 ACADEMIC YEAR**

(UNDER MAHATMA GANDHI UNIVERSITY PGCSS REGULATIONS 2019)



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### **M.A. Business Economics Degree Programme**

(Mahatma Gandhi University 2019 Regulations: 2020-21 Academic Year)

M.A. Business Economics is a postgraduate Economics course. It is designed to meet the growing demand for those who seek a postgraduate degree combining a solid training in microeconomic and macroeconomic principles with quantitative methods and research informed applied economics units along with economics issues and problems related to business organization, management and strategy. M.A. in Business Economics covers topics such as Microeconomics, Macroeconomics, Development Economics, Indian Economy, Mathematical Methods, Public Economics, Management Concepts and Organizational Behaviour, Statistics, Investment Analysis and Portfolio Management, International Economics, Econometrics, Research Methodology in Business Economics, Environmental Economics and Marketing Management Theories. This programme will contain a mix of theory, methods, research and field courses that will be very fruitful for the economic development of a country. With a master degree in Business Economics, one is expected to have comprehensive knowledge of modern economics along with management education as an academic discipline. This programme enables students to know about economic theory regarding the way in which economy is influenced by economic policies. It provides a deep insight of finance and management sectors and civilizes the soft skill of a student which makes him/ her to face any challenge in public and private sector.

M.A. Business Economics is an advanced level course designed for the students to deal with economic concepts and management principles in a much in-depth manner. This programme provides a strong foundation in economic principles and meets the needs of decision-makers and advisors in the business to create essential business skills which are necessary for career progression in many public and private sector organizations. During the course time, a student will get in-depth knowledge about the core subjects like micro economic theory, macro- economic theory, mathematical economics and Econometrics. The course seeks to cultivate the analytical and critical skills relevant to economic development, in particular, those needed to assess alternative approaches to policy. It provides rigorous quantitative training which makes students competent to take up the most challenging careers in business, industry, public sectors and advanced academic research. It aims to provide the research tools and approaches needed for those who wish to proceed to doctoral research in Economics. The need to improve curriculum and keep up with the pace of new developments,

it is important to incorporate new literature in the postgraduate course. Thus, keeping in view the emerging trends in business, finance and Governance, a new curriculum for M. A. Business Economics has been developed. The present curriculum also contains teaching and evaluation methodology so that students are well trained and equipped with latest knowledge and skills to cope with the burgeoning challenges. The programme spanning four semesters intends to impart the necessary skills and capabilities to meet the challenges of the ever-changing vibrant economic environment.

#### AIM OF THE PROGRAMME

The broad objective of this programme is to overcome the issues occurring in the business world that needs an analytical and quantitative approach with the use of latest techniques evolving in the field of Business and Economics. It provides students with a full understanding of economic theory and with a firm grounding in the analytic methods of economic theory used by economists working in research, government, management and business. It also aims at equipping the students with the analytical tools of economics to have a holistic understanding of the economy in particular and the society in general. It prepares them for challenging careers open to economists as well as business analysts. The objective of business economics instruction is to offer an opportunity for students to be exposed to different facets of the discipline and to learn how economists go about their work. The specific objectives of the M.A.Business Economics Programme are given below:

- i) To transform students to skilled persons who are able to deal with competitive business challenges in the era of globalization and privatization.
- i) To provide students a strong base in economic principles and help them to develop a critical ability to solve business related issues in the best possible way.
- ii) To give students knowledge in the various fields of Economics and an in-depth understanding of the theoretical and empirical constructs in the field of Economics.
- iv) To disseminate awareness and appreciation of the complexity of socio- economic interdependence and change.
- v) Application of economic theories and dilating problem-solving acumen. To teach applications of theories in analyzing current economic problems.
- vi) Preparation for advanced studies leading to M. Phil. and PhD.
- vi) To equip students with a set of tools of econometrics, which would help them to solve real-world problems.
- vii) Develop the powers of inquiry, critical analysis, logical thinking, and your ability to apply

theoretical knowledge to current issues of policy and practice in economics and business.

- ix) Encourage initiative, independent learning, awareness of analytical and theoretical approaches in the field of economics, exposure to recent research and state-of-the-art tools in applied for work in economics.
- x) To train students for model building, test economic models and business models using advanced methods and sophisticated economic and management tools, analysis interpretation and formulation of development policies.
- xi) To stimulate analytical and critical thinking on the different economic and management issues.
- xii) To develop the capabilities of original and independent work, promoting excellence in thought and in action.
- xiii) To give the students a level of knowledge in economics and business management to equip them to get employment in professional occupations or in other Research focused roles.
- xiv) To equip the students academically sound professionally competent so that they can solve any problem with ease.

## 1. PROGRAMME LEARNING OUTCOMES

Specifically, upon successful completion of the programme students will be able:

1. **Gaining Additional Skills to Existing Knowledge:** Students are able to enhance their soft skills like analytical skills and managerial skills with particular focus on Quantitative Techniques, Finance and Applied Business Economics along with the study of keeping up with classes, readings, problem sets, tests and assignments forces them to develop their time management and teamwork skills. Mastery in scientific analysis and latest soft skills enable them to take up the most challenging careers in business, industry, public sector and advanced academic research.
2. **Gaining Access to Existing Knowledge:** Students are able to create a continuous learning environment for engaging themselves to update with new knowledge in Economics. Locate published research in Economics, Management and related fields; locate information on particular topics and issues in economics; search out economic data as well as information about the meaning of the data and how they are derived.
3. **Displaying Command of Existing Knowledge:** Students are able to demonstrate knowledge of theoretical and empirical bases underpinning the construction, implementation and

interpretation of Economic theories and assessment techniques, and be able to assess the Economic and social consequences regarding the same. Summarize (in a 2-minute monologue or a 300-word written statement) what is known about the current condition of the economy; summarize the principal ideas of an eminent living economist; summarize a current controversy in the economics literature; state succinctly the dimensions of a current economic policy issue; explain key economic concepts and describe how they can be used; identify the new developments in the field of management.

4. **Displaying Ability to Draw Out Existing Knowledge:** Write a précis of a published journal article; read and interpret a theoretical analysis, including simple mathematical derivations, reported in an economics journal article; read and interpret a quantitative analysis, including regression results, reported in an economics journal article; show what economic concepts and principles are used in economic analyses published in articles from newspapers and newsmagazines.
5. **Utilizing Existing Knowledge to Explore Issues:** To take a rigorous, quantitative approach to solve economic problems and to build and test economic models, using sophisticated economics tools. Prepare a written analysis (of say, 5 pages) of a current economic problem; prepare a decision memorandum (of say, 2 pages) for a superior that recommends some action on an economic or business strategy decision faced by the organization.
6. **Creating New Knowledge:** Think critically, independently and creatively to synthesize concepts to formulate cases, issues, identify and formulate a question or series of questions about some economic or business issues that will facilitate investigation of the issue; prepare a 5-page proposal for a research project; complete a research study whose results are contained in a published paper.

## 2. ELIGIBILITY FOR ADMISSIONS

A Candidate who has passed B.A., Economics or B.Sc., (Mathematics) degree examination of Mahatma Gandhi University or an examination of some other University accepted by the syndicate as equivalent thereto shall be permitted to apply for the M.A. Business Economics in the affiliated colleges of the University. Students admitted under this programme are governed by the University Regulations in force.

3. **MEDIUM OF INSTRUCTION AND ASSESSMENT** English shall be the medium of instruction and examination.

4. **FACULTY UNDER WHICH THE DEGREE IS AWARDED** Faculty of Social Science  
**SPECIALIZATIONS OFFERED, IF ANY** Management Concepts and Organisational Behaviour, Investment Analysis and Portfolio Management, Research Methodology in Business Economics,



Econometrics, Quantitative Economics, Advanced Microeconomics and Financial Economics.

5. NOTE ON COMPLIANCE WITH THE UGC MINIMUM STANDARDS FOR THE CONDUCT AND AWARD OF POST GRADUATE DEGREES

The Programme Structure, Scheme and Syllabus of the M.A. Programme in Business Economics is in compliance with the UGC Minimum Standards for the Conduct and Award of Post Graduate Degrees.

6. ELIGIBILITY FOR THE AWARD OF DEGREE

A candidate shall be eligible for the award of the degree only if he/she has undergone the prescribed course of study in the college affiliated to the University for a period of not less than two academic years. A candidate who has passed the examination of all the courses with 'C' grade shall be the minimum requirement for the award of the degree.

### **THE PROGRAMME STRUCTURE**

1. Students shall be admitted into the four -semester postgraduate programme in Business Economics.
2. The programme shall include two types of courses; Core courses and Elective Courses.
3. There are 17 core courses and 3 groups-wise electives with three courses. The core courses are designed to provide students with rigorous academic training, as well as with tools that can be used in policy analysis.
4. The elective courses shall be in the fourth semester. All the elective courses should hold same credit for a programme.
5. There shall be three groups of three Elective courses for the programme such as Group A, Group B and Group C.
6. The elective courses mainly aim to provide specialization in various Business Economics courses such as applied, mathematical stream, advanced microeconomics and business management. The department will offer any one group in the fourth semester.
7. The selection of courses from different groups are not permissible.
8. Course evaluation would consist of seminar presentations, assignments, written examinations, Project and viva-voce.
9. There shall be a Project with a dissertation to be undertaken by all students.
10. The student shall submit one assignment as an internal component for every course.
11. The PG student may deliver one seminar lecture as an internal component for every course.

12. Every student shall undergo two class tests as an internal component for every course.
13. Total credits for the programme are eighty (80). No course shall have more than four (4) Credits.
14. Project shall be completed by working outside the regular teaching hours. Project shall be carried out under the supervision of a teacher in the department concerned. A candidate may, however, in certain cases be permitted to work on the project in an industrial / research organization on the recommendation of the Supervisor. There shall be an internal assessment and external assessment for the project.
15. The external evaluation of the dissertation work is followed by the presentation of work including dissertation and viva-voce.
16. Comprehensive viva voce shall be conducted at the end of the programme. This shall cover questions from all courses in the programme.
17. The weight for the Internal Evaluation of Theory Project/Comprehensive viva-voce is **5** and the External evaluation of Project /Comprehensive viva-voce is **15** and its maximum Weighted Grade Point (WGP) is **25** and **75** respectively. The Internal External ratio is **1:3**.
18. There shall be no separate minimum grade point for internal evaluation.
19. The minimum requirement of aggregate attendance during a semester for appearing the end semester examination shall be 75%.  
  
The programme shall include a study tour for students, which can be done during any semester. The tour shall be to research institutions/ industrial sites, extending for a maximum of five working days, excluding journey time.

**7. THE SEMESTER-WISE COURSE DETAILS**

Course Code	Title of the Course	Type of the Course	Hours per week	Credits
<b>FIRST SEMESTER</b>				
EC010101	Microeconomics-I	Core	05	04
EC010102	Macroeconomics-I	Core	05	04
EC010103	Development Economics	Core	05	04
EC010104	Indian Economy - I	Core	05	04
EC010105	Mathematical Methods for Economic Analysis	Core	05	04
<b>SECOND SEMESTER</b>				
EC010201	Microeconomics-II	Core	05	04
EC010202	Macroeconomics-II	Core	05	04
EC010203	Public Economics	Core	05	04
BE010204	Management Concepts and Organisational Behaviour	Core	05	04
EC010205	Statistical Methods for Economic Analysis	Core	05	04
<b>THIRD SEMESTER</b>				
EC010301	International Economics	Core	05	04
EC010302	Econometrics-I	Core	05	04
BE010303	Research Methodology in Business Economics	Core	05	04
EC010304	Environmental Economics	Core	05	04
BE010305	Investment Analysis and Portfolio Management	Core	05	03
<b>FOURTH SEMESTER</b>				
EC010401	International Finance	Core	05	04
EC010402	Econometrics-II	Core	05	04

<b>ELECTIVE (Credit 3x3=9)</b>		
<b>GROUP A</b>	<b>GROUP B</b>	<b>GROUP C</b>
BE800401 Logistics and Supply Chain Management	BE810401 Marketing Management	BE820401 Managerial Economics
BE800402 Principles of Business Economics	BE810402 Human Resource Management	BE820402 Business Statistics
BE800403 Banking and Foreign Exchange Management	BE810403 Project Management & Entrepreneurial Development	BE820403 Entrepreneurship Development

BE010403	Project/Dissertation	Core	Credit	02
BE010404	Comprehensive Viva -Voce	Core	Credit	02
Total weight of the course				80

### 8. Pattern of Questions

The question paper for final assessment will be of three hours duration and will consist of three parts. The question shall be prepared in such a way that the answers can be awarded A+, A, B, C, D, E grades. There shall be no separate minimum grade point for internal evaluation of Theory, Project, and Comprehensive viva-voce. A question paper may contain short answer type/annotation, short essay type questions/problems and long essay type questions.

Weight: Different types of questions shall be given different weights to quantify their range as follows:

<b>Sl.No.</b>	<b>Type of Questions</b>	<b>Weight</b>	<b>Number of questions to be answered</b>
1.	Short Answer type questions	1	8 out of 10
2.	Short essay/ problem solving type questions	2	6 out of 8
3.	Long Essay type questions	5	2 out of 4

All questions shall be set in such a way that the answers can be awarded A+, A, B, C, D, E grade.

## 9. Direct Grading System

Direct Grading System based on a 7 – point scale is used to evaluate the performance (External and Internal Examination of students). For all courses (theory & practical) / semester/overall programme, Letter grades and **GPA/SGPA/CGPA** are given on the following scale:

Range	Grade	Indicator
4.50 to 5.00	A+	Outstanding
4.00 to 4.49	A	Excellent
3.50 to 3.99	B+	Very good
3.00 to 3.49	B	Good (Average)
2.50 to 2.99	C+	Fair
2.00 to 2.49	C	Marginal
up to 1.99	D	Deficient (Fail)

No separate minimum is required for Internal evaluation for a pass, but a minimum **C** grade is required for a pass in an external evaluation. However, a minimum **C grade** is required for pass in a course.

### 10.1. Evaluation first stage - Both internal and external (to be done by the teacher)

Grade	Grade Points
A+	5
A	4
B	3
C	2
D	1
E	0

### 10.2. Theory-External

Maximum weight for external evaluation is **30**. Therefore, Maximum Weighted Grade Point (WGP) is **150**. Weight: Different types of questions shall be given different weights to quantify their range as follows:

Sl.	Type of Questions	Weight	Number of questions to be answered
1.	Short Answer type questions	1	8 out of 10
2.	Short essay/ problem solving type questions	2	6 out of 8
3.	Long Essay type questions	5	2 out of 4

### 10.3 Theory (Internal) - Components and Weightage

	<b>Components</b>	<b>Weightage</b>
i.	Assignment	1
ii.	Seminar	2
iii.	Best Two Test papers	1 each (2)
	<b>Total</b>	<b>5</b>

(For test papers all questions shall be set in such a way that the answers can be awarded A+, A, B, C, D, E grade.)

### 11. Project- External: Components and Weightage

The project is evaluated by one external and one internal examiner. The dissertation of the project is examined along with the oral presentation of the project by the candidate. The different weight for assessment of different components is shown in below.

<b>Components</b>	<b>Weightage</b>
Relevance of the topic and analysis	3
Project content and presentation	7
Project viva	5
<b>Total</b>	<b>15</b>

#### 11.1 Project- Internal: Components and Weightage:

Internal evaluation of the dissertation will be based on the following criterion

<b>Components</b>	<b>Weightage</b>
Relevance of the topic and analysis	2
Project content and presentation	2
Project viva	1
<b>Total</b>	<b>5</b>

#### 11.2 Comprehensive viva-voce (External)-components and weightage

<b>Components</b>	<b>Weightage</b>
Course viva (all courses from first semester to fourth semester)	15
<b>Total</b>	<b>15</b>

## 12. Comprehensive viva (Internal)- Components and Weightage

Comprehensive viva-voce shall be conducted at the end of the programme. Viva-voce shall be conducted by one external examiner and one internal examiner. The viva-voce shall cover questions from all courses in the programme. There shall be no internal assessment for comprehensive viva-voce.

<b>Components</b>	<b>Weightage</b>
Course viva (all courses from first semester to fourth semester)	5
<b>Total</b>	<b>5</b>

## 13. Dissertation Format

### Dissertation: Master of Arts (MA) in Business Economics

The dissertation shall be prepared in the following format.

<b>General Guidelines</b>	
<b>1</b>	General Introduction to the Study
<b>2</b>	Review of Literature
<b>3</b>	Research Gap
<b>4</b>	Statement of the problem
<b>5</b>	Significance of the Study
<b>6</b>	Formulation of Research Questions /Issues
<b>7</b>	Research objectives
<b>8</b>	Hypotheses
<b>9</b>	Conceptual Framework – Conceptualization & Operationalization (precise and specific meaning of the terms and concepts)
<b>10</b>	Theoretical framework
	Analytical Framework
<b>11</b>	Data source (Primary/Secondary)
<b>12</b>	Sampling framework
<b>13</b>	Pilot Survey, if needed

<b>14</b>	Tools of analysis (Analytical Framework)
<b>15</b>	Limitations of the study
<b>16</b>	Chapter outlines
	Chapters
<b>17</b>	Situating the Study
<b>18</b>	Discussion of the Results
<b>19</b>	Major findings, Summary, Recommendations (if any) and Conclusion
<b>20</b>	Bibliography /References &Webliography
<b>21</b>	Appendices

	<b>1.1. Title page</b>		<b>1.2 Preface</b>
	Title of the project		<b>1.3 Table of contents</b>
	Name of the candidate	<b>a.</b>	List of Tables
	Name and designation of the supervisor	<b>b.</b>	List of Figures
	Degree for which project is submitted	<b>c.</b>	Glossary.
	Name of the College	<b>d.</b>	List of abbreviations
	Month and year the project is presented	<b>e.</b>	Acknowledgment
	Declaration of the student &supervisor		<b>1.4 Abstract/ Executive Summary (One page)</b>
	<b>1.5 The Main Text</b>		
	Introductory Chapter: Items 3 to 16 mentioned above		
	b. Other Chapters- Analysis, Results Interpretation		
	c. Conclusion Chapter: Conclusions, Recommendations &Summary		
	<b>1.6 End Notes (after each Chapter)</b>		<b>1.7. Bibliography or References (at the end of the thesis)</b>
	<b>1.8 Appendices</b>		
	Questionnaire		Coding Frame (optional)
	Interview Schedule		Letters sent to sample members (optional)





	Observation Schedule (optional)		Any Other
<b>Length of the Project</b>			
<p>a. Report length 40 to 50 pages excluding Appendix and Certificates</p> <p>b. Alignment: Justify</p> <p>c. Font: Times New roman</p> <p>d. Font size: 12</p> <p>e. Line spacing: 1.5</p> <p>f. Double line Page Border</p> <p>* Style of The Report: • Chicago Manual of Style (CMS) or American Psychological Association Style (APA)</p>			

**Departmental Requirement**

(To be kept at the Department by the Supervisor)

**Supervisor- Student Meeting Log**

<b>Date/Time</b>	<b>Discussion Areas</b>	<b>Summary of Discussions</b>	<b>Signature of the Supervisor</b>
	Topic selection		
	Clarify Objectives		
	Literature Review		
	Seminar 1		
	Research Design		
	Collect Data		
	Analyze Data		
	Write up		
	Supervisor's Comments		
	Final Draft - Seminar 2		

**Name of the Supervisor:**

**Name of the Student:**

*Notes: The dissertation work may be started in the Third Semester itself for timely completion of the work at the end of the IV Semester.*

**FIRST SEMESTER**

Course Code	Title of the Course	Type of the Course	Hours per week	Credits
<b>EC010101</b>	Microeconomics-I	Core	<b>05</b>	<b>04</b>
<b>EC010102</b>	Macroeconomics-I	Core	<b>05</b>	<b>04</b>
<b>EC010103</b>	Development Economics	Core	<b>05</b>	<b>04</b>
<b>EC010104</b>	Indian Economy - I	Core	<b>05</b>	<b>04</b>
<b>EC010105</b>	Mathematical Methods for Economic Analysis	Core	<b>05</b>	<b>04</b>

Semester	Course Code	Course Title	Type of course	Credit	Teaching Hours
<b>I</b>	<b>EC010101</b>	<b>Microeconomics-I</b>	<b>Core</b>	<b>4</b>	<b>90</b>

**Course Objectives**

*The purpose of this course is to provide students with a solid understanding of modern microeconomic theory. The course presents a rigorous treatment of the principles governing individual behaviour, market structure, and game theory. The cardinal end of the course is to equip the students themselves in a comprehensive manner with the multiple facets of the Modern Microeconomic theory and the applications of theories in analyzing current economic problems and to develop the ability to synthesize knowledge. In a abroad sense, it provides an intuitive platform for what students will learn in the courses that follow. The emphasis will be on thinking like an economist and the course will illustrate how microeconomic concepts can be applied to analyses real-life situations. By the end of this course, the student is expected to be familiar with basic concepts of microeconomics and acquire analytical skills to analyses problems of economic policy. Besides, students should be able to demonstrate: (i) an understanding of relevant microeconomic concepts; (ii) a capacity to explain and evaluate critically theoretical arguments.*

**Unit- 1 Theory of Consumer Behaviour**

**(25 Hours)**

- 1.1 The Slutsky Equation- Compensated and Uncompensated Demand Function- Indirect Utility Function- Ray's Identity- Duality in Consumer Theory.
- 1.2 The Pragmatic Approach to Demand Theory — Constant Elasticity Demand Function.
- 1.3 Dynamic Versions of Demand Function; Nerlove, Houthakker and Taylor-Linear expenditure system.
- 1.4 Consumer Choices Involving Risk and Uncertainty, Time and Characteristics -Bernoulli Hypothesis, Neumann and Morgenstern Index, Friedman and Savage hypothesis, Markowitz hypothesis.
- 1.5 Inter-temporal Substitution effect- Choices Involving Time- Time Allocation model- Attributes model of Kevin Lancaster
- 1.6 Network Externalities — Bandwagon, Snob and Veblen Effects

**Unit- 2: Theory of Production and Cost Production Function**

**(20 Hours)**

- 2.1 Homogenous and Non-Homogenous Production Functions –A brief account of Production function of a single product firm- Production function of a multi-product firm (with

illustration)

2.2 Empirical production functions - Cobb-Douglas Production Function - Constant Elasticity Substitution Production Function—Variable Elasticity of Substitution (VES) Production Function-- Homothetic Production Function

2.3 A summary of Short- run and Long-run cost in Traditional and Modern Microeconomic Theory (without illustration)

2.4 The L shape Scale curve- Engineering production function and Engineering cost curves (with illustration). Learning Curve- Returns to Scope

### **Unit- 3: Oligopoly and Economic Behaviour of Firm**

**(30 Hours)**

3.1 Oligopoly—Price and Output Determination; Collusive and Non-collusive oligopoly

3.2 A brief account of collusive Oligopoly (Cartels and Price Leadership)

3.3 Oligopoly with Homogeneous Product-Cournot, Bertrand & Stackelberg Model

3.4 Oligopoly with Non-homogeneous Product-Chamberlin's model, Sweezy's Kinked Demand Curve. The Contestable Market Theory- Baumol

3.5 Theory of Games-Strategies - Zero-Sum Game & Non-Zero-Sum Game -Prisoner's Dilemma - Nash Equilibrium- Game Theory Applications - Important Issues in Game Theory - Cooperation, Competition.

### **Unit- 4: Theories on Distribution**

**(15 Hours)**

4.1 Marginal Productivity Theory and Product Exhaustion Problem: Euler's-Clark-Wicksteed-Walras

4.2 Macro theories of distribution -Ricardo-Marx- Kalecki – Kaldor.

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Semester	Course Code	Course Title	Type of course	Credit	Teaching Hours
<b>I</b>	<b>EC010102</b>	<b>Macroeconomics - I</b>	<b>Core</b>	<b>4</b>	<b>90</b>
<b>Course Objectives</b>					
<p><i>This course provides a rigorous framework for understanding the aggregate economy in both the short run and the long run. The objective of the course is to provide an overview of modern macroeconomics at the post-graduate level, to show how this body of theory can be adapted to the characteristics of developing economies. Another objective of the course is to familiarize the students with the contribution of various schools of thought in macroeconomics. The first part of the course is intended to present a thorough understanding of three outstanding orthodoxies, viz, Classical, Keynesian, Modern Neo- classical synthesis, Neo Keynesianism and Monetarism. The course structure covers the major debates and controversies intend to provide a wider vision of the present discourses in macroeconomics. The course will help to develop the aptitude to relate concepts with research and policy. The course aims to introduce students to key concepts, methodologies, theories, and techniques in modern macroeconomic analysis. Particular emphasis is placed on the modeling techniques of some of the theoretical models used widely in the analysis of economic growth, consumption, and investment. At the end of this course, students should be able to (i) know of the major issues as they arise in the field of macroeconomics, (ii) understand alternative approaches to modeling consumption, and investment, (iii) critically evaluate the usefulness of macroeconomic techniques.</i></p>					

### **Unit- 1: Classical versus Keynesian Approach**

**(40 Hours)**

- 1.1 Classical: Labour Market-Employment and Output-Say's Law- Interest Rate-Quantity Theory of Money: Neutrality of Money and Classical Dichotomy. (Self-Study)
- 1.2 Keynesian Fixed Price Models: Keynesian Cross Model (Three Sector Model) and IS-LM Model: Liquidity Trap- Fiscal and Monetary Policies- Crowding Out Effect.
- 1.3 Keynesian Flexible Price Model: AD-AS Framework-Policy Implications-Multiplier: T and G-Multiplier, Balanced Budget Multiplier- Built-in-Stabilizers-Ricardian Equivalence.
- 1.4 Labour Market: Classical versus Keynes -Keynes Effect and Real Balance Effect
- 1.5 Inflation: Inflationary Gap-Demand-Pull and Cost-Push Inflation-Phillips Curve: Lipsey's excess-demand model - The Samuelson-Solow modification of the Phillips curve- Tobin's views on Phillips curve- Strategies to control inflation.
- 1.6 Neo-Keynesian Analysis (Disequilibrium Models): Walrasian Vs. Keynesian Models. Effective Demand and Notional Demand ---Incompatibility of Walras Law and Neoclassical Synthesis of Keynes's General Theory- Disequilibrium models of Robert Clower- Leijonhufvud's, Barro-Grossman and Malinvaud.

**Unit- 2: Monetarism**

**(10 Hours)**

- 2.1 Main Propositions of Monetarism—Friedman’s Re-statement of Quantity Theory of Money - Monetarist Inflation Theory -Adaptive Expectation Hypothesis
- 2.2 Monetarism and the Philips Curve: The Friedman-Phelps Expectations-Augmented Phillips Curve -Natural Rate of Unemployment Hypothesis-Accelerationist Hypothesis and NAIRU.
- 2.3 Policy Implications- Business Cycles and Monetary Policy: -Rule Versus Discretion-Cold Turkey versus Gradualism-Taylor rule-Inflation Targeting.

**Unit- 3: Demand for Money and Supply of Money**

**(20 Hours)**

- 3.1 Theoretical Approaches to the Demand for Money: The Classics, Keynes, and Friedman.
- 3.2 Transactions Theories of Money Demand: The Baumol Model-The Shopping-Time Model -Cash-in-Advance Models.
- 3.3 Tobin’s Portfolio Theories of Money Demand- Buffer Stock Demand for Money: Akerlof and Milbourne (A-M) Model, Miller and Orr(M-O) Model.
- 3.4 Supply of Money: Financial Intermediation- Mechanistic Model of Bank Deposit Determination- Behavioural Model of Money Determination- Demand Determined View of Money Supply Process.
- 3.5 Measures of money supply; H- theory of money supply- Money Multiplier and Its Determination- Methods of Monetary Control- RBI Approach -- High Powered Money- Inside and Outside Money--Money Supply Determination in an Open Economy.

**Unit- 4: Behavioural Foundations of Macroeconomics**

**(20 Hours)**

- 4.1 Consumption Function: Current Income Theories (Absolute Income Hypothesis of Keynes, Kuznets’s Consumption Puzzle, Drift Hypothesis of Smithies and Relative Income Hypothesis of Duesenberry). (Self-Study)
- 4.2. Fischer’s Intertemporal Choice Model.
- 4.3 Normal Income Theories: Permanent income Hypothesis of Friedman and Life Cycle Hypothesis of Modigliani et.al -Robert Hall’s Random Walk Hypothesis. (Self-Study)



4.4 Investment Function: Keynes's Investment Theory– MEC Approach - Accelerator Theory of Investment -Capital Stock Adjustment Principle - Financial Theory of Investment – Tobin's Q Ratio- Modigliani-Miller Theory –Metzler Inventory Cycle Model--- Jorgenson's Neoclassical Investment Model.

#### Reference:

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2. Blanchard, Olivier and Johnson, David R (2018): *Macroeconomics*, 8<sup>th</sup> Ed, Pearson. (Unit- 1& 2)
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4. Carlin, Windy and Soskice, David (1990): *Macroeconomics and the Wage Bargain: A modern Approach to Employment, Inflation, and the Exchange Rate*, OUP. (Unit-1,2)
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7. De Vroey, Michel (2016): *A History of Macroeconomics from Keynes to Lucas and Beyond*, CUP. (Unit- 1& 2)
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9. Edgmand, Michael R (1987): *Macroeconomic Theory and Policy*, PHI. (Unit-4)
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32. Pierre Picard (1993): Wages and Unemployment: A Study in Non-Walrasian Macroeconomics, Cambridge University Press. (Unit- 1& 2)
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42. Williamson, Stephen D. (2018): Macroeconomics, 6<sup>th</sup> Ed, Pearson. (Unit- 1,2)

Semester	Course Code	Course Title	Type of course	Credit	Teaching Hours
<b>I</b>	<b>EC010103</b>	<b>Development Economics</b>	<b>Core</b>	<b>4</b>	<b>90</b>
<b>Course Objectives</b>					
<p><i>Development economics is an exciting and challenging branch of Economics. The approach of this course is to provide a comprehensive introduction to the theoretical paradigms of economic development. In a fast-moving global economic order, there is a persistent demand to synchronize the approaches, theories and development issues for a better understanding of the problems of the developing economies. By its very nature, the scope is interdisciplinary in nature, incorporating non-economic dimensions like culture, norms, and values as well as political, historical and social processes. The discourse, however, is essentially based on the logic and theoretical framework of standard economic analysis. The objective of this course is to familiarize students with the conceptual routes, theoretical dynamics and practical strategies of growth and development. It is expected that this course would orient them towards major themes of development, lead them towards more methodical probes and equip them with adequate analytical knowledge. The aim of this course is to provide an advanced treatment of the main issues, concepts and techniques in modern growth theory. At the end of this course, students should be able (i) to understand and critically evaluate alternative theories of growth.(ii) show a clear understanding of the recent literature, both empirical and analytical, on theories of underdevelopment and growth in developing countries;(iii) be able to evaluate critically some of the results in the literature, particularly those related to development issues.</i></p>					

**Unit -I: Economic Development –Overview**
**(Self-Study)**
**(10 Hours)**

- 1.1 Meaning and measurement of economic development: conventional, human development index (Human Development Index, Gender Related Development Index, Gender Empowerment Measure, Gender Inequality Index, Human Poverty Index).
- 1.2 Quality of life indices: Entitlements approach- Capabilities and Functioning- Development as Freedom- Human Rights-Based Approach- Three Core Values of Development
- 1.3 Development Gap -Inequality in income distribution- Kuznets Inverted U hypothesis- Lorenz Curve and Gini-coefficient - Concept of Sustainable Development.

**Unit- 2: Theories of Underdevelopment**
**(25 Hours)**

- 2.1 Vicious Circle of Poverty—Dualistic Theories. – Social – Financial and Technical Dualism Prebisch- Singer thesis and Myrdal thesis: Backwash and spread effect- Circular and cumulative causation- Rostow's stages of growth. —Vent for Surplus theory of Hla Myint—Stable Theory –the Dutch Diseases.
- 2.2 Rural-urban migration and urban unemployment (Harris-Todaro model).

2.3 Political Economy of Underdevelopment (Theory of dependency): Paul Baran, Gundar Frank, Samir Amin and Emmanuel Wallerstein (World systems approach).

**Unit- 3: Theories of Development and Growth**

**(25 Hours)**

31. Classical Theory of Development–Adam Smith, David Ricardo, Karl Marx and Schumpeter.
32. Theories of Economic Growth: Harrod-Domar Model.
33. Neo-Classical Growth Models – Solow and Meade.
34. Cambridge Growth Models: Mrs. Joan Robinson's and Kaldor's Growth Models.
35. Endogenous Growth Models: (Ramsey, Romer; Uzawa-Lucas, AK, Arrow's Model, Grossman and Helpman's model, Aghion and Howitt).

**Unit- 4: Approaches to Development**

**(20 Hours)**

- 4.1. Theory of Big Push- Critical Minimum Effort Thesis- Low Income Equilibrium Trap. - Balanced and Unbalanced Growth. (Self-Study)
- 4.2. Development with Unlimited Supply of Labour, Ranis and Fei Model - Michael Kremer's O-Ring Theory of Economic Development-- The Jorgenson model and Dixit-Marglin model.

**Unit- 5: Critical Issues in Development Process**

**(10 Hours)**

- 5.1 Role of Financial Institutions in Economic Development: (Acemoglu and Zilibotti model)
- 5.2 Globalization and Development: Views of Stiglitz.
- 5.3 Development and Human Rights
- 5.4 Social Capital and Development.
- 5.5 Corruption, Crime, Social Exclusion and Development.
- 5.6 Climate Change and Development.
- 5.7 Energy and Development.

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26. Yujiro Hayami and Yoshihisa Godo (2005): Development Economics: From the Poverty to the Wealth of Nations, 3<sup>rd</sup> Ed, OUP.

Semester	Course code	Course Title	Type of course	Credit	Teaching Hours
I	EC010104	Indian Economy - I	Core	4	90

**Course Objectives**

*This course offers an analytical introduction to the main aspects of the Indian economic policy and performance in the post-independence period. It focuses on Indian economic problems in the light of relevant economic theories, and in a comparative perspective. The course is expected to enable the students to appreciate the evolution of the economy, its institutional framework, nuances in using statistical information for analyzing public policy, and to get familiar with the issues for research. This course also enables the students to understand the pre-reform and post-reform development experience of the Indian Economy. A thorough understanding of Indian economic policies is a must for post-graduate students of economics and that is what this course aims to develop among the students.*

**Unit-1 – Structure and Growth of the Indian Economy**

**(15 Hours)**

- 1.1 India's Economic growth in historical perspective.
- 1.2 National Income – growth and measurement Database on Indian Economy.
- 1.3 Economic Planning – Development strategies - planning and development – debates on planning and import substitution -Rationale – Achievements – failures — crisis of 1991.
- 1.4 Economic Reforms – Structural Adjustment Programmes – Neo-liberalism in India- Disinvestment Policy – PPP-impact of 25 years of reforms on various sectors of the economy- NITI Aayog- and its structure, NITI Aayog Verses Planning Commission.
- 1.5 State-Local financial relations in India.

**Unit-2: Agriculture and Industry**

**(15 Hours)**

- 2.1 Productivity in agriculture; Land reforms; New technology in Indian agriculture- Green Revolution- Need for second Green Revolution; Modern farm inputs and marketing-; Commercialization and diversification.
- 2.2 Agricultural Finance and Marketing – globalization and Indian Agriculture — New Agricultural Policy- WTO and- Indian Agriculture- Current Issues in Indian agriculture. Investments and subsidies in Indian agriculture- Agrarian distress and related issues- Govt. Supports and schemes in agriculture sector.
- 2.3 Industrial Growth – Trends patterns and structure – industrial stagnation debates-

Industrial Policies in India- Reforms in industrial sector – industry under globalization- Research and development – Technology transfer – Make – in – India initiatives- Small and Medium Scale Industries (MSMEs)- Role, problems and remedies- Role of FDI in industrialization process- ICT based industrial development strategy- Public Sector Enterprises -Make in India.

**Unit-3: Service Sector and Infra-Structure**

**(15 Hours)**

- 3.1. Growth and performance of service sector in India – Pre and post-Independence period
- 3.2. Health and Education Infrastructure - Efficacy of social sector spending in India along with its implication for inclusive growth.
- 3.3. Energy, Transport, Telecommunication- recent infrastructure policy – Inadequacies and structural bottlenecks in infrastructure development- Trade in services- Global technological change and Indian IT boom. Challenges of India's Service sector.

**Unit-4. Trade and External Sector**

**(15 Hours)**

- 4.1. Evolution of trade policies since independence.
- 4.2. External Sector reforms – Trade reforms – changing structure, composition and direction of India's foreign trade – Balance of Payment; Exchange rate- India and WTO - EXIM policy – SEZ.
- 4.3. FII and FDI in India – role of MNC's.

**Reference:**

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2. Agarwal A N (2017), Indian Economy: Problems of Development and Planning, Vikas 2. Publishing House, New Delhi.
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64. P.S. Krishnan (2018): Social Exclusion and Justice in India, Routledge.
65. Pulin B Nayak, Bishwanathe Golar and Pradeep Agarwal (2010): India's Economy and Growth: Essays in Honour of VKRV Rao, Sage India.
66. Raghbendra Jha (2018): Facets of India's Economy and Her Society Vol.II, Palgrave.
67. Raghbendra Jha (2018): Facets of India's Economy and Her Society Volume II: Current State and Future Prospects, Palgrave.
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69. Rajesh Raj S.N. & Kunal Sen (2016): Out of the Shadows? The Informal Sector in Post-reform India, OUP.
70. Rajiv Kumar and Vijay Kelkar (1990): 'Industrial Growth in the Eighties- Emerging Policy Issues', Economic and Political Weekly, Vol. 25, Issue No. 4.
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75. Rout, H.S. and P. Mishra (2015) Social Sector in India: Issues and challenges , Cambridge Scholar Publishing,
76. Roy Tirthankar (2000): 'The Economic History of India 1857-1947', Oxford University Press, New Delhi.
77. Roy, M. and S. Sinha Roy (2016). International Trade and International Finance: Explorations of Contemporary Issues. Springer: Singapore.

78. Ruddar Dutt and Sundaram (2016): Indian Economy, S Chand and Company, New Delhi
79. Rudra Ashok (1975): 'Indian Plan Models'. Allied Publishes, New Delhi.
80. S.Mahendra Dev (2017): India Development Report 2017, OUP.
81. Sangeeta Verma and P.C. Bodh (2018): Glimpses of Indian Agriculture, OUP
- 82.Sankar Kumar Bhaumik (2018): Reforming Indian Agriculture: Towards employment generation and poverty reduction Essays in Honour of G K Chandha, Sage India.
- 83.Saumya Chakrabarti (2016): Inclusive Growth and Social Change Formal–Informal–Agrarian Relations in India, OUP
- 84.Sikdar, S (2013). Capital Flows and Foreign Exchange Rate Management. Oxford: New Delhi.
85. S.J. Byres (ed): The State, Development Planning and Liberalization in India, OUP.
- 86.The Ministry of Finance & Government (2018): Economic Survey 2017-18 (Volume 1 and Volume 2), OUP.
- 87.Time Dyson (2018): A Population History of India From the First Modern People to the Present Day, OUP.
88. Uma Kapila (2018): Indian Economy: Performance and Policies, 2018-19.
- 89.Uma Kapila (2019): Indian Economy Since Independence: A comprehensive and critical analysis of India's economy, 1947-2017 (Academic Foundation)
- 90.Vaidyanathan, A (2010): Agricultural Growth in India: The Role of Technology, Incentives and Institutions, OUP, New Delhi.
91. Vijay Joshi (2016): 'India's Long Road: The Search for Prosperity'. Penguin Random House, New Delhi.
92. Vijay Joshi and I. M. D Little (2018): India's Economic Reforms, 1991-2001, OUP.
- 93.Zaad Mahmood (2017): Globalization and Labour Reforms: The Politics of Interest Groups and Partisan Governments, OUP.

Semester	Course code	Course Title	Type of course	Credit	Teaching Hours
<b>I</b>	<b>EC010105</b>	<b>Mathematical Methods for Economic Analysis</b>	<b>Core</b>	<b>4</b>	<b>90</b>

**Course Objectives**

*This is a course on the basic mathematical methods necessary for understanding modern economics literature. Mathematics provides a logical, systematic framework within which quantitative relationships may be explored, and an objective picture of the reality may be generated. The deductive reasoning about social and economic phenomena naturally invites the use of mathematics. Among the social sciences, economics has been in a privileged position to respond to that invitation, since two of its central concepts, commodity, and price, are quantified in a unique manner. Thus, a good understanding of mathematics is indispensable for better cognizance of almost all fields of economics, both applied and theoretical. The goal of the course is to make students understand, assimilate and thus capable of using the mathematics required for studying economics at the master's level. This course will focus on developing the mathematical tools that are used extensively in Microeconomics, Macroeconomics, and Econometrics. Students should be given an introduction to the Linear algebra, Differential Calculus, Integral Calculus, etc. These mathematical methods would help students in their understanding of advanced and core courses in Economics. The aim of this course is to: (i) introduce the students to several mathematical tools used in modern economics; (ii) illustrate the use of these tools by applying them to various well-known economic models; and (iii) complement the core postgraduate microeconomic and macroeconomic theory courses. Learning outcomes: On completion of this unit, successful students should be able to demonstrate understanding of static optimization and dynamic systems applicable to economics.*

**Unit-1: Linear algebra**

**(15 Hours)**

- 1.1. Definitions of vector and matrix.
- 1.2. Types of matrices, Addition, subtraction and multiplication of matrices.
- 1.3. Determinants, Minors, Cofactors, Adjoint and Inverse of a matrix.
- 1.4. Solution of a system of linear equations - Cramer's rule and Inversion method.
- 1.5. Rank of a matrix -Linear independence of vectors.
- 1.6. Some applications in Economics - Input -output analysis - Partial equilibrium market model.

**Unit-2: Differential Calculus**

**(25 Hours)**

- 2.1 Limit of a function - Derivative of a function.
- 2.2 Rules of differentiation - Higher order derivatives - L'Hospital rule of finding the limit of a function
- 2.3 Differentiation of implicit function - Partial and total derivative of a function with several variables
- 2.4 Maxima and minima of a function.
- 2.5 Curvature properties - Convexity and concavity - Points of inflection.
- 2.6. Properties of homogeneous functions - Euler's theorem.
- 2.7. Matrix calculus: Rules of Matrix differentiation, differentiation of a matrix by a scalar, differentiation of a scalar by a matrix
- 2.8. Some applications in Economics- Derivation of Marginal cost, Marginal revenue functions - Derivation of point elasticity, tax yield and income multiplier, problems relating to indifference curve and isoquant. Production function, utility functions, cost functions. Cobb-Douglas production function, CES production function - Comparative static analysis of market model, national income model, input output model, determination of partial elasticities of demand.

**Unit-3: Integral Calculus**

**(25 Hours)**

- 3.1. Indefinite integrals - rules of integration, initial conditions and boundary conditions
- 3.2. Integration by substitution, Integration by parts - Integration of natural exponential functions.
- 3.3. Definite integrals - properties of definite integrals
- 3.4. Area under a curve, area between curves
- 3.5. Difference equations and differential equations (basic concepts only).
- 3.6. Improper integrals - Beta and Gamma integrals.
- 3.7. Some applications in Economics - Consumer surplus and producer surplus - continuous interest-discount calculation. Cobweb model, multiplier accelerator. Harrod-Domar and Solow model.

**Unit-4: Linear Programming**

**(25 Hours)**

- 4.1 Formulation of LPP and solution using graphical and Simplex methods.



4.2 Duality theory - constrained optimization with inequality and non-negativity constraints

4.3 Kuhn-Tucker formulation. Primal and dual, shadow prices.

4.4 Applications from Economics and Finance.

#### Reference:

1. Akira Takayama - Mathematical Economics, 2nd Ed, Cambridge University Press.
2. Allen, R. G. D. (2003), Mathematical Analysis for Economists, The Macmillan Press, Delhi.
3. Anthony M. and Biggs N. (1996), Mathematics for Economics and Finance, Cambridge University Press.
4. Carl P. Simon and Lawrence Blume (2014): Mathematics for Economists, Viva Books.
5. Chiang and Wainwright (2018): Fundamental Methods of Mathematical Economics, 4<sup>th</sup> Ed, McGraw-Hill.
6. Edward Dowling (2011): Schaum's Outline of Introduction to Mathematical Economics, 3<sup>rd</sup> Ed, McGraw-Hill.
7. Henderson, James M and Quandt, Richard E (1989)- Microeconomic Theory: A Mathematical Approach. 3<sup>rd</sup> Ed, TMH (Indian Edition).
8. Holden K. and Pearson A.W. (1992): Introductory mathematics for Economics and Business, Second Edition, The Macmillan Press Ltd.
9. Hoy M. et.al. (2001), Mathematics for Economics, 2<sup>nd</sup> Ed, MIT Press.
10. Jacques I. (2006), Mathematics for Economics and Business, 5<sup>th</sup> Edition, Prentice Hall.
11. M. D. Intriligator (1996) - Mathematical Optimization and Economic Theory, Prentice-Hall
12. Malcolm Pemberton and Nicholas Rav (2016): Mathematics for Economists, 4<sup>th</sup> Ed, Manchester University Press
13. Martin Timbrell (1985): Mathematics for Economists: An Introduction, Wiley- Blackwell.
14. Mike Rosser and Piotr Lis (2018): Basic Mathematics for Economists, 2<sup>nd</sup> Ed, Routledge.
15. Ok E. A (2007): Real analysis with Economic Applications, Princeton University Press 2007.
16. Peter N. Hess: Using Mathematics in Economic Analysis, Prentice Hall.
17. Renshaw G. (2009): Maths for Economics, 3<sup>rd</sup> Edition, Oxford.
18. Robert B. and D. L. Schultze (1973): - Modern Mathematics and Economic Analysis, W.W. Norton and company.
19. Sydaester K., Hammond P. and Strom A. (2012), Essential Mathematics for Economic Analysis, 4<sup>th</sup> Ed, Pearson.
20. Ummer E.K (2012), Basic Mathematics for Economics Business and Finance, Routledge.
21. William Novshek (1993): Mathematics for Economists, Academic Press.
22. Yamane, Taro (2010) - Mathematics for Economists: An Elementary Survey, PHI.



**SECOND SEMESTER**

Course Code	Title of the Course	Type of the Course	Hours per week	Credits
EC010201	Microeconomics-II	Core	05	04
EC010202	Macroeconomics-II	Core	05	04
EC010203	Public Economics	Core	05	04
BE010204	Management Concepts and Organisational Behaviour	Core	05	04
EC010205	Statistical Methods for Economic Analysis	Core	05	04

Semester	Course code	Course Title	Type of course	Credit	Teaching Hours
<b>II</b>	<b>EC010201</b>	<b>Microeconomics – II</b>	<b>Core</b>	<b>4</b>	<b>90</b>
Course Objectives					
<p><i>This is the second part of the core Microeconomics Sequence. This course is designed to provide students with a sound understanding of advanced microeconomic theory. It will cover the aspects of microeconomic theory that is required to analyze contemporary economics issues and to create new models to explain the behavior of individuals, firms, and markets, and to evaluate economic policies. The topics will include alternative theories of firms' behavior, information, institutional, behavioral economics, theory of general equilibrium and welfare economics. This course is intended to acquaint the student with decision making in the context of market interdependence, complexity, uncertainty and informational asymmetry; give insights into developments in the areas of general equilibrium and welfare economics; and to enable the student to apply microeconomic principles in the areas of industrial organization, exchange, and welfare.</i></p>					

**Unit- 1: Theories of The Firm (20 Hours)**

- 1.1. Why firms, their size and structure – Ronald Coase-O Williamson
- 1.2. Team production approach by Armen Alchian and Harold Demsetz
- 1.3. Hierarchical structures- U form and M form

**Unit- 2: Alternative Theories of The Firm's Behaviour (25 Hours)**

- 2.1. Hall and Hitch Report and Full Cost Pricing
- 2.2. Gordon's attack on Marginalism
- 2.3. Theory of Limit Pricing -Bain, Sylos-Labini, F. Modigliani, Bhagwati and Pashigian
- 2.4. Managerial Theories-W J Baumol- O Williamson –Marris
- 2.5. Behavioural theories- March and Cyert-Contestable Market Theory by W.J. Baumol

**Unit- 3: Institution, Information and Behavioural Economics (30 Hours)**

- 3.1. Information Economics-Asymmetric Information - the market for Lemons- the Principal Agent Problem - Moral Hazard, Adverse Selection-Screening and Market Signalling.
- 3.2. Adverse Selection in Labour Market - A Simple Model of Educational Attainment- Adverse Selection in credit market.
- 3.3 Behavioural Economics-Classical and Neo-Classical views of human nature – Cyert and March's behavioural model—framing -anchoring effect – uncertainty

3.4 Role of time and emotions in economic decisions - role of constraints and information - satisficing – bounded rationality - altruism and common good.

3.5 New Institutional Economics: Transaction costs - Social cost vis-à-vis individual costs- Identification and measurements of transaction costs, Coase Theorem, Bounded Rationality

3.6 Concepts of Property and defining Property Rights- Problems of Ill-defined Property rights, Externalities-Market failure and property rights- Issues relating to ill-defined property rights

3.7 Contracts - Rent Seeking-Incentives- Applications to Markets- the Firm and the State.

#### **Unit- 4: General Equilibrium and Welfare Economics**

**(15 Hours)**

41. Partial and General Equilibrium, - Walrasian General Equilibrium System- Existence, Uniqueness and Stability of an Equilibrium-2x2x2 General Equilibrium Model- Static Properties of a General Equilibrium State- General Equilibrium and the Allocation of Resources- Prices of Commodities and Factors- Factor Ownership and Income Distribution

42. Exposition of Welfare theories- A C Pigou, Wilfredo Pareto, Kaldor-Hicks, Bergson-Samuelson, Scitovsky Double Criteria- Welfare Maximization and Perfect Competition- Critique and Extensions

43. Arrow's impossibility, Sen's Capability Theory, Rawl's theory of justice and equity- Nussbaum's Central Capabilities

44. Easterlin Paradox. Human Happiness index

#### **Reference:**

1. A. Koutsoyiannis (1985): Modern Microeconomics, 2<sup>nd</sup> Ed, MacMillan Education (Reprint).
2. Andreu Mas-Colell, Michael D. Whinston and Jerry R. Green (2005): Microeconomic Theory, OUP.
3. Austan Goolsbee, Steven Levitt and Chad Syverson (2013): Microeconomics, Worth Publishers (chapter 15- information economics -17 behavioural economics)
4. B. Douglas Bernheim and Michael D. Whinston (2016): Microeconomics, McGrawHill. (Chapter 14 transaction cost, information and behavioural economics. Chapter 18- information economics Chapter 9 information economics)
5. Christopher Snyder, Walter Nicholson and Robert Stewart (2015): Microeconomic Theory: Basic Principles and Extensions, Cengage Learning.
6. David Besanko and Ronald R. Braeutigam (2014): Microeconomics, 4<sup>th</sup> Ed, John Wiley and Sons, Inc. Edition, South Western Cengage Learning. Genaro C. da Costa (2005): Value and Distribution in Neoclassical and Classical System, 2<sup>nd</sup> Ed, Himalaya Publishers, Mumbai.

7. Geoffrey A. Jehle and Philip J. Reny (2014): Advanced Microeconomic Theory 3<sup>rd</sup> Ed, Prentice Hall.
8. Hal R. Varian (2014): Intermediate Microeconomics with Calculus, 1<sup>st</sup> Ed, W. W. Norton & Company.
9. Hal R. Varian (2017): Intermediate Microeconomics: A Modern Approach, 10<sup>th</sup> Ed, WW Norton & Co, NY.
10. Henderson, M. and R.E. Quandt (1989): Microeconomic Theory: Mathematical Approach, 3<sup>rd</sup> Ed, McGraw Hill.
11. Jeffrey M. Perloff (2016): Microeconomics with Calculus, 3<sup>rd</sup> Ed, Pearson.
12. Judy A. Whitehead (2015): Microeconomic: A Global Text, Routledge.
13. Maria Moschandreas (1994): Business Economics, Cengage Learning.
14. Mike Rosser (2011): Microeconomics: The Firm and the Market Economy, MacMillan
15. Robert Awh (2001): Microeconomics, John Wiley.
16. Robin Bade and Michael Parkin (2017): Foundations of Microeconomics, 7<sup>th</sup> Ed, Pearson.
17. Saul Estrin, David Laidler and Michael Dietrich (2016): Microeconomics, 5<sup>th</sup> Ed, Prentice Hall (Chapter 25 Economics of Information)
19. Snyder and Nicholson (2016): Microeconomic Theory: Basic Principles and Extensions, 11<sup>th</sup> Ed, Pearson. (Chapter 18 Information Economics)
20. Steven E. Landsburg (2017): Price Theory and Applications, 8<sup>th</sup> Ed. Cengage Learning.
21. Thomas J Nechyba (2010): Microeconomics: An Intuitive Approach with Calculus.
22. William A. McEachern (2017): Principles of Microeconomics, 4<sup>th</sup> Ed, Cengage Learning.
23. Yew-Kwang Ng (2004): Welfare Economics: Towards a More Complete Analysis, Palgrave-Macmillan

Semester	Course Code	Course Title	Type of course	Credit	Teaching Hours
<b>II</b>	<b>EC010202</b>	<b>Macroeconomics - II</b>	<b>Core</b>	<b>4</b>	<b>90</b>
<b>Course Objectives</b>					
<p><i>Analyzing today's hot-button policy issues requires approaching macroeconomic theory with the models that researchers and policymakers employ. The second part of macroeconomics intendeds to present the students with a firm grounding in modern macroeconomic thoughts. It, therefore, pays special heed to the major developments in the classical and Keynesian orthodoxy with clear historical perspectives. Here the emphasis is both on competing hypotheses and analytical techniques. The principal objective of the course is to provide the students with an intuitive understanding of both the sources of controversies and how the debates have led to the development of modern macroeconomics. At the end of this course students should be able to: (i) Understand the strengths and weakness of the main macroeconomic tools and models used in modern macroeconomics; (ii) Learn to evaluate and critically compare results in alternative macroeconomic models; and (iii) Understand the importance and limitations of modeling assumptions for macroeconomic policy.</i></p>					

**Unit- 1: New Classical Macroeconomics**
**(20 Hours)**

- 1.1. Main Propositions of NCM: The Rational Expectations Hypothesis-Continuous Market Clearing - The Lucas Supply Curve - Rational Expectations -
- 1.2. The New Classical Economics and the Business Cycle - The Ineffectiveness of Government Intervention - The Lucas Critique
- 1.3. Monetary Policy in the NCM and the Philips Curve -Credibility and Dynamic Time-Inconsistency.

**Unit- 2: Real Business Cycle and Supply-Side Economics**
**(20 Hours)**

- 2.1. Real Business Cycles Model: Labour Market in RBC Model—Intertemporal Substitution.
- 2.2. AS- AD in RBC Model—Supply Shocks in RBC Model-- Technology Shocks- Neutrality of Money and Flexibility of Wages and Prices – Stabilization Policy
- 2.3. Supply side Economics: Main features- and Types of supply-side policies -Tax (Laffer Curve), incentive and production- SSE and role of the Government. 7

**Unit- 3: New Keynesian School and Post-Keynesian Economics**
**(30 Hours)**

- 3.1 New Keynesian School: Imperfect Competition and Price Setting – Sticky Nominal Wages—Staggered Wage-Contract Theory.

3.2 Sticky Price Model: Menu Costs and Demand Externality.

3.3 Sticky Real Wages: Asymmetric Information Model-Implicit Contract Theory- Insider Outsider Model and Hysteresis.

3.4 Efficiency Wage Theories of Involuntary Unemployment: - Shapiro–Stiglitz Model - Turnover Cost-Selective Theory—On the Job Efficiency -Shirking Theory and Coordination Failure- Policy Implications of NKE.

3.5 Search and Matching Models-DMP Model.

3.6 Post-Keynesian Economics (PKE): Essentials Characteristics of Post Keynesian Economics - Various Strands of PKE- Principles of Effective Demand and Labour Market: Employment and Unemployment—Consumption Theory-Pricing Theory and Distribution of Income---Expectation—Investment Theory Money: Endogenous Supply of Money and Circuit Theory- Minsky’s Financial Instability Hypothesis-Path Dependency and Hysteresis-Role of State- Fiscal and Monetary Policy in PKE

#### **Unit- 4: Macroeconomic Theories of Business Cycles**

**(20 Hours)**

4.1 Samuelson’s Interaction between Multiplier and Accelerator. Hicksian theory of Cycles. Kaldor’s model of Cycles. Goodwin’s Non-Linear Model. Kalecki’s Theory of Cycles and Dynamics of a Capitalist Society and Political business cycles.

4.2 The Great Recession of 2008: The Roots of the Current Crisis -Financial Innovation and Agency Problems in the Mortgage Markets. - Asymmetric Information and Credit Rating Agencies-Residential Housing Prices (The Subprime Debacle)

4.3 Financial Deregulation and Securitization.

#### **Reference:**

1. Agenor, Pierre-Richard and Montiel, Peter J. (2015): Development Macroeconomics 4<sup>th</sup> Ed, Princeton University Press, Princeton.
2. Bober, Stanley (1968): The Economics of Cycles and Growth, New York: John, Wiley and Sons
3. Carlin, Windy and Soskice, David (1990): Macroeconomics and the Wage Bargain: A modern Approach to Employment, Inflation, and the Exchange Rate, OUP.
4. Chirichiello, Giuseppe (1994): Macroeconomic Models and Controversies, The Macmillan Press Ltd.
5. Dilip M. Nachane (2018): Critique of the New Consensus Macroeconomics and Implications for India, Springer.
6. D’Souza, Errol (2012): Macroeconomics, 2<sup>nd</sup> Ed. Pearson India. (Module-II)
7. De Vroey, Michel (2016): A History of Macroeconomics from Keynes to Lucas and

Beyond, CUP.

8. Felderer, Bernhard and Homburg, Stefan (1987): *Macroeconomics and New Macroeconomics*, Springer-Verlag.
9. Galbraith, James, K and Darity, William Jr (1994): *Macroeconomics*, Houghton Mifflin Co, NJ.
10. Gärtner, Manfred (2009): *Macroeconomics*, 3<sup>rd</sup> Ed, Prentice Hall.
11. Ghatak, Anitha (1994): *Macroeconomics: A Mathematical Approach*, Concept Publishing Co, ND.
12. Harcourt, G. C. (2006): *The Structure of Post-Keynesian Economics the Core Contributions of the Pioneers*, CUP. (Module-III-B)
13. Heijdra, Ben J. (2017): *Foundations of Modern Macroeconomics*, 3<sup>rd</sup> Ed, OUP
14. Hillier, Brian (2006): *Macroeconomics: Models, Debates and Development*, Basil Blackwell.
15. Homburg, Stefan (2017): *A Study in Monetary Macroeconomics*, OUP.
16. Jansen, Dennis W and Delorme, Charles and Ekelund, Robert B, Jr (1994): *Intermediate Macroeconomics*, West Publishing Co.
17. Knoop, Todd A. (2015): *Business Cycle Economics: Understanding Recessions and Depressions from Boom to Bust*, Praeger.
18. Lavoie, Marc (2006): *Introduction to Post-Keynesian Economics*, Palgrave. (Module- III-B)
19. Lavoie, Marc (2014): *Post-Keynesian Economics: New Foundations*, Edward Elgar. (Module-III-B)
20. Levaccic, Rosalind and Rebmann, Alexander () : *Macroeconomics: An Introduction to Keynesian- Neo-Classical Controversies*, 2<sup>nd</sup> Ed, MacMillan
21. Paul Davidson (1994): *Post Keynesian Macroeconomic Theory*, Edward Elgar, 1994. (Module-III-B)
22. Peel, David and Minford, Patrick (2016): *Advanced Macroeconomics: A Primer*, Edward Elgar.
23. Pentacost, Eric (2000): *Macroeconomics: An Open Economy Approach*, Macmillan.
24. Peter Galba'cs (2015): *The Theory of New Classical :Macroeconomics: A Positive Critique*, Springer.
25. Peterson, Wallace C and Estenson, Paul S (1992): *Income, Employment and Economic Growth*, 7<sup>th</sup> Ed, W W Norton, NY.
26. Phelps, E. (1990): *Seven Schools of Macroeconomic Thought*, Oxford University Press, Oxford
27. Philip Arestis (1992): *Post-Keynesian Approach to Economics*, Edward Elgar (Module- III-B)
28. Richard P.F. Holt and Steven Pressman (2001) (Ed): *A New Guide to Post Keynesian Economics*, Routledge.
29. Romer, David (1996): *Advanced Macroeconomics* 4<sup>th</sup> Ed, McGraw-Hill.
30. Rouseas, Stephen (1999): *Post Keynesian Monetary Economics* MacMillan. (Module- III-B)
31. Scarth, William (2014): *Macroeconomics: The Development of Modern Methods for Policy Analysis*, Edward Elgar.
32. Snowdon, Brian and Vane, Howard R (1997): *A Macroeconomics Reader*, Routledge.
33. Snowdon, Brian and Vane, Howard, R (2005): *Modern Macroeconomics: Its Origins, Development and Current State*, Edward Elgar.
34. Taylor, Lance (2004): *Reconstructing Macroeconomics: Structuralist Proposals and Critiques of the Mainstream*, Harvard University Press.
35. Tsoulfidis, Lefteris (2010): *Competing Schools of Economic Thought*, Springer.
36. Westaway, A J and Jones, T G Weyman (1977): *Macroeconomics theory, evidence and policy*, Longman. (Module-IV 4.1.)
37. Williamson, Stephen D. (2018): *Macroeconomics*, 6<sup>th</sup> Ed, Pearson.



Semester	Course code	Course Title	Type of course	Credit	Teaching Hours
<b>II</b>	<b>EC010203</b>	<b>Public Economics</b>	<b>Core</b>	<b>4</b>	<b>90</b>
Course Objectives					
<p><i>Public economics is the study of government policy from the points of view of economic efficiency and equity. Public economics explores the economic effects of government tax and expenditure policies, as well as the optimal design of these policies. The primary objective is to teach the leading current tools and methods of public finance. The course covers major topics in public finance including externalities, public goods, benefit/cost analysis, fiscal federalism, taxation, and others. The course deals with the nature of government intervention and its implications for allocation, distribution, and stabilization. The thought content encompasses a host of topics including public goods, market failures, and externalities. The objective of this course is to familiarize students about the rationale for and role of government intervention in economic activities and how the government makes economic decisions. The course will also examine the recent developments in both theoretical and empirical literature in the area. At the end of this course, students should be able to demonstrate a clear understanding of established concepts and theoretical results on collective choice, optimal income taxation, and the effects of income redistribution on the provision of public goods. The course will be useful for students aiming towards careers in the government sector, policy analysis, business, and journalism.</i></p>					

**Unit- 1: Role of State and Macroeconomic Perspective of Public Finance (10 Hours)**

- 1.1. Role of Government: Issues related to market failure and government intervention- Government failure.
- 1.2. Changing Role of State: Issues in Public Finance in a Globalizing World with special emphasis on Global Public Goods.
- 1.3. Macroeconomics of Public Finance: The Interaction between Fiscal and Monetary Policy and Fiscal Stabilization

**Unit- 2: Economic Analysis of Public Goods and externalities (25 Hours)**

- 2.1. Public goods: Pure and Impure Public Goods.
- 2.2. Market failure and Externalities- Types of Externalities, Coase Theorem and Property Rights, Free-Rider Problem
- 2.3. Optimal provision of public goods – Voluntary Exchange Models – Samuelson’s contribution.
- 2.4. The Theory of Clubs and Local Public Goods- Tiebout Model
- 2.5. Voting and Public Choice – Reasons for Public Choice- Public Choice under Direct Democracy unanimity rule – Wicksell approach



2.6 Majority Rule – Buchanan and Tullock model - Bowen Black model

2.7 Preference Revelation Mechanisms - Lindahl equilibrium- Groves–Clarke mechanism

**Unit- 3: Economic Decision Making of Government (15 Hours)**

3.1. Normative social choice theory – Arrow’s theorem – Majority Voting – The Median Voter Model – Representative Democracy -Downs Model on Demand and Supply of Government Policy- Niskanen Model of Bureaucratic Behavior

3.2. Positive Social Choice Theory: The Leviathan Hypothesis – Theory of Rent Seeking – Property Rights Dimension, Rent Seeking and X- Efficiency 3.3.Lobbying and Interest Groups.

**Unit- 4: Fiscal Administration and Management (25 Hours)**

4.1. Incidence of Taxation – Optimal Taxation – Dead Weight Loss – Equity Vs Efficiency- Theories of taxation: Benefit Theory, The Cost Service Theory and Ability to Pay Theory

4.2 Impact and Incidence of Taxation, Theories of Shifting- Diffusion Theory, Concentration Theory, Demand and Supply Theory.

4.3. Theories of Public Expenditure: Adolf Wagner- Wiseman- Peacock - Colin Clark- Bowen Model, Lindahl Model, Pigou Model and Samuelson Model

4.4 Theories of Public debt: Classical – Keynesian – Modern 4.5.Burden of Public Debt- Intergenerational Equity –Buchanan Thesis

4.5 Measurement and Macroeconomic Impact of Deficits: Alternative Paradigms 4.7.Deficit concepts-Problem of fiscal deficit –Corrective measures-FRBM Act

4.6 Budgetary Policy in India- Stages involved in the preparation, presentation and execution of government budget – A brief review of recent budgets in India

4.7. Recent trends in the fiscal parameters in India -Its macroeconomic implications

**Unit- 5: Fiscal Federalism: Theory and Practice (15 Hours)**

5.1. Theory of Fiscal Federalism: The Decentralization Theorem

5.2. Theory of Intergovernmental Transfers

5.3. Issues of Indian Federalism and Intergovernmental Transfers in India- Vertical and Horizontal Imbalances.

5.4. Centre-State financial relations in India- Finance Commission and the recent most reports of the Finance commissions of India

**Essential Readings:**

1. Anthony B. Atkinson and Joseph E. Stiglitz (2015): Economics of the Public Sector, 2<sup>nd</sup> Rev. Ed, Princeton University Press.
2. C.V. Brown and Peter. M. Jackson (2010): Public Sector Economics, 5<sup>th</sup> Ed, Wiley-Blackwell
3. Harvey Rosen (2012): Public Finance. 8<sup>th</sup> Ed, McGraw Hill Education.
4. Hyman David: Public Finance (2015): A contemporary Application of Theory to Policy, 5<sup>th</sup> Ed, Thomson Learning.
5. John Cullis and Philip Jones (2009): Public Finance and Public Choice: Analytical Perspectives, 3<sup>rd</sup> Ed, OUP (India)
6. Patrick A. McNutt (1997): The Economics of Public Choice: Contemporary Issues in the Political Economy of Governing, Edward Elgar Publishing Ltd.

**Additional Readings:**

1. Amaresh Bagchi (2005): Readings in Public Finance, OUP (India)
2. Bailey, Stephen J: Public Sector Economics (2001): Theory and Practice. Second Edition. Palgrave, New York.
3. Bharti Pandey (2017): Fiscal Federalism in India: Challenges and Reforms, Serials Publications.
4. Buchanan, J. M (1968): The Demand and Supply of Public Goods. Randy McNally, Chicago.
5. Cornes, Richard and Todd Sandler (1996): The Theory of Externalities, Public Goods and Club Goods. Cambridge University Press.
6. Friedman, A (1986): Welfare Economics and Social Choice Theory. Martins Nijhoff, Boston.
7. Glennester, H. and J. Hills (1998): The State of Welfare: the Economic and Social Spending, Oxford University Press, London.
8. Greene, Joshua E (2012): Public Finance: An International Perspective, World Scientific.
9. Gruber, Jonathan (2016): Public Finance and Public Policy, 5<sup>th</sup> Ed, Worth Publishers.
10. Hindriks, Jean and Gareth D. Myles (2007): Intermediate Public Economics. Prentice Hall of India.



11. Holley H. Ulbrich (2007): Public Finance in Theory and Practice, 2<sup>nd</sup> Rev. Ed, South- Western.
12. Jean-Jacques Laffont (1998): Fundamentals of Public Economics, MIT Press
13. Jha, R (1997): Modern Public Economics, Routledge, London.
14. John Leach (2003): A Course in Public Economics, Cambridge University Press.
15. Kenneth J. Arrow (2012): Social Choice and Individual Values (Cowles Foundation Monographs Series), 3<sup>rd</sup> Ed, Yale University Press
16. Mueller, Dennis C. (1979): Public Choice, Cambridge University Press.
17. Musgrave, R.A. and P.B. Musgrave (2017): Public Finance in Theory and Practice, Fifth Edition, McGraw Hill Education.
18. Stiglitz, Joseph E and Rosengard, Jay K (2015): Economics of the Public Sector, 5<sup>th</sup> Ed, W.W. Norton and Co, Inc.

Semester	Course Code	Course Title	Type of course	Credit	Teaching Hours
<b>II</b>	<b>BE010204</b>	<b>Management Concepts and Organisational Behaviour</b>	<b>Core</b>	<b>4</b>	<b>90</b>
<b>Course Objectives</b>					
<p><i>Management Concepts and Organisational Behaviour is to acquaint the students with the basic nature of management, its process, tasks and responsibilities of a manager as well as organizational behavioural dynamics governing an organization. It will also help students to equip themselves with the tools necessary to understand the dynamics of individual and group behaviour for efficient and effective utilization of human resources in the organizations. It will also familiarize the participants with the behavioural patterns of human beings at individual and group levels in the context of an Organization.</i></p>					

**Unit- 1: Introduction to Management and Organisational Behaviour (20 Hours)**

- 1.1. Introduction to Management – Evolution – Concept – Scope – Significance – Role – Nature – Purpose
- 1.2. Management as profession- Management and Administration – Functions of Management
- 1.3. Management Thought – Classical Schools - Neo Classical — Quantitative and system school – Contingency approach to management - Decision theory school

**Unit- 2: Management Functions (30 Hours)**

21. Planning: Nature, Types, Importance, Steps in Planning Process, Long range and Short- range Planning, Objectives, MBO, Premising, Decision Making, Strategies & Policies, Making Planning effective and Open System Approach to Planning.
22. Organising: Span of Management, Graicuna’s Theory of Superior-subordinate Relationship, Factors influencing Span of Management, Wide versus Narrow Spans, Decentralisation of Authority, Principles of Delegation, Balancing between Centralisation & de-centralisation, Types of Organisation.
23. Staffing: Nature & Significance, A brief knowledge of Recruitment, Selection, Training & Development, and Performance Appraisal.
24. Directing: Nature, Concept of Leadership, Leadership Styles, Theories of Leadership, Charismatic Leadership Theory, Concept of Motivation, relevance of Communication.

25. Controlling: Concept and Importance of Control, Control Process, Types of Control Mechanism, Management by Exceptions.

**Unit- 3: Organisational Behaviour-Approaches and its Structure**

**(25 Hours)**

- 3.1. Organisation Behaviour -Introduction, Historical Perspective, Approaches - Importance, Framework for Learning OB, Limitations of OB, Globalization and OB.
- 3.2. Organisation Structure: Classification on the basis of Possession of Authority, Classification on the basis of grouping of activities, New Organisational Designs – Project, Matrix, Organic Structure & Mechanistic Structure, Challenge of Modern Organisation, Virtual Organisation.
- 3.3. Motivation – Concept of Motivation - Motivational Theories of Maslow, Herzberg, David Mc Clelland, and Porter and Lawler.
- 3.4. Leadership – Theories of leadership – Leadership Styles – Leadership Skills – Women and Leadership – Leadership for the future.
- 3.5. Group Dynamics & Motivation – Benefits of Groups – Types of Groups – Group Formation and Development.

**Unit- 4: Dynamics of Organisational Behaviour**

**(15 Hours)**

- 4.1. Group – Nature – Stages- Properties – Group Decision making – Dynamics of informal Groups.
- 4.2. Conflict – interpersonal – inter group – organisational.
- 4.3. Culture and Change: Concept of Culture, Fundamentals of Culture, Fundamentals of Change.

**References:**

1. Hersey, Paul, Kenneth H. Blanchard and Dewey E. Johnson: Management of Organisational Behaviour- Utilising Human Resources, Prentice Hall, New Delhi
2. Koontz, Harold, Cyril O'Donnell, and Heinz Weihrich : Essentials of Management, Tata McGraw-Hill, New Delhi
3. Luthans, Fred- Organizational Behaviour, McGraw-Hill.
4. Newstrom, John W. and Keith Davis: Organizational Behaviour- Human Behaviour at Work, Tata McGraw-Hill, New Delhi.
5. Robbins, Stephen P. and Mary Coulter: Management, Prentice Hall, New Delhi
6. Robbins, Stephen P. Organisational Behaviour, Prentice Hall, New Delhi.

Semester	Course Code	Course Title	Type of course	Credit	Teaching Hours
<b>II</b>	<b>EC010205</b>	<b>Statistical Methods for Economic Analysis</b>	<b>Core</b>	<b>4</b>	<b>90</b>
Course Objectives					
<p><i>This course is designed to cover the statistical material required for entry into Econometrics. It begins with some basic concepts and terminology that are fundamental to Inferential Statistics. It then develops the notion of probability, followed by probability distributions of discrete and continuous random variables and of joint distributions. This is followed by a discussion on sampling techniques used to collect survey data. The objective of this course is to train students in the use of the most common statistical tools and techniques encountered in economics for analysis of data with valid logic and inferences. At the end of the course, students are expected to learn a clear understanding of the inferential statistics as well as the interpretation of data.</i></p>					

### **Unit- 1: Probability Theory and Probability distributions**

**(20 Hours)**

- 1.1. Random variables - Discrete and Continuous.
- 1.2. Density function, Distribution function - Definition and properties.
- 1.3. Mathematical Expectation, Variance and co-variance of random variables.
- 1.4. Bivariate random variables - Marginal and conditional distributions.
- 1.5. Moment Generating function - Definition and properties.
- 1.6. Discrete distributions - Binomial - Mean, variance, mgf of Binomial distribution. Computation of probability using Binomial distribution. Fitting of Binomial.
- 1.7. Poisson distribution - mean, variance, mgf of Poisson distribution. Computation of probability using Poisson distribution, Fitting of Poisson distribution.
- 1.8. Continuous distributions - Normal distribution - Mean, variance and mgf of Normal distribution (Derivation is not required). Standard Normal distribution - pdf, tables of standard normal distribution, Computation of probabilities of Normal distribution. Log-normal distribution - pdf, relation between normal and log-normal distribution.
- 1.9. Law of large numbers and Central Limit theorem (Concept and statement only).

### **Unit- 2: Sampling methods and Sampling Distributions**

**(20 Hours)**

- 2.1. Population and Sampling - Parameter and Statistic - Definition and examples.

- 2.2. Probability and non-probability sampling methods - Practical methods of drawing random samples – with replacement and without replacement.
- 2.3. Determination of Sample size.
- 2.4. Sampling distributions - Standard error. Sampling vs Non-sampling errors.
- 2.5. Chi-square, t, and F distribution - Definition, properties and tables of distribution. Examples of statistics following t, Chi-square and F distributions.

**Unit- 3: Inferential Statistics- Estimation**

**(20 Hours)**

- 3.1. Estimation - Point and interval Estimation - Properties of Good estimators –Cramer- Rao inequality.
- 3.2. Methods of Estimation - Maximum Likelihood estimators and estimation using method of moments.
- 3.3. Calculation of MLE of parameters of Binomial, Poisson and Normal distributions.
- 3.4. Interval estimation - Confidence interval - population mean of normal distribution when population variance is known and unknown.

**Unit- 4: Inferential Statistics - Testing of Hypothesis**

**(20 Hours)**

- 4.1. Hypothesis testing - Hypothesis - Simple and composite hypothesis - Null and alternative hypothesis Rejection and acceptance region - Type I and Type II errors, Significance level and power of a test. p-value of a test.
- 4.2. Large sample tests of population mean of one sample and two samples, proportion of a population of one sample and two samples, Goodness of fit, independence of attributes (two-way classification).
- 4.3. Small sample tests of mean and variance of normal population of one sample and two samples - paired sample and independent sample tests, ratio of variances of two normal populations.
- 4.4. Non-parametric tests - Sign test, Wilcoxon Matched-pairs Test (or Signed Rank Test), run test, Fisher-Irwin Test, Mann-Whitney test, Kendall's Coefficient of Concordance and Kruskal-Wallis test.

**Unit- 5: Research methodology**

**(10 Hours)**

51. Objectives of Research - Types of Research - Research Process - Criteria of Good Research- Research Problem - Selecting the Problem - Technique Involved in defining a Problem.
52. Research Design - Features of a Good Design - Different Research Designs
53. Research Report - Technique of Interpretation - Significance of Report Writing - Different Steps and layout of writing report - types of Reports - Precautions for Writing Research Reports.

**Reference:**

1. McClave, Benson and Sincich (2012): A First Course in Business Statistics, 8<sup>th</sup> Ed, Prentice Hall.
2. Moore, McCabe, Alwan, Craig and Duckworth (2011a): The Practice of Statistics for Business and Economics H Freeman and Company.
3. Lind A. Douglas, Marchal G. William and Wathen A. Samuel (2016)- Basic Statistics for Business and Economics, 7<sup>th</sup> Ed, McGraw Hill International Edition.
4. Mendenhall William, Beaver J. Robert and Beaver M. Barbara (2014) - Introduction to Probability and Statistics – 12<sup>th</sup> Ed, Thomson Books/Cole publishers.
5. Earl Babbie (2008): The Basics of Social Research, 4<sup>th</sup> Ed, Thomson.
6. Gerald Keller (2012): Statistics for Management and Economics, 9<sup>th</sup> Ed, South-Western.
7. James P. Stevens (2007): Intermediate Statistics: A Modern Approach, 3<sup>rd</sup> Ed, Lawrence Erlbaum Associates.
8. Joseph F. Healey (2012): Statistics: A Tool for Social Research, 8<sup>th</sup> Ed, Wardworth.
9. Roxy Peck and Jay Devore (2014): Statistics: The Exploration and Analysis of Data, 8<sup>th</sup> Ed, Cengage.
10. Sheldon M Ross (2016): Introductory Statistics, 5<sup>th</sup> Ed, Associate Press.
11. Ronald M. Weiers (2010): Introduction to Business Statistics, 7<sup>th</sup> Ed, South-Western.
12. Anderson, Sweeney and Williams (2016): Statistics for Business and Economics 12<sup>th</sup> Ed, South-Western.
13. Peter J. Diggle and Amanda G. Chetwynd (2011): Statistics and Scientific Method: An Introduction for Students and Researchers, OUP.
14. Don E. Ethridge (2004): Research Methodology in Applied Economics, 2<sup>nd</sup> Ed, Wiley-Blackwell





15. William J. Goode and Paul K. Hatt: Methods in Social Research, McGraw-Hill Book Company, Inc.
16. Bryman, Alan (2008), Social Research Methods, Oxford University Press, New Delhi.
17. Gerard Guthrie (2010), Basic Research Methods, Sage Publications New Delhi

**THIRD SEMESTER**

Course Code	Title of the Course	Type of the Course	Hours per week	Credits
<b>EC010301</b>	International Economics	Core	<b>05</b>	<b>04</b>
<b>EC010302</b>	Econometrics-I	Core	<b>05</b>	<b>04</b>
<b>BE010303</b>	Research Methodology in Business Economics	Core	<b>05</b>	<b>04</b>
<b>EC010304</b>	Environmental Economics	Core	<b>05</b>	<b>04</b>
<b>BE010305</b>	Investment Analysis and Portfolio Management	Core	<b>05</b>	<b>03</b>

Semester	Course code	Course Title	Type of course	Credit	Teaching Hours
<b>III</b>	<b>EC010301</b>	<b>International Economics</b>	<b>Core</b>	<b>4</b>	<b>90</b>
<b>Course Objectives</b>					
<p><i>This course surveys and studies the various theories of international trade and applies them to the analysis of current trade problems. The topics covered include theories explaining trade patterns, the effect of trade on national welfare, the welfare of groups within a country, trade policy, international economic integration and so on. The course aims to provide an understanding of the broad principles and theories, which govern the free flow of international trade, with empirical evidence. It would also provide an exposure to the theoretical underpinnings and empirical evidence of the major trade policies followed both at national and international level. The theoretical knowledge of international trade and policy imparted in the course would help the students to solve real-world problems. It will prepare them to become trade policy-makers and key strategists on trade issues.</i></p>					

**Unit- 1: Classical Trade Theory (Self-Study)**
**(15 Hours)**

- 1.1. Mercantilism
- 1.2. Absolute Advantage Theory
- 1.3. Comparative Advantage of Trade - Real and Opportunity Cost Approaches
- 1.4. Gains from Trade- Reciprocal Demand (Offer Curves)
- 1.5. Terms of Trade and its Computation
- 1.6. Revealed comparative advantage (Case Study- Estimate India's revealed comparative advantage using Balassa index)

**Unit- 2: Neo- Classical Trade Theory**
**(20 Hours)**

- 2.1. Heckscher-Ohlin theorem
- 2.2. Factor-Price Equalization Theorem – Factor Intensity Reversal
- 2.3. Empirical Verifications of Heckscher-Ohlin Theory
- 2.4. The effect of growth on trade – Immiserating Growth – Rybczynski Theorem
- 2.5. Technical progress and trade – neutral, capital saving, labour saving

**Unit-3: Modern Trade Theory**
**(25 Hours)**

- 3.1 Kravis and Linder Theory of Trade- Technology Gap Theory and Product Life Cycle Theory

- 3.2 Intra-industry trade- causes, emergence and measurement- imperfect competition and trade
- 3.3 The Neo-Heckscher -Ohlin Models
- 3.4 Neo- Chamberlin models- Neo-Hotelling models- Krugman Model
- 3.5 Oligopolistic models- Brander- Krugman Model- Reciprocal Dumping Model- - Gravity Model- Porter Diamond Model
- 3.6 Empirical work in intra-industry trade-Balassa index- Grubel-Lloyd index, Acquino index- - impact of intra industry trade on developing economies-trade in services.
- 3.7 Introduction to supply chain management (SCM) - impact of SCM on international trade
- 3.8 Trade and economic development- role and significance- Singer- Prebisch Thesis

#### **Unit-4: Trade Policy**

**(30 Hours)**

- 4.1. Free trade and protection
- 4.2. Effects of tariff —Metzler Paradox- Optimum Tariff- Effective rate of protection
- 4.3. Quotas and other non-tariff barriers- technical/ quality/ safety standards (regulations)- case study on India's EXIM policy
- 4.4. Economic integration – theory of customs union – partial and general equilibrium analysis – dynamic effects
- 4.5. Integration experiences- European Union, BRICS- NAFTA, PAFTA ASEAN
- 4.6. Regional trade blocs and barriers to free flows of trade
- 4.7. Multilateral trade negotiations- the GATT rounds – UNCTAD and evolution of world trading arrangements – World Trade Organization and fair trade- Development Round- Trade Facilitation- Trade War.

#### **Essential Readings:**

1. Appleyard D. R and Field A J (2014) -International Economics 8<sup>th</sup> Ed McGraw Hill, New Delhi
2. Chacholiades, M. (1990), International Trade: Theory and Policy, McGraw Hill, Kogakusha, Japan
3. Krugman P R and Obsfeild M (2009) - International Economics- Theory and Policy, 8<sup>th</sup> Ed, Pearson, Dorling Kindersley (India) Pvt. Ltd, New Delhi
4. Salvatore, D (2008) - International Economics, 8<sup>th</sup> Ed, Wiley India, New Delhi
5. Soderston, B and Reed G. (1994) - International Economics, 3rd Edition, McMillan Press Ltd. London

### Supplementary Readings:

6. A.J. Smit (2010): The competitive advantage of nations: Is Porter's Diamond Framework a new theory that explains the international competitiveness of countries? *Southern African Business Review*, Volume 14 Number 1
7. Bhagwati, J. N. (1987), *International trade: Selected readings*, Second Edition, MIT Press, Cambridge, Massachusetts
8. Bhagwati and Srinivasan (1983), *Lectures on international trade*, The MIT Press.
9. Carbaugh, R J (2008) - *International Economics*, (11th Edition) Thomson South Western, New Delhi
10. Feenstra Robert C (2004), *Advanced International Trade- Theory and Evidence*, Princeton University Press, Princeton
11. Grimwade Nigel (2001), *International Trade*, (Second Edition), Routledge, London
12. Grubel H G and Lloyd P J (1975), *Intra-industry Trade*, Macmillan, London.
13. Haberler G (1961), *A Survey of International Trade Theory*, International Finance Section, Department of Economics, Princeton University.
14. *Handbook of International Business*, Oxford University Press
15. Kindleberger, C P -*International Economics*, R.D. Irwin, Homewood
16. Michele Fratianni: (2007) *The Gravity Equation in International Trade*, Indiana University, Kelley School of Business, CIBER, Bloomington, Indiana 47405, USA.
17. Prebisch, Raul (1959). "Commercial Policy in the Underdeveloped Countries, *AER* 49, no.2. pp. 251- 73.
18. Reinert K A (2012), *An Introduction to International Economics*, Cambridge university Press, New York
19. Richard Baldwin and Charles Wyplosz (2004), *The Economics of European Integration*, McGraw Hill, New York
20. Richard E Caver and Harry G Johnson, *Readings in International economics*

Semester	Course Code	Course Title	Type of course	Credit	Teaching Hours
<b>III</b>	<b>EC010302</b>	<b>Econometrics-1</b>	<b>Core</b>	<b>4</b>	<b>90</b>
Course Objectives					
<p><i>An Economic model is a family of probability distributions proposed by a researcher that could possibly have generated the data of some economic variables -viewed as random variables. Given the economic data either cross-section or time series or panel, a researcher would like to select a particular probability distribution from the family of distributions to “best match” the data. This course helps the students to learn how to estimate a general class of parametric models or semi parametric models, how to conduct testing and inference, given the data. The course also aims to cover (1) identification of model parameters; (2) consistency, asymptotic normality, and semi parametric efficiency of various estimators; (3) hypothesis testing and model selection. It also covers the problems encountered in estimation and inference in the context of the single-equation linear regression model. Empirical applications include estimation and inference of some popular economic models in microeconomics and macroeconomics. The true objective of this course is to acquaint students with econometric techniques that are widely used in empirical work in Economics and other related disciplines. It is intended to expose students to the art of performing estimation, analyzing and interpretation of the estimated econometric model. At the end of the course students should be able to: (i) demonstrate their understanding of the appropriate econometric methods for analyzing data; (ii) interpret computer output for the estimation and testing of econometric relationships; and (iii) interpret and discuss results.</i></p>					

### **Unit- 1: Two Variable Regression Model**

**(20 Hours)**

- 1.1. Definition & Scope of Econometrics-Methodology-Modern Interpretation
- 1.2. Classical Linear Regression Model-PRF-Linearity-Stochastic Disturbance Term-Significance- SRF
- 1.3 Method of OLS-Derivation of OLS Estimators-Deviation Form, Properties-
- 1.4 Assumptions-Gauss-Markov Theorem-Goodness of the Fit- $R^2$
- 1.5 Estimation and Testing of Hypothesis-Standard Error.

### **Unit- 2: Multiple Regression Model**

**(15 Hours)**

- 2.1 Multiple Regression-Matrix Approach—General k variable Model—Variance Covariance Matrix—OLS Estimators and Gauss-Markov Theorem (Matrix Notation)
- 2.2 Partial Regression Coefficients—Multiple Coefficient of Determination-R Square and Adjusted R Square

2.3 Estimation and Testing of Hypothesis-Test of Coefficients and Overall Significance-t-test and F test-P-value—Testing the Equality of Two Regression Coefficients

2.4 Restricted Least Squares-Testing Linear Equality Restrictions

**Unit- 3: Violation of the Assumptions of Classical Model and Extensions (20 Hours)**

3.1 Heteroscedasticity: Nature, Consequences, Tests, and Remedial Measures

3.2 Auto-correlation: Nature, Consequences, Tests, and Remedial Measures

3.3 Multicollinearity: Nature, Consequences, Tests, and Remedial Measures

3.4 Model Specification and Errors: Consequences—Underfitting and Overfitting—Measurement Errors

3.5 Regression through Origin -Scaling and Units of Measurement

3.6 Different Functional Forms of Regression Models and their Applications (Log-linear, Semi-log, Double log, Reciprocal and Log Reciprocal Models)—Choice of Functional Forms

**Unit- 4: Regression with Qualitative Variables and Simultaneous Equation Models (20 Hours)**

4.1 Qualitative Explanatory Variables—Dummy Variable Regression—ANOVA and ANCOVA Models—Dummy variable Trap—Interpretation of Regression Results

4.2 Models with Qualitative Dependent Variables- LPM, Logit, Probit, and Tobit Models—Interpretation of Regression Results

4.3 Simultaneous Equation Models—Simultaneous Equation Bias—Inconsistency of OLS Estimators—Identification Problem—Test of Simultaneity and Exogeneity

4.4 Problem of Estimation—Single Equation Methods —OLS—ILS— 2SLS and Systems Methods—2SLS and SURE Model—Lurking Variables

**Unit- 5: Dynamic Econometric Models (15 Hours)**

5.1. Estimation of Distributed Lag Models—Koyck Model and its rationalization—Partial Adjustment and Adaptive Expectations Model—Almon Approach

52. Estimation of Auto Regressive Models—Instrumental Variables—Method of Instrumental Variables—Problems—SARG Test and Durbin h Statistic—Causality- The Granger Causality Test and Sims Test

### Essential Readings:

1. Gujarati, Damodar & Dawn C Porter (2017): Basic Econometrics, 5<sup>th</sup> Ed, McGraw Hill.
2. Stock James and Watson, Mark (2017): Introduction to Econometrics, 3<sup>rd</sup> Ed, Pearson Education (Indian Edition).
3. J Johnston (1997): Econometric Methods, 4<sup>th</sup> Ed, McGraw-Hill Higher Education.

### Complementary Readings:

1. Badi H. Baltagi (2011): Econometrics, 3<sup>rd</sup> Ed, Springer.
2. Chandan Mukherjee, Howard White and Marc Wuyts (1998): Econometrics and Data Analysis for Developing Countries, Routledge New York.
3. Christopher Dougherty (2016): Introduction to Econometrics, Oxford University Press, Indian Edition.
4. G.S. Maddala and Kajal Lahiri (2012): Introduction to Econometrics, 4<sup>th</sup> Ed, John Wiley & Sons (Indian Edition).
5. Kmenta, Jan (1976), Elements of Econometrics, 2<sup>nd</sup> Ed, McMillan, New York.
6. Michael Bailey, Real Econometrics: The Right Tools to Answer Important Questions, Oxford University Press, 2016
7. Peter Kennedy (2008): A Guide to Econometrics, 6<sup>th</sup> Ed, Wiley-Blackwell.
8. Ramu Ramanathan (2002): Introductory Econometrics with Applications, 3<sup>rd</sup> Ed, Thomson Learning Inc, Singapore.
9. Robert S. Pindyck and Daniel L. Rubinfeld, Econometric Models and Economic Forecasts, 4<sup>th</sup> Ed, McGraw-Hill Publishing Co.
10. Russell Davidson & James G. MacKinnon (2009): Econometric Theory and Methods, Oxford University Press.
11. Sankar Kumar Bhaumik (2015): Principles of Econometrics: A Modern Approach Using EViews, Oxford University Press (India)
12. Studenmund A. H (2017): Using Econometrics: A Practical Guide, 7<sup>th</sup> Ed, Pearson (India).
13. William H. Greene (2018): Econometric Analysis, 8<sup>th</sup> Pearson Education (India).
14. Wooldridge, Jeffrey M (2018): Introductory Econometrics: A Modern Approach, Thomson, 7<sup>th</sup> Ed, South Western, USA.



Semester	Course Code	Course Title	Type of course	Credit	Teaching Hours
<b>III</b>	<b>BE010303</b>	<b>Research Methodology in Business Economics</b>	<b>Core</b>	<b>4</b>	<b>90</b>
<b>Course Objectives</b>					
<p><i>The purpose of this paper is to provide new researchers with a wide-ranging outline of the main elements of research methodology, particularly in the business field. A thorough understanding of research methodology is a must for post-graduate students of business economics and that is what this course aims to develop among the students. The paper aims to offer postgraduate students boarding on their research voyages with a useful summary that would guide in them navigating the methodological aspect of their research work.</i></p>					

### **Unit- 1: Introduction to Research**

**(10 Hours)**

- 1.1 Meaning of Research – Classification of research (pure, applied, explanatory, descriptive, historical, diagnostic, experimental, qualitative and quantitative)-Features of a good research study- Steps in research process.
- 1.2 Need for Inter-Disciplinary Approach in business Economics- Management Decision Problem vs. Management Research Problem.
- 1.3 Formulating the research hypothesis- Types of Research hypothesis- Research applications in business Economics.

### **Unit- 2: Research Proposal and Research Design**

**(20 Hours)**

- 2.1. Research proposal- types of research proposals-Steps in Research Proposal.
- 2.2. Literature Review -types- traditional, thematic and meta-analysis methods.
- 2.3. Research Design- Nature of good design - Classification of Research Designs- Exploratory Research, Descriptive and Causal Designs- Secondary Resource analysis-Case study Method, Expert opinion survey, Focus group discussions, Descriptive Research Designs: Cross-sectional

studies and Longitudinal studies, Experimental Designs- Time series Designs- Errors affecting Research Design.

### **Unit- 3: Sampling Technique**

**(20 Hours)**

- 3.1. Sample and non-Sampling –Methods of Sampling- Non-probability Sampling–Convenient, Judgment, Quota, Snowball -Probability– Simple Random, Stratified, Cluster, Multi Stage.
- 3.2. Qualitative Research Methods: Focused Interview, Semi-Standardized Interview, Problem-Centered Interview, Expert Interview, Group Interviews, Focus Groups, Non-participant Observation, Participant Observation, Ethnographic research - Grounded Theory Methodology.
- 3.3. Measurement: Levels and types of measurement–Nominal, Ordinal, Interval and Ratio. Attitude Measurement: Comparative and Non–Comparative scaling techniques, Tabulation and Cross–tabulation of data.

### **Unit- 4: Data Collection Method**

**( 15 Hours)**

- 4.1. Data Collection - Methods of primary data collection -Methods of secondary data collection.
- 4.2. Questionnaire Designing -Criterion for a good questionnaire - Online questionnaire tools.
- 4.3. Attitude Scaling Techniques: Concept of Scale – Rating Scales viz. Likert Scales, Semantic Differential Scales, Constant Sum Scales, Graphic Rating Scales – Ranking Scales – Paired Comparison and Forced Ranking.

### **Unit- 5: Data Preparation, Analysis and Interpretation**

**(25 Hours)**

- 5.1. Data Preparation –Univariate analysis -Bivariate analysis –Cross tabulations. Data analysis techniques: Multiple regression analysis, Discriminant analysis and factor analysis.
- 5.2. Analysis of Variance: Completely randomized design in a one-way ANOVA- Randomized block design in two-way ANOVA- Factorial design ANCOVA.

- 5.3. Report Writing- Essentials of a Good Report- Steps in Writing a Report-Types of Reports- Footnotes - Bibliography. Style manuals-APA style, MLA style, ASA style, Chicago manual Style. (Concepts only).
- 5.4. Ethical Issues in Research - Researchers Ethical code- Ethical Codes related to respondents- Plagiarism-Types of Plagiarism-Ways to Avoid Plagiarism.

### Reference Books

1. Bruce, B. and Howard, L. (2014). Qualitative Research Methods for the social sciences, London: Pearson.
2. Chawala, Deepak & Sondhi, Neena (2016), Research Methodology- Concept & Cases, Vikas Publication, ISBN: 978-93259-8239-0.
3. Flick, U. (2014). An introduction to qualitative research. Sage Publications.
4. Flick, U. (2015). Introducing research methodology: A beginner's guide to doing a research project. Sage.
5. Ghauri, Pervez & Gronhaug, Kjell (2010), Research Methods in Business Studies, Pearson, ISBN: 978-0273712046.
6. Green, P E, Tull, D S & Albaum, Gerald (1988), Research for Marketing Decisions, Prentice Hall of India Pvt. Ltd
7. Gregory, I. (2005). Ethics in research. London: Continuum.
8. Gupta, S.L. and Gupta, H. (2011). Research Methodology: Texts and Cases with SPSS. Delhi: International Book House.
9. Gupta, S L & Gupta, H (2012), Business Research Methods, TMHE Pvt. Ltd, ISBN: 978-1-25-900503-9.
10. Guthrie, G. (2010). Basic research methods: An entry to social science research. SAGE Publications India.
11. Kothari, C.R. and Garg, G. (2019). Research Methodology: Methods and Techniques, New Age.
12. Krishnaswamy, K N, Sivakumar, A I and Mathirajan, M (2011), Research Methodology, Pearson, ISBN: 978-81-7758-563-6.
13. Neuman, W.L. (2011). Social Research Methods: Qualitative and Quantitative Approaches, 7th edition, International edition, Pearson
14. Pannerselvam, R (2016), Research Methodology, PHI Pvt. Ltd., New Delhi, ISBN: 978- 81-203-4946-9
15. Schwartz, S. (2012). Microsoft Office 2010, New Delhi: Pearson. Kothari, C. R. (2016),



Research Methodology- Methods & Techniques, New age international publishers, ISBN : 978-93-86649-22-5.

16. Sjoberg, G., and Nett, R. (2014). A methodology for social research. Jaipur: Rawat Publications
17. William J Goode and Paul K Hatt, 1981 Methods in social Research, McGraw- Hill
18. Wilkinson and Bhandarkar, 2002 Methodology and Techniques of Social Research, Himalaya

Semester	Course code	Course Title	Type of course	Credit	Teaching Hours
<b>III</b>	<b>EC010304</b>	<b>Environmental Economics</b>	<b>Core</b>	<b>4</b>	<b>90</b>
<b>Course Objectives</b>					
<p><i>This course examines the economics behind environmental issues and problems and policies designed to address them. Topics are focused on the valuation of non-market goods, cost-benefit analysis, correcting market failures especially in the provision of public goods, the tragedy of the commons, and climate change. The economic assessment of environmental impacts and the economics of policies and institutions which have a significant bearing on the environment are also covered in the course. This course will provide students with the tools to understand how market inefficiencies might arise in the presence of externalities like pollution and how market solutions can correct market failures. The main objective of the course is to illustrate how the study of mainstream economics needs to be reoriented in the light of the following premises: the natural environment is the core of any economy and economic sustainability cannot be attained without environmental sustainability. Thus, the course is intended to equip students with analytical skills that would enable the evaluation of environmental and economic policy issues. It is expected to enable students to understand the economics of the relationship between economic activities and environmental impacts. This course builds on the knowledge of students in micro-economics and public economics.</i></p>					

**Unit- 1: Basic Environmental issues: Environment and Economy**
**(15 Hours)**

- 1.1. Environment and Economy- Environmental Economics, Ecological Economics and Resource Economics- Interlinkages between the Economy and the Environment
- 1.2. Material Balance Approach- criteria of Natural Resource Use-Principles of uncertainty and irreversibility – Inter generational equity- intra generational equity
- 1.3. Environment-Development Trade-offs: Environmental Cost of Economic Growth- The Environmental Kuznets Curve. Theory of Krutilla-Fisher Equation for Preservation or Development.
- 1.4. Different Perspectives on Development and Growth: The First and Second Laws of Thermodynamics Pessimist and Optimistic Models Limits to Growth- Beyond the Limits - Simon Julian’s thesis of “Ultimate Resource”-The Skeptical Environmentalist.
- 1.5. Global environment issues – climate change: positive and normative analysis of climate change- Economics of Global Warming and Climate Change: Nordaus’ Dice Model.

**Unit- 2: Welfare Economics, Social Sector and Environment**

**(20 Hours)**

21. Individual preference regarding environmental protection-Pareto optimality
22. Market Failure and Externalities: Non-exclusion and the Commons Tragedy of Commons Non rivalry and Public Goods -Non-convexities- Asymmetric Information
23. Hardin's Thesis, Olson Theory of Collective Action, Externalities and Property Rights: Coase theorem -Pigouvian Solution, Ostrom's Co-operative Solutions to Common Pool Resources (CPR) -Optimal Provision of Public Goods- Pollution Prevention, Control and Abatement – Command, Control and Market Based Instruments -Taxes Vs Tradable Permits - CPRS
24. Land use - Deforestation- urbanization and their impact on environment - Air and water pollution

**Unit- 3: Environmental Valuation**

**(20 Hours)**

31. Valuing the Environment: The Economic Concept of Value-Types of Value: Use- Value, Option Value and Non-use or Passive Use Values- The standard model-divergence in value measures-challenges to neo-classical theory of environmental valuation - Development of Nonmarket Valuation—Anthropocentric versus Biocentric Viewpoints - Valuation techniques- market and non-market- direct and indirect - Environment impact assessment- LCA
32. Valuation Methods: Compensating and Equivalent Welfare Compensating and Equivalent Variations and Willingness to Pay and Willingness to Accept.
33. Alternative Approaches and Methods of Environmental Valuation – Revealed Preference Methods—Travel Cost Method—Random Utility Site Choice Model—Problems of Travel Cost Method—Hedonic Pricing Method and the Problems—Hedonic Wage Values—Dose Response Function—Averting Expenditure and Avoided Cost Methods— Challenges— Aggregation and Partial Values
34. Stated Preference Methods—Contingent Valuation—Steps in Conducting a Contingent Valuation—Reliability and Validity—Attribute Based Models—Conjoint Analysis—Choice Experiments—Contingent Ranking—Production Function Methods—General Methodology and Measurement Issues

35. Economic Incentives: Emission taxes, tradable pollution permits, Pigouvian fee; Emission standards and Environmental Protection.

**Unit- 4: Sustainable Development**

**(15 Hours)**

- 4.1. Sustainable Development: Sustainability Criteria: Hicksian Sustainability Possible-Sustainability Rules -The Hartwick-Solow Approach
- 4.2. Non-Declining Natural Capital Stock Approach -Safe Minimum Standards Approach -Daly's Co-operational Principles - Sustainability versus Efficiency
- 4.3. Indicators of Sustainability ENP/AENP (Environmentally Adjusted or Approximate Environmentally Adjusted National Product) and Green GNP Indicator on the Basis of Natural Capital Stock and SMS Approaches
- 4.4. Weak, Strong and Very Strong Sustainability- Pearce-Atkinson Measure of Weak Sustainability Daly-Cobb's Index of Sustainable Economic Welfare- Common-Perring's Model of Sustainable Development.
- 4.5. Course of Inter-Generational Welfare- Environmental Sustainability- Ecological Sustainability-Protecting Forest Products and Services
- 4.6. Eco Economy and its Shape—Solar Hydrogen Economy—New Materials Economy Feeding Everyone Well—Protecting Forest Products and Services

**Unit- 5: Environmental Governance and Management**

**(20 Hours)**

- 5.1. Integrated environmental and economic accounting and the measurement- Environmentally corrected GDP
- 5.2. Ecological Footprint Analysis-Global Environmental Governance- the Montreal and Kyoto Protocol -International Environmental Treaties and Institutions- WTO and TRIPS as related to environmental issues- Subsidies and taxes, Product standards and Exceptions clause; International environmental externalities.
- 5.3. Environmental regulations and assessment in Indian context.

### Essential Reading:

1. Kolstad, Charles D (2014): Environmental Economics, 2<sup>nd</sup> Ed, Oxford University Press, Indian Edition.
2. Nick Hanley, Jason F. Shogren and Ben White (2010): Environmental Economics in Theory and Practice, 2<sup>nd</sup> Ed, Palgrave MacMillan.
3. Ahmed M. Hussen (2014): Principles of Environmental Economics. 4<sup>th</sup> Ed, Routledge.
4. Horst Siebert (2010): Economics of the Environment: Theory and Policy, 7<sup>th</sup> Ed, Springer.

### Supplementary Reading:

5. Anthony C. Fisher (1981): Resource and Environmental Economics, Cambridge University Press
6. Barry C. Field and Martha K. Field (2016): Environmental Economics: An Introduction, 7<sup>th</sup> Ed, McGraw Hill.
7. Baumol, William J and Wallace E Oates: The theory of environmental policy, Cambridge University press, 1988.
8. Charles S. P. (2000): Economics and Global Environment, Cambridge University Press
9. David A. Anderson (2010): Environmental Economics and Natural Resource Management, Routledge, London
10. Hans Wiesmeth (2012): Environmental Economics: Theory and Policy in Equilibrium, Springer.
11. Henk. F, H. L. Gabel, Shelby G. and Adam Rose, (2001) "Frontiers of Environmental Economics" Edward Elgar, Cheltenham UK
12. James Crustave Speth and Peter Maas (2009). Global Environmental Governance – Foundation of Contemporary Environmental Studies-Island press.
13. Jonathan M. Harris and Brian Roach (2018): Environmental and Natural Resource Economics: A Contemporary Approach, 4<sup>th</sup> Ed, Routledge.
14. Katar Singh, Anil Shishodia (2007): Environmental Economics; Theory and Applications, Sage publications, New Delhi.
15. Kavi Kumar, in Kanchan Chopra and Vikram Dayal (2009), (Ed). Hand book of Environmental Economics; Oxford University Press.
16. Kimio Uno and Peter Bartelmus (1998): Environmental Accounting in Theory and Practice, Springer
17. Krutilla John V. (1967). "Conservation Reconsidered", American Economic Review, Vol. 57, 1067.
18. Lee G. Anderson and Juan Carlos Seijo (2010): Bioeconomic of Fisheries Management, Wiley-Blackwell, Iowa
19. Lester R. Brown (2001): Eco Economy: Building an Economy for the Earth, W.W Norton and Company, London
20. Lester R. Brown (2015): The Great Transition: Shifting from Fossil Fuels to Solar and Wind Energy, W.W Norton and Company, London
21. Mohan Munasinghe and James Gustave Speth, Sustainable Development in Practice Cambridge University Press.
22. Nicholas Stern(2007): The Economics of Climate Change: Stern review, Cambridge University Press.



23. Oates W.E. (1994) (ed.), *The Economics of the Environment*, An Elgar Critical Writings Reader, Edward Elgar.
24. Olson, Jr., Mancur (1971), *The Logic of Collective action: Public Goods and the theory of Groups*, Cambridge, Harvard University Press.
25. Ostrom, E. (1990), *Governing the Commons: The Evaluation of Institutions for Collective Actions*, Cambridge University Press, Cambridge.
26. Pearce, D.W. and R. Turner (1991): *Economics of Natural Resource Use and Environment*, John Hopkins University Press, Baltimore.
27. Pearce D.W. and Jeremy J. Warford (1996), *World without End: Economics, Environment and Sustainable Development*, OUP.
28. Peter G. Brown and Geoffry Garner (2009), *Right Relationship, Building a whole Earth Economy*, Berrett-Koehler publishers, Sanfransisco.
29. Rabindra N Bhattacharya (2002), *Environmental Economics-an Indian perspective*, OUP, New Delhi.
30. Roger Perman, Yue Ma, James McGilvray and Michael Common: *Natural Resource and Environmental Economics*, 3<sup>rd</sup> Ed, Pearson Learning.
31. Steven C. Hackett (2006): *Environmental and Natural Resources Economics: Theory, Policy, and the Sustainable Society*, M.E.Sharpe, New York
32. Sugatha Margit (2007): *India Macroeconomics Annual 2007*, Centre for Studies in Social Sciences, Kolkata, Sage Publishers
33. Tietenberg, T. (1994): *Environmental Economics and Policy*, Harper Collins, New York.
34. Tony Prato (1998): *Natural Resource and Environment Economics*, Iowa State University Press.
35. Trond Bjorndal and Gordon Munro (2012): *The Economics and Management of World Fisheries*, OUP, London
36. Ulaganathan Sankar (2004) *Environmental Economics* OUP, New Delhi.
37. United Nations (2014): *System of Environmental Economic Accounting Central Framework*, New York.

Semester	Course Code	Course Title	Type of course	Credit	Teaching Hours
<b>III</b>	<b>BE010305</b>	<b>Investment Analysis and Portfolio Management</b>	<b>Core</b>	<b>3</b>	<b>90</b>
<b>Course Objectives</b>					
<p><i>The course aims at developing a comprehensive conceptual and theoretical background upon which the student can expand his or her knowledge of the field of investments and portfolio management. This course content mainly focuses on developing the practical skills in investment management and also giving a foundation on major investment portfolio management strategies. Students will understand the investment process, scope and stages and be able to analyze how the market expectations are formed, how the strategic asset allocations are made and how an optimal investment strategy is selected. The course includes major theories like Efficient Market Hypothesis, Markowitz's Model and it also tries to impart basic knowledge on fundamental and technical analysis.</i></p>					

**Unit- 1: Investment and Risk Analysis**
**(20 Hours)**

- 1.1 Investment –meaning and types – Factors responsible for Investment- Features of an Investment programme - Investment Process.
- 1.2 Investment vs. Speculation -Investment Avenues- Individual Investors – Institutional Investors – Foreign Institutional Investors.
- 1.3 Risk and Return-Meaning and definition of risk-Types (Systemic Risk, Market Risk, and Interest Rate Risk)- Risks of Investment and Return on Investment.

**Unit- 2: Capital Market Analysis**
**(20 Hours)**

- 2.1 Capital Market – Origin and Development – Functions of Capital Market- Instruments – New Issue Market/IPO – Book Building.
- 2.2 Listing – Trading processes – S E B I and its functions – Stock Exchanges – N S E – B S E - N S D L – C D S L.
- 2.3 Credit Rating – CRISIL – Derivatives - Futures and Options – Commodity Exchange – Exchange Traded Funds.

**Unit- 3: Portfolio Management**
**(25 Hours)**

- 3.1 Portfolio management- Meaning and Concept- Portfolio Management Process, Objectives, Basic Principles.

32 Portfolio Construction: Approaches to Portfolio Construction- Markowitz's Model- Markowitz efficient frontier - Capital Market theory-CAPM model - Capital Market Line- Security Market Line -Arbitrage Pricing Theory (APT).

33 Efficient Market Hypothesis (EMH) – Weak, semi-strong and strong Forms of market efficiency-Implications of EMH-Random walk theory.

#### **Unit- 4: Fundamentals and Technical Analysis**

**(25 Hours)**

4.1 Fundamental Analysis-Economic Environment analysis-Industry Analysis- Company analysis-Operating analysis- Management analysis-Financial Analysis- Approaches to valuation- DCF method.

4.2 Technical Analysis-Meaning and Assumptions-Trend Lines and their significance-Dow Theory, volume indicators, market sentiment indicators, confidence indicators, points & figure charting, bar charting.

4.3 Elliot Wave Principle-Moving Averages of stock prices – Relative Strength Index-Chart Patterns.

#### **References:**

1. Prasanna Chandra – Investment Analysis and Portfolio Management – Tata McGraw-Hill
2. Donald E.Fischer and Ronald J.Jordan – Security Analysis and Portfolio Management – Prentice - Hall
3. Bhole L M – Financial Institutions and Markets - Tata McGraw-Hill
4. Barua, Regunathan and Varma – Portfolio Management - Tata McGraw-Hill
5. Prasanna Chandra – Financial Management, Theory and Practice - Tata McGraw-Hill
6. Avadhani V A – Securities Markets – Himalaya Publishing House
7. Gupta L C – Rates of Return – Oxford University Press
8. Khan M Y – Indian Financial System - Tata McGraw-Hill
9. Yasaswy N J – Equity Investment - Tata McGraw-Hill
10. William J Baumol – Stock Market and Economic Efficiency



11. Thomas, Susan ( Ed.) Derivatives Markets in India - Tata McGraw-Hill
12. Stephen J Brown, William N Goetzmann Edwin J Elton, Martin J Gruber Modern Portfolio Theory and Investment Analysis,7th Edition,
13. Robert A. Haugen Modern Investment Theory –
14. Prasanna Chandra -Financial Management: Theory and Practice-
15. Francis J C -Investment Analysis-
16. Jonathan Berk, Peter DeMarzo, Ashok Thampy -Financial Management
17. S. Kevin- Security Analysis and Portfolio Management-2 edition

### FOURTH SEMESTER

Course Code	Title of the Course	Type of the Course	Hours per week	Credits
EC010401	International Finance	Core	05	04
EC010402	Econometrics-II	Core	05	04
<b>Elective- Group-A</b>				
BE800401	Logistics and Supply Chain Management	Elective	05	03
BE800402	Principles of Business Economics	Elective	05	03
BE800403	Banking and Foreign Exchange Management	Elective	05	03
<b>Elective- Group-B</b>				
BE810401	Marketing Management	Elective	05	03
BE810402	Human Resource Management	Elective	05	03
BE810403	Project Management Entrepreneurial Development	Elective	05	03
<b>Elective- Group-C</b>				
BE820401	Managerial Economics	Elective	05	03
BE820402	Business Statistics	Elective	05	03
BE820403	Entrepreneurship Development	Elective	05	03
BE010403	Project/Dissertation	Core		02
BE010404	Comprehensive Viva -Voce	Core		02

Semester	Course Code	Course Title	Type of course	Credit	Teaching Hours
<b>IV</b>	<b>EC010401</b>	<b>International Finance</b>	<b>Core</b>	<b>4</b>	<b>90</b>
Course Objectives					

*The course will address the following main topics: the balance of payments; foreign exchange market and exchange rate determination; foreign currency derivative instruments; arbitrage and international parity conditions; risks in global finance, the management of foreign exchange risk with forwards and options; basic characteristics of trade finance and investment instruments; and international capital flows and markets. The intent is to investigate how various financial instruments are used for hedging and speculating in the currency markets and how economic theories are applied to determine the equilibrium exchange rates. Some policy issues concerning the recent world financial market turbulence will also be discussed. This course aims at providing a theoretical exposition of different aspects of international finance and financial institutions in a historic cum emerging geopolitical context particularly in that of globalization. It will equip students with both fundamental knowledge in international finance, financial institutions and their application in real life. This course seeks to provide a working knowledge of these issues. It will prepare students to become policy-makers and key strategists on issues related to international finance and related institutions. The stress will be on an understanding of the intuition behind the theories.*

### **Unit-1: Foreign Exchange Rates and Markets**

**(30 Hours)**

- 1.1 Foreign exchange market- structure and functions-the demand for and supply of foreign exchange – fixed and flexible exchange rate-nominal, real and effective exchange rates- Case studies on REER and NEER in India.
- 1.2 Types of foreign exchange transactions-arbitrage, spot and forward markets and rates, currency swaps, futures and options-foreign exchange risks, hedging and speculation
- 1.3 Theory of optimum currency area- Euro currency markets and international bond markets - Currency Board determination of exchange rate
- 1.4 Theories of exchange rate- mint parity theory-purchasing power parity theory- Balance of payments Approach- monetary approach-asset market (Portfolio Balance) approach- Exchange rate over shooting- Exchange control-objectives and methods of exchange control.

**Unit-2: Balance of Payments**

**(18 Hours)**

- 2.1. Balance of payments: concepts-structure-disequilibrium in balance of payments
- 2.2. Adjustment Mechanisms-devaluation-elasticity and absorption approaches-Marshall-Lerner condition- J- Curve- Monetary approach to balance of payment adjustment
- 2.3. Foreign Trade Multiplier
- 2.4. Case Study on 1991 BOP Crisis in India

**Unit-3: Open Economy Macro Economic Policy**

**(15 Hours)**

- 3.1. Open Economy Adjustment Policies-Internal and External Balance
- 3.2. Swan Diagram
- 3.3. Assignment Problem
- 3.4. Mundell-Fleming Model-combining monetary and fiscal policies
- 3.5. Implications of Impossible Trinity in the Indian context.

**Unit-4: Resource Movements, Currency Crisis and International Financial Institutions**

**(27 Hours)**

- 4.1. International labour movements and remittances
- 4.2. ILO- Outsourcing- challenges and Issues
- 4.3. Multi-national organizations (MNCs)
- 4.4. International capital movements-FDI and portfolio investments – Indian experience
- 4.5. Currency Crisis- East Asian Financial Crisis-Sub- prime lending crisis-Greece crisis- Euro zone (debt) crisis
- 4.6. Breton Woods system: International Liquidity and IMF-World bank- international debt problem-external debt of India using international statistics

**Reference:**

1. Keith Pilbeam (2013) – International Finance, 4th edition, Palgrave
2. Salvatore, D (2008) - International Economics, (8th Edition). Wiley India, New Delhi
3. Appleyard D. R and Field A J (2014) -International Economics (8th Edition) McGraw Hill, New Delhi

4. Krugman Paul, R and Obstfeld, Maurice and Melitz, Marc.J (2018) - International Finance- Theory and Policy, 11<sup>th</sup> Ed, Pearson (India) Pvt. Ltd, New Delhi
5. Soderston, B and Reed G. (1994) - International Economics, 3rd Edition, McMillan Press Ltd. London
6. MacDonald, Ronald (2007): Exchange Rate Economics: Theories and Evidence, Routledge.
7. Levi Maurice D. (2009): International Finance, 5<sup>th</sup> Ed, Routledge, New York.

#### **Supplementary Readings:**

1. Bhagwati, Jagdish, Arvind Panagariya, and T.N Srinivasan, (2004): 'The muddles over outsourcing'. Journal of economic perspectives, 18(4): 93-104
2. Asbjorn Rodseth (2000): Open Economy Macroeconomics, Cambridge University Press.
3. Carbaugh, R. J (2008): International Economics, (11th Edition). Thomson South Western, New Delhi
4. Feenstra, Robert C. and Taylor, Alan M (2011): Advanced International Trade- Theory and Evidence, 2<sup>nd</sup> Ed, Worth Publishers.
5. Fleming, J.M. (1962): Domestic Financial Policies Under Fixed and Floating Exchange Rates, International Monetary Fund Staff Papers 9, pp. 369–379.
6. Frankel, J.A. (1993): Monetary and Portfolio Balance Models of Exchange Rate Determination, MIT press, Cambridge.
7. Gerber, James (2014): International Economics, 6<sup>th</sup> Ed, Pearson Education Inc.
8. Husted, Steven and Melvin, Michael (2016) : International Economics, 9<sup>th</sup> Ed, Pearson.
9. Kenen Peter B. (2000): The International Economy, Cambridge University Press, New York.
10. Mundell, R A (1962): The Appropriate Use of Monetary and Fiscal Policy for Internal and External Stability, International Monetary Fund Staff Papers 9, pp. 70 - 79.
11. Radlett, S, and Sachs J. (1998): The east Asian Financial Crisis: Diagnosis, Remedies, and Prospects', Brookings Papers on Economic Activity. Vol 28, no.1. pp. 1- 74.
12. Ramsaran Ramesh (1998): An Introduction to International Money and Finance Palgrave
13. Reinert K A (2012): An Introduction to International Economics, Cambridge university Press, New York:
14. Pugel, Thomas A (2016): International Economics, 16<sup>th</sup> Ed, McGraw Gill Education.
15. Stern, R.M. (2007): Balance of Payments: Theory and Economic Policy, Aldine Transaction
16. Thirlwal, A.P (1999): Balance of Payments Theory, 6th edition, Oxford University Press, New York



17. Ugur Mehmet (2002): (Edited), An Open Economy Macroeconomics Reader, Routledge, London.

Semester	Course Code	Course Title	Type of course	Credit	Teaching Hours
<b>IV</b>	<b>EC010402</b>	<b>Econometrics—II</b>	<b>Core</b>	<b>4</b>	<b>90</b>
<b>Course Objectives</b>					
<p><i>The aim of the course is to provide the theoretical background that is useful for research in applied economics. Applications of economic theory need a reasonable understanding of economic relationships and relevant statistical methods. This course provides an introduction to time series methods in econometrics covering aspects of the trend behavior, detrending mechanisms, and their properties, unit root theory, cointegrated system approaches, realized volatility and, model selection. This course accordingly is devoted to equipping the students with advanced theory of econometrics and relevant applications of the methods. It is designed to equip students for analyzing real-life data, related to economics in particular and social science in general. It will acquaint the students with advanced techniques in time-series and panel-data analysis as well as implementation of theory through software applications to gear them towards execution of independent research projects. The emphasis is on learning to use methods and to developing an understanding of how specific empirical questions determine the empirical approach to be used. The aims of this course are threefold: to introduce students to basic modelling techniques in the analysis of cross-section, panel and time series economic data; to provide students with sufficient econometric training to read the applied literature in core journals which use these standard techniques; to prepare students for a dissertation topic that analyses either cross-section, panel or time series data using basic econometric techniques. At the end of the course, students should be able to perform the following tasks: Interpret the results from regression models involving panel data and instrumental variables; understand how to use instrumental variables to account for endogenous regressors; understand how to estimate binary response models; understand how to set up, estimate and analyze panel data regression models; understand the basic concepts of stationary and non-stationary time series; understand and apply basic linear models for univariate and multivariate time series; understand the concepts of integration and cointegration and how to test for these phenomena in time series.</i></p>					

### **Unit- 1: Stochastic Process and Stationarity**

**(15 Hours)**

- 1.1. Stochastic Process, Ergodicity and Stationary—White Noise Processes
- 1.2. Non-Stationarity and Random Walk Models—Deterministic and Stochastic Trends / Trend and Difference Stationary Processes-Integrated Stochastic Process
- 1.3. Non-Stationary Time Series and the problem of Spurious Regression—Solutions
- 1.4. Transforming the Non-Stationary Time Series—Tests of Stationarity — Correlogram (ACF, PACF), and Unit Root Test—Augmented Dicky-Fuller test—Non-parametric PP test—Structural Change

### **Unit- 2: ARIMA Modelling and Cointegration**

**(20 Hours)**

- 2.1. The World Decomposition Theorem—AR and MA processes—ARMA and

ARMAX— ARIMA Modelling

2.2. Linear combination of non-stationary series and Cointegration—Difference between Unit Root and Cointegration Tests— Augmented Engle-Granger test and Johansen –Juselius tests— Granger Representation Theorem

2.3. Cointegration and Error Correction Mechanism— VECM (Vector Error Correction Model) – Granger Causality

**Unit- 3: Time Series Forecasting and VAR Models**

**(20 Hours)**

3.1. Time Series Forecasting— Single Equation and Simultaneous Equation Regression Modelling and the Lucas Critique

3.2. Vector Auto regressions (VAR)— Structural VAR (SVAR) and Bayesian VAR (BVAR)— In sample & out of sample (VAR)—Impulse Response Functions— The issues of optimal lag length

**Unit- 4: Volatility Measurement and Growth Rate Estimation**

**(15 Hours)**

4.1. Volatility Measurement—Measurement of Volatility ARCH and GARCH Models and Estimation—GARCH Forecasting

4.2. Growth Rate Estimation—Robustness—Endogenous and Exogenous Breaks— Kinked Exponential Growth Rates

**Unit- 5: Panel Data Models**

**(20 Hours)**

5.1. Panel Data Models—Nature and Data Sources—Constant Coefficients Model— Error Components Models—Fixed Effect (Least Squares Dummy Variable LSDV) Model—Fixed Effect (Within Groups WG) Estimator—Random Effects Model (REM)—REM and Hausman Test—Breusch-Pagan Test—Consistency Property of Estimators.

5.2. Dynamic Panel Data Analysis—Panel Data Unit Root—Cointegration Tests

**Reference:**

1. Badi H. Baltagi (2013): *Econometric Analysis of Panel Data*, 5<sup>th</sup> Ed, John Wiley & Sons. Cheng Hsiao (2013): *Analysis of Panel Data*, 3<sup>rd</sup> Ed, Cambridge University Press
2. Chris Brooks (2014): *Introductory Econometrics for Finance*, 3<sup>rd</sup> Ed, Cambridge University Press.
3. Chris Chatfield (2003): *The Analysis of Time Series: An Introduction*, 6<sup>th</sup> Ed, Chapman and Hall.
4. Douglas C Montgomery, Cheryl L. Jennings and Murat Kulahci (2015): *Introduction to Time Series Analysis and Forecasting*, 2<sup>nd</sup> Ed, Wiley.
5. *Econometric Modelling* by Dr. Rudra P. Pradhan, Department of Management, IIT Kharagpur.  
For more details on NPTEL visit <http://nptel.iitm.ac.in>
6. Erik Biorn (2017): *Econometrics of Panel Data: Methods and Applications*, OUP.
7. Franses, P. H. (1998), *Time Series Models for Business and Economic Forecasting*, Cambridge University press, New York.
8. G. S. Maddala and In-Moo Kim (1999): *Unit roots, cointegration, and structural change*, Cambridge University Press.
9. Gebhard Kirchgassner, Jurgen Wolters, Uwe Hassler, *Introduction to Modern Time Series Analysis*, Springer.
10. Gujarati Damodar & Dawn C Porter (2017): *Basic Econometrics*, 5<sup>th</sup> Ed, McGraw Hill. Gusti Ngurah Agung (2014): *Panel Data Analysis Using EViews*, Wiley.
11. H. Stock James and Watson Mark (2017): *Introduction to Econometrics*, 3<sup>rd</sup> Ed, Pearson Education (Indian Edition)
12. James D Hamilton (2012): *Time Series Analysis*, Princeton University Press.
13. Jeffrey M. Wooldridge (2010): *Econometric Analysis of Cross Section and Panel Data*, 2<sup>nd</sup> Ed, The MIT Press.
14. M. Hashem Pesaran (2015): *Time Series and Panel Data Econometrics*, Oxford.
15. Marc S. Paolella (2019): *Linear Models and Time-Series Analysis*, Wiley.
16. Orley Ashenfelter, Phillip B. Levine, David J. Zimmerman, *Statistics and Econometrics: Methods and Applications*, John Wiley & Sons.

17. Peter J. Brockwell, Richard A. Davis (2010): Introduction to Time Series and Forecasting, 2<sup>nd</sup> Ed, Springer.
18. Philip Hans Franses, Dick van Dijk and Anne Opschoor (2014): Time Series Models for Business and Economic Forecasting, 2<sup>nd</sup> Ed, Cambridge University Press.
19. Robert Alan Yaffee, Monnie McGee (2000): An Introduction to Time Series Analysis and Forecasting: With Applications of SAS and SPSS, Academic Press.
20. Ruey S. Tsay (2010): Analysis of Financial Time Series, 3<sup>rd</sup> Ed, Wiley.
21. Sankar Kumar Bhaumik (2016): Principles of Econometrics: A Modern Approach Using EViews, Oxford University Press (India).
22. Spyros Makridakis, Steven C. Wheelwright, Rob J. Hyndman (2008): Forecasting: Methods and Applications, 3<sup>rd</sup> Ed, John Wiley & Sons.
23. Svetlozar T. Rachev, Stefan Mittnik, Frank J. Fabozzi, Sergio M. Focardi, Teo Jaic, Financial Econometrics: From Basics to Advanced Modelling Techniques, John Wiley Sons.
24. Terence C. Mills (2015): Time Series Econometrics: A Concise Introduction, Palgrave.
25. Walter Enders (2018): Applied Econometric Time Series, 4<sup>th</sup> Ed, John Wiley & Sons (Indian Edition)

Semester	Course Code	Course Title	Type of course	Credit	Teaching Hours
<b>IV</b>	<b>BE800401</b>	<b>Logistics And Supply Chain Management</b>	<b>Elective- A-1</b>	<b>3</b>	<b>90</b>
<b>Course Objectives</b>					
<p><i>We live in an era where larger economic and social forces are shaping consumption, production and distribution across the globe. The course on logistics management and supply chain is aimed to provide students with the skills and knowhow to help organizations to access essential materials and services to accomplish their missions. They will learn to balance cost, effectiveness and risk to fulfill the demands of their organization's supply chain and deliver the required customer service levels. The students will be equipped to effectively discharge managerial and logistics duties. At the end of the course, the students will be able to analyze an existing supply chain of a company, apply various supply chain management concepts, and improve the supply chain and design an efficient supply chain in alignment with the strategic goals of the company.</i></p>					

### **Unit- 1: Introduction to Logistics**

**(10 Hours)**

- 1.1. Nature and Concept of Logistics
- 1.2. Importance of Logistics in India
- 1.3. Basic Components of Logistics Management
- 1.4. Introduction to Supply Chain, Current supply chain strategies. Demand, Planning and forecasting. Customer service and Logistics.
- 1.5. Impediments to an effective Customer service management. Channels of distribution.
- 1.6. Planning framework for logistics. Inventory flows and supply chains. Logistics management and organization.

### **Unit- 2: Inventory Strategy**

**(20 Hours)**

- 2.1. Inventory decisions, purchasing and supply scheduling, storage decisions.
- 2.2. Key drivers of outsourcing
- 2.3. Outsourcing operations and services.
- 2.4. Managing the 3PL relationship. Detailed matrices and Key performance Indicators (KPIs)

### **Unit- 3: Logistics Contracts**

**(20 Hours)**

- 3.1. Importance of Logistics Contracts
- 3.2. Back ground law. Bailment and licenses.

- 3.3. Logistics risks and insurance -Concepts
- 3.4. Third- and fourth-party logistics.

**Unit- 4: Ware Housing and Distribution**

**(20 Hours)**

- 4.1. Freight Transport Industry. Types of transport. Current and future trends.
- 4.2. Concepts of Warehousing. Warehousing and Distribution Centres.
- 4.3. Outsourcing of warehouse operations. Warehouse location planning, Operations – order picking.
- 4.4. Operations- packaging. 3PL,\$PL,GPS and GIS technology.
- 4.5 Emerging Technologies in Logistics and Supply chain management.

**Unit- 5: Performance Measurement**

**(20 Hours)**

- 5.1. Performance measurement methods.
- 5.2. Logistics and supply chain indicators.
- 5.3. Current issues in supply chain performance and optimization.

**References:**

- 1. D.K Agrawal, Text book of Logistics and Supply Chain Management, Macmillan Publishers India ltd.
- 2. David Simchi –Levi and Philip Kaminsky, Designing and Managing the Supply Chain: Concepts, Strategies and Case Studies. McGraw Hill Company.
- 3. Martin Christopher, Logistics and Supply Chain Management, Pearson Education (5<sup>th</sup> ed)
- 4. Rahul V. Altekar, Supply Chain management- Concepts and Cases, Prentice Hall of India.
- 5. Sunil Chopra and Peter Meindl, Supply Chain Management: Strategy, Planning and Operation. 6<sup>th</sup> Ed. Prentice Hall.
- 6. Alan Rushton, Phil Croucher and Peter Baker, The Handbook of Logistics and Distribution management: Understanding the Supply Chain. Kogan Page Publishers
- 7. Haniefuddin S.K and Shaik Shamsuddin, Essentials of Logistics and Supply chain Management,
- 8. Michael H. Hugos, Essentials of Supply Chain Management.
- 9. Paul Myerson, Lean supply Chain and Logistics Management, McGraw Hill Professional.

Semester	Course Code	Course Title	Type of course	Credit	Teaching Hours
<b>IV</b>	<b>BE800402</b>	<b>Principles of Business Economics</b>	<b>Elective- A-2</b>	<b>3</b>	<b>90</b>
<b>Course Objectives</b>					
<i>To impart basic knowledge about the principles of Economics and to equip the students to apply these principles in managerial decision making. This course gives an idea about the basic functions of Business Economics, organisational structure, significance of decision making, theories of motivation and importance of economic environment of business.</i>					

**Unit- 1: Introduction to Business Economics: (15 Hours)**

- 1.1. Nature and scope of business economics. Basic concepts, Economic rationale of optimization.
- 1.2. Marginalism, Equimarginalism
- 1.3. Opportunity cost principle, Discounting principle, Risk and uncertainty.
- 1.4. Externality and trade-off, Constrained and unconstrained optimization, Economics of Information.

**Unit- 2: Economic Environment of Business (20 Hours)**

- 2.1. Significance and elements of economic environment.
- 2.2. Economic systems and business environment; Economic planning in India; Government policies –industrial policy, fiscal policy, monetary policy, EXIM policy.
- 2.3. Public Sector and economic development; Development banks and relevance to Indian business; Economic reforms, liberalization and structural adjustment programmes.

**Unit- 3: Socio-Cultural Environment (20 Hours)**

- 3.1. Critical elements of socio-cultural environment; Social institutions and systems.
- 3.2. Social values and attitudes; Social groups. Dualism in Indian society and problems of uneven income distribution; Emerging rural sector in India.
- 3.3. Indian business system; Social responsibility of business; Consumerism in India.



**Unit- 4: Theoretical Framework of Business Environment**

**(20 Hours)**

- 4.1. Nature, Importance and concept of Business Environment.
- 4.2. Element of environment –internal and external.
- 4.3. Changing dimensions of business environment.
- 4.4. Techniques of environmental scanning and monitoring.

**Unit- 5: International and Technological Environment**

**(15 Hours)**

- 5.1. Multinational corporations; Foreign collaborations and Indian business;  
Non-resident Indians and corporate sector.
- 5.2. International economic institutions – WTO, World Bank, IMF and their importance to India;  
Foreign trade policies; Impact of Rupee devaluation;
- 5.3. Technological environment in India; Policy on research and development;  
Patent laws; Technology transfer.

**Essential Reading:**

1. Adhikary, M: Economic Environment of Business, Sultan Chand & Sons, New Delhi.
2. Ahluwalia, I.J: Industrial Growth in India, Oxford University Press, Delhi.
3. Alagh, Yoginder K: Indian Development Planning and Policy, Vikas Publication, New Delhi
4. Asha Kaul, Business Communication, Phi Learning Pvt. Ltd.2009.
5. Choudhary, Omvir, Principles of Management, 2011.
6. Debasish Sathya Swaroop, Business Communication, Phi Learning Pvt. Ltd.2010
7. Mandal, Management- Principles and Practice.2011
8. Mason Carpenter, Principles of Management, Flat World Knowledge, 2011.
9. RC Bhatia, Principles of Management, Lotus Press. New Delhi.2013
10. Tripathi, Principles of Management, Tata McGraw Hill Education, 2008.

Semester	Course Code	Course Title	Type of course	Credit	Teaching Hours
<b>IV</b>	<b>BE800403</b>	<b>Banking And Foreign Exchange Management</b>	<b>Elective- A-3</b>	<b>3</b>	<b>90</b>

**Course Objectives**

*The primary objective of this paper is to provide student with a firm conceptual background and analytical framework necessary to understand banking system and its components. It also helps in understanding foreign exchange management and its instruments. This course is designed to acquaint student with the concepts of banking system and its components. The course discusses various credit markets, foreign exchange and its instruments, and its operations and international foreign markets.*

**Unit- 1: Commercial Bank**

**(25 Hours)**

- 1.1. Origin and functions of commercial banks – primary functions; agency services; general utility services.
- 1.2. Credit creation process by banks, Asset and liability management by banks.
- 1.3. Productivity and Profitability of banks. Banking Reforms in India.  
Secured and Unsecured Advances: Modes of security advance; lien pledge, leasing, hypothecation and mortgage.

**Unit- 2: Money Market Instruments**

**(25 Hours)**

- 2.1. Money at call and short notice; treasury bills, bill of exchange, promisory notes, letters of credits and certificate of deposits (CDs).
- 2.2. commercial papers (CPs), interbank participation certificates (IBPCs)
- 2.3. Importance of money market.

**Unit- 3: Banker Customer Relationship**

**(15 Hours)**

- 3.1 Debtor and creditor law of limitation. Banker's right of set – off.
- 3.2 Banker's rights and obligations – banker's obligation to honour cheques.
- 3.3. Furnished order, order nisi. Banker's clients – general and particular, secrecy of accounts.

**Unit- 4: Foreign Exchange**

**(25 Hours)**

- 4.1. Exchange banks, exchange rate: theories of determination.

4.2. Spot and forward rates – Concepts and importance

4.3. India's exchange arrangements; management of exchange reserves in India

4.4. FERA: FEMA, convertibility of rupee – current account and capital account.

### References:

1. Radhaswamy, M., Practical Banking, S. Chand & Co., New Delhi, 1980.
2. Srivastva, P.K., Banking Theory and Practice, Himalya, Bombay, 1981.
3. Ghosh, A. and B. Maitra, Studies in the Fundamentals of Practical Banking, World Press, Calcutta.
4. Bedi, H.L. and V.K. Hrikas, Practical Banking Advances, UBS, New Delhi, 1993, (Selected Chapters only).
5. Indian Bank's Association, IBA Bulletin.
6. Indian Institute of Banker's Mumbai, Journal of the Indian Institute of Banker's.
7. Government of India, Economic Survey.
8. Kane, David.R., Principles of International Finance, Croom Helm, London.
9. Avadhani, V.A., International Finance – Theory and Practice, Himalya, Bombay.

Semester	Course Code	Course Title	Type of course	Credit	Teaching Hours
<b>IV</b>	<b>BE810401</b>	<b>Marketing Management</b>	<b>Elective- B-1</b>	<b>3</b>	<b>90</b>
<b>Course Objectives</b>					
<p><i>The objective of this course is to make the students understand the concepts of marketing management, to learn about marketing process for different types of products and services, to understand the tools used by marketing managers in decision making, pricing policies, and to understand the global marketing environment and its emerging trends.</i></p>					

**Unit-1: Introduction to Marketing**
**(15 Hours)**

- 1.1. Marketing Concepts- Nature and Scope of Marketing-Functions and Role of Marketing in an Organisation.
- 1.2. Marketing Services- Nature and Characteristics of Services- Classification of Services- Importance of Marketing in Service Sector.

**Unit-2: Marketing Strategy and Control**
**(25 Hours)**

- 2.1. Different Marketing Strategies- Selecting a Marketing Strategy- The Concept of Market Leaders- Challengers, Followers.
- 2.2. Segmentation Strategy- Target Marketing- Poisoning Strategy- Marketing Strategy of New Products- Designing and Management of Global Marketing Strategies.
- 2.3. Buying Behaviour - Buying Motives-Buying Process - Determination of Buyer Behaviour- Classification of Goods- Industrial Buyer Behaviour.

**Unit-3: Marketing Decisions**
**(20 Hours)**

- 3.1. Product Decisions- The Concept of a Product- Product Line Strategies- Differentiation- Product Life Cycle- Product Mix- Branding- Developing New Products and Services.
- 3.2. Pricing Decisions: Pricing Objectives and Procedures- Different Types of Pricing- Penetrating and Skimming Pricing-Pricing Methods – Cost Oriented Pricing – Competition-Oriented Pricing – Practical Methods of Pricing – Peak Load Pricing – Pricing of a New Product – Multi Product Pricing - Dual Pricing- Administered Pricing – Transfer Pricing

**Unit-4: Promotion Strategies and Emerging Trends in Marketing**

**(30 Hours)**

- 4.1. Promotion: Promotion Mix-Advertising, Sales Promotion, Personal Selling; and Public Relations: Direct Marketing& Relationship Marketing.
- 4.2. Placement: Channels of Distribution: Levels and Types of Channels- Functions and Management of Channel Members- Current Trends in Whole- selling and Re-tailing- Marketing Organisation and Control.
- 4.3. Emerging Trends in Marketing - Rural Marketing, CRM, Services Marketing, B2B Marketing- Internet Marketing- Marketing Research.

**References:**

1. Brassington, F and Pettitt, S, (2000) 'Principles of Marketing, Second Edition, Prentice Hall, Harlow.
2. Kotler, P, Armstrong, G, Saunders, J and Wong, V, (2001), 'Principles of Marketing': Third European Edition, Prentice Hall, Harlow.
3. Randall, G. (2001) 'Principles of Marketing', 2nd edition, Thomson Learning.
4. Hoyer, W.D. and MacInnis, D.J. (2001) 'Consumer Behaviour', 2nd Edition, USA: Houghton Mifflin Company.
5. Booms, B.H. and Bitner, M.J. (1981), 'Marketing strategies and organisation structures for service firms, in Marketing of Services', J. Donnelly and W.R. George (eds), American Marketing Association.
6. Davies, M. (1998) 'Understanding Marketing', 1st edition. Prentice Hall.
7. Philip Kotler. (1996), 'Marketing Management', Prentice Hall India Pvt. Ltd.
8. Stanton, Etzel and Walker (2000) 'Fundamentals of marketing', Mc Graw Hill.
9. Cuntill, Still, Govoni. 'Fundamentals of marketing management', Prentice Hall.
10. Baker, M. (2000) 'Marketing Management and Strategies', 3rd edition, Macmillan Business.
11. Proctor, T. (2000) 'Essentials of Marketing research', UK: Financial Times-Prentice Hall.

Semester	Course Code	Course Title	Type of course	Credit	Teaching Hours
<b>IV</b>	<b>BE810402</b>	<b>Human Resource Management</b>	<b>Elective- B-2</b>	<b>3</b>	<b>90</b>
Course Objectives					
<i>The objective of the course is to make the students understand the importance of human resource management, to know the elements of the HR function, and to be familiar with application of the principles and techniques of human resource management.</i>					

**Unit-1: Perspectives in Human Resource Management (20 Hours)**

- 1.1. Evolution of Human Resource Management – Principles of HRM- The Importance of the Human Factor – Challenges – Inclusive Growth and Affirmative Action.
- 1.2. Role of Human Resource Manager – Human Resource Policies – Computer Applications in Human Resource Management – Human Resource Accounting and Audit.

**Unit-2: The Concept of Best Fit Employee (25 Hours)**

- 2.1. Importance of Human Resource Planning – Forecasting Human Resource Requirement – Matching Supply and Demand -Internal and External Sources.
- 2.2. Recruitment – Selection – Induction – Compensation Method- Pay Structure- Fringe Benefits- Socialization Benefits.
- 2.3 Training and Executive Development: Types of Training Methods –Purpose- Benefits- Resistance. Executive Development Programmes – Common Practices – Benefits – Self-Development – Knowledge Management- Stress Management- Methods.

**Unit-3: Performance Evaluation and Control Process (25 Hours)**

- 3.1 Method of Performance Evaluation – Feedback – Industry Practices. Promotion, Demotion, Transfer and Separation – Implication of Job Change.
- 3.2. The Control Process – Importance – Methods – Requirement of Effective Control Systems Grievances – Causes – Implications.
- 3.3. Redressal Methods- HR Related Issues in Mergers and Acquisitions- International HRM- Issues- International Labour Standards.

**Unit-4: Industrial Relations**

**(20 Hours)**

- 4.1. Meaning of Employee Relations – Industrial Disputes – Causes- Forms and Types of Industrial Disputes – Methods of Settling Disputes.
- 4.2. Trade Unions – Objectives, Functions – Employee Welfare - Strategic Human Resources Management – Strategic Tools.
- 4.3. Contemporary Issues in Industrial Relations- Laws of Social Security- Health and Safety.

**Books for References:**

1. V.S.P. Rao- ‘Human Resources Management’
2. Keith Davis - ‘HR and Personnel Management’
3. Flippo- ‘Personnel Management’
4. T.V.Rao- ‘Human Resource Management’
5. Pareek, Udai and Rao T.V –‘Designing and Managing Human Resource Systems’
6. Satyadian S.Mirza – ‘Human Resource Management’
7. R. S Davar - ‘Personnel Management and Industrial Relations in India’.
8. Edwin B. Flippo- Principles of Human Resource Management.
9. K. K Ahuja- Personnel Management, Himalaya Publishing House.
10. Gary Deseler – ‘Human resource management (9<sup>th</sup> edition)’Prentice Hall.
11. George W. Bohlander, Scott. A. Snell- ‘Managing Human resources, methods and challenges’ South Western college.
12. Rothwell & Cazanar.- ‘Strategic Human resource planning and Management’ Prentice Hall.
13. Rao T. V & Pereira. – ‘Recent Experiences in Human resource management’ Prentice Hall.

Semester	Course Code	Course Title	Type of course	Credit	Teaching Hours
<b>IV</b>	<b>BE810403</b>	<b>Project Management and Entrepreneurial Development</b>	<b>Elective- B-3</b>	<b>3</b>	<b>90</b>

**Course Objectives**

*The main objective of the course is to teach and train the students about the techniques of project management, a major task of business economy. The emphasis of the course is on understanding concepts related with projects and equip the student with the tools of market and demand estimation for the successful conduct of business. In this course, a student will be aware on various aspects of entrepreneurial skill development. The objectives of this course are: (1) to help the students to study about the project development cycle,( 2)to learn about institutional support system in project execution (3) to apply entrepreneurial skills in business life with a thorough backing of foundations of entrepreneurial development (4)to acquaint students with the special challenges of starting new ventures and introducing new product and service ideas and(5) to provide the skill in executing various projects, starting from project identification till project termination.*

### **Unit-1: Project Management**

**(25 Hours)**

- 1.1. Project- Concepts, Categories of Project, Project Development Cycle. Project Management-Tools and Techniques. Project Identification, Project Formulation and Preparation.
- 1.2. Market and Demand Estimation, Market Survey, Demand Forecasting - Technical Factors-Material Inputs, Technology, Production, Plant Capacity, Location and Site, Civil Works, Charts, Layouts, Work Schedule, Cost of Project, Means of Financing, Estimates of Cost, Financial Projections.
- 1.3. Technical, Economic, Financial, Legal and Social Appraisal of the Industrial Projects.
- 1.4. Social Cost-Benefits, Treatment of Risk and Uncertainty, Sensitivity Analysis and Probability Approach Single as well as Multiple Projects.
- 1.5. Monitoring and Post Implementation- Evaluation of the Project, Project Financing.

### **Unit-2: Foundations of Entrepreneurship Development**

**(35 Hours)**

- 2.1. Entrepreneurship: Definition of Entrepreneur, Functions of an Entrepreneur, Entrepreneurial Motivation and Barriers, Classification of Entrepreneurship - Nature, Opportunities and the Importance of International Entrepreneurship.
- 2.2. Entrepreneurial Traits. Factors of Entrepreneurship Development: Socio-Cultural, Political,



Economical and Personal. Entrepreneurial Success and Failure: Reasons and Remedies.

- 2.3. Theories of Entrepreneurship - Innovation Theory by Schumpeter & Imitating- Theory of High Achievement by McClelland - X-Efficiency Theory by Leibenstein - Theory of Profit by Knight - Theory of Social change by Everett Hagen.

### **Unit-3: Project Management and Institutional Support**

**(15 Hours)**

- 3.1. Financial Schemes Offered by Various Financial Institutions Commercial Banks, IDBI, ICICI, SIDBI, SFCs, Venture Capital Funding, Angel Capitalist.
- 3.2. Role of Central Government and State Government in Promoting Entrepreneurship with Various Incentives, Subsidies and Grants.
- 3.3. Role of Agencies in the Entrepreneurship Development. - DIC - SISI - EDII –NIESBUD – NEDB.

### **Unit-4: Institutional Support for New Ventures**

**(15 Hours)**

- 4.1. Supporting Organizations; Incentives and Facilities; Financial Institutions and Small-scale Industries, Govt. Policies for SSIs. Family and Non-Family Entrepreneur.
- 4.2. Role of Professionals, Professionalism vs. Family Entrepreneurs.
- 4.3. Role of Woman Entrepreneur- Challenges to Woman Entrepreneurs, Achievements of Woman Entrepreneurs, Role Models of Woman Entrepreneurs Venture Capital- Nature and Overview, Venture Capital Process, Locating Venture Capitalists.

### **SUGGESTED READINGS:**

1. Chandra Prasanna - Project: Preparation, Appraisal, Budgeting and Implementation. (TMH, 5th Ed.)
2. Mohsin M. - Project Planning and Control (Vikas)
3. Goyal BB – Project Management: A Development Perspective (Deep & Deep)
4. Chaudhary, S – Project Management (Tata McGraw Hill)
5. Young TL – The Hand Book of Project Management (Kogan Page)
6. Couger, C- Creativity and Innovation (IPP, 1999)
7. Nina Jacob, - Creativity in Organisations (Wheeler, 1998)

8. Jonne&Ceserani - Innovation & Creativity (Crest) 2001.
9. Bridge Setal- Understanding Enterprise: Entrepreneurship and Small Business (Palgrave, 2003)
10. Holt - Entrepreneurship: New Venture Creation (Prentice-Hall) 1998.
11. Hunger J D and Wheelen T L - Strategic Management (Addison-Wesley, 1999)
12. Dollinger M J - Entrepreneurship (Prentice-Hall, 1999)
- 13.J. Heagney.: “Fundamentals of project Management” (2011)
14. H. Kerzner. Project Management: A Systems Approach to Planning,
- 15.Scheduling and Controlling. John Wiley & Sons, 2006
- Complementary references
- 16.M.P. Spinner, Project management: principles and practices, Prentice-Hall International, [1997]
- 17.Entrepreneurial Development: S.S.Khanka
18. Entrepreneurial Development: C.B.Gupta & N.P. Srinivasan
19. Project Management: S.Choudhury
20. Project Management: Denis Lock

Semester	Course Code	Course Title	Type of course	Credit	Teaching Hours
<b>IV</b>	<b>BE820401</b>	<b>Managerial Economics</b>	<b>Elective- C-1</b>	<b>3</b>	<b>90</b>
Course Objectives					
<p><i>The course intends to provide an understanding of the applications of economic theories in business decision making. Managerial economics is the application of economic theory and methodology to managerial decision making within various organizational settings. It helps to analyse the problems, issues, and decisions that managers face in each department of the organization. It also provides a better understanding of the external business environment in which an organization operates. Students will have a better understanding of the economic concepts and tools that have direct managerial applications. The topics covered in the course are: Basic concepts in Economic decision making, Market demand analysis, Production, Cost and Profit Analysis, Pricing, Policy and Practices and Risk in project Analysis.</i></p>					

### **Unit-1: Introduction to Managerial Economics**

**(20 Hours)**

- 1.1. Economics and Business Decision Making; economics as a tool for decision making.
- 1.2. Business Economics: Meaning, Significance and Scope.
- 1.3. The distinction between economics and Business Economics; Economic Indicators and Business Cycles.

### **Unit-2: Managerial Decisions in Competitive Markets**

**(20 Hours)**

- 2.1. Perfect competition and its features, Profit maximization in the short run and in the long run.
- 2.2. Managerial decisions for firms with market power, Measurement of market power: The Lerner Index, Determinants of the market power.
- 2.3. Economies of scale, Barriers created by government, Profit maximization under monopoly: output and pricing decisions
- 2.4. Monopolistic competition: short run and long-run equilibrium.
- 2.5. Pricing decision in an oligopoly: The Kinked Demand curve model.

**Unit-3: Production, Costs and Profit Analysis**

**(20 Hours)**

- 3.1. Estimation of production and cost functions-Economies and diseconomies of scale- Experience Curve-Optimal scale and X-inefficiency-Firm's Supply Curve- Elasticity of supply.
- 3.2. Break Even Analysis-Application of Break Even Analysis in decision making.
- 3.3. Managerial Theories of the firm-Baumol -Marris- Wililamson – Cyert and March.
- 3.4. Market Failures and Price Regulations: Market failures and need for regulation, Regulations and market structure, Firm behavior, Price regulation

**Unit-4: Risk in Project Analysis**

**(30 Hours)**

- 4.1. Uncertainty Vs Risk-Risk in economic analysis-Risk Return indifference curves.
- 4.2. Probability and uncertainty-application of probability to risk evaluating risky streams of receipts.
- 4.3. Risk adjusted discount rates- Certainty Equivalent Approach-Decision Trees-Simulation.
- 4.4. Maximin Criterion- Minimax Regret Criterion- Information and Risk-Adverse Selection- Problem of Moral Hazard

**References:**

1. A. Koutsoyiannis, Modern Micro Economics, Macmillan
2. Christopher Thomas, S Charles Maurice, Sumit Sarkar, Managerial Economics, Tata McGrawHill
3. Craig H Peterson, Cris Lewis, Sudhir K Jain, Managerial Economics, Pearson Education
4. Dominick Salvatore, Managerial Economics in a global economy, Oxford University Press
5. Dwivedi D. N. Managerial Economics, Vikas , New Delhi.
6. Evan J Douglas, Managerial Economics, Prentice Hall
7. Joel Dean, Managerial Economics, Prentice Hall of India, New Delhi
8. Joseph G Nellis and David Parker, The essence of Business Economics, Prentice Hall
9. Paul Keat, Phillip Young, Stephen Erfle, Managerial Economics, Pearson
10. R. L. Varshney and K. L. Maheswari, Managerial Economics, Sultan Chand and Sons, NewDelhi

11. W Bruce Allen, Keith Weigelt, Edwin Mansfield, Managerial Economics- Theory, Application and Cases, W. W. Norton and Company.
12. Atmanand, Managerial Economics, Excel Publication
13. Charles J Stocks, Economics for Managers, McGraw Hill
14. Chopra O. P. Managerial Economics, Tata McGraw Hill
15. G. S. Gupta, Managerial Economics, Tata McGraw-Hill Education
16. Howard Davies, Managerial Economics- An Analysis of Business Issues, Prentice Hall
17. M. Baye, Managerial Economics and Business Strategy, McGraw-Hill/Irwin
18. Nick Wilkinson, Managerial Economics-A problem solving approach, Cambridge University Press
19. R. M. Shrivastava, Essentials of Business Finance, Himalaya Publishing House
20. William F Samuelson, Stephen G Marks, Managerial Economics, Wiley

Semester	Course Code	Course Title	Type of course	Credit	Teaching Hours
<b>IV</b>	<b>BE820402</b>	<b>Business Statistics</b>	<b>Elective- C-2</b>	<b>3</b>	<b>90</b>
Course Objectives					
<p><i>To provide an understanding of handling data and interpret the results of statistical analysis and make inferences about the population from sample data. Statistics is the art of making data-based decisions using statistical tools. It is an integral part of the structure and functions of business. This course provides an opportunity to make the students familiar with basic statistical techniques and their applications in managerial decision making. It includes statistical Inference, Probability and Probability Distribution, Correlation and Regression in Business and Time Series Analysis.</i></p>					

**Unit- 1: Statistical Inference**
**(20 Hours)**

- 1.1. Applications of inferential statistics in managerial decision-making.
- 1.2. Concepts and methods of estimation- properties of estimation.
- 1.3. Method of moments – method of least squares- method of maximum likelihood (without proof)
- 1.4. Hypothesis testing – concepts and methods – simple and composite hypothesis – Type I and Type II errors.

**Unit- 2: Probability and Probability Distribution**
**(25 Hours)**

- 2.1. Concept of probability and its uses in business decision-making.
- 2.2. Basic Probability Theory - Probability densities and distribution functions.
- 2.3. Stochastic, independent, standards, probability distributions.
- 2.4. Law of large numbers and central limit theorem (without proof) – Standard sampling distribution – X square, t and F.

**Unit- 3: Correlation and Regression in Business**
**(25 Hours)**

- 3.1. Correlation: Meaning and types of correlation, Simple and Multiple Correlation, Coefficient of Determination, Application of correlation in Business analysis.

- 3.2. Regression: Meaning, Regression equations and their application,  
Partial and Multiple regression, Importance of Regression in Business analysis.

**Unit- 4: Time Series Analysis**

**(20 Hours)**

- 4.1. Concept and use of Time series analysis Additive and Multiplicative models.  
4.2. Components of time series - Trend analysis.  
4.3. Least Square method - Linear and Non- Linear equations, Applications in business decision-making.

**References**

1. Beri - Business Statistics (Tata McGrawHill ,2nd Edition).
2. Bhardawaz-Business Statistics (Excel Books)
3. Black- Business Statistics (Wiley Dreamtech)
4. Chandan J S - Statistics for Business and Economics (Vikas 1998.Ist Edition)
5. Croxton, F. E., D. . Cowden and S. Kliein, Applied General Statistics, Prentice Hall, NewDelhi.
6. Gupta C B, Gupta V - An Introduction to Statistical Methods (Vikas1995, 23rd Edition).
7. Levin Rubin - Statistics for Management (Pearson 2000, New Delhi, 7th Edition).
8. Render and Stair Jr - Quantitative Analysis for Management (Prentice-Hall, 7th edition)
9. Sharma J K - Business statistics (Pearson education 2nd edition)
10. Speigal, M. R. Theory and Prodblems of Statistics, McGraw Hill Book, London
11. Gupta S. C. Fundamentals of statistics, Himalaya Publishing house, New Delhi.
12. Gupta S.C. and V.K. Kapoor, Fundamentals of Applied Statistics, S. Chand and Sons. NewDelhi.
13. Gupta S.P. and Gupta M. P. Business statistics, Sultan Chand and sons, New Delhi. 4.Howard L Balsely (1978), 'Basic Statistics for Business and Economics',GridInc, Columbus,Ohio
14. Thomas R. Dyckman, L. Joseph Thomas (1977), ' Fundamental Statistics for Businessand Economics', Prentice- Hall, inc, New Jersey

Semester	Course Code	Course Title	Type of course	Credit	Teaching Hours
<b>IV</b>	<b>BE820403</b>	<b>Entrepreneurship Development</b>	<b>Elective- C-3</b>	<b>3</b>	<b>90</b>
Course Objectives					
<p><i>The primary objective is to develop conceptual understanding of entrepreneurship and its structure. The other main objectives are to provide an understanding of key areas of entrepreneurship development, opportunities available to entrepreneurs and challenges in the field and to give an idea of entrepreneurship development programmes in India and Kerala. Familiarising students with basic concept of entrepreneurship development is the main course objective. This course will facilitate students to understand the theories on motivation and the need for training on entrepreneurial development. It will also provide recent developments in entrepreneurial development programmes both in national and state level. The course will help the students to know the various aspects of women entrepreneurship. The case studies on successful enterprises and sick enterprises will give a clear scenario of both entrepreneurship development and its challenges.</i></p>					

### **Unit- 1: Basic Concepts and Theories of Entrepreneurship**

**(20 Hours)**

- 1.1. Evolution of the concept of entrepreneur – definition, nature and importance of entrepreneur.
- 1.2. Functions and Characteristics of Entrepreneur – Distinction between an Entrepreneur and a Professional Manager.
- 1.3. Entrepreneur vs. Intrapreneur. Major motivating factors of entrepreneurship.
- 1.4. Motivation Theories, Maslows’s Need Hierarchy Theory, McClelland’s Acquired Need Theory.
- 1.5. Entrepreneurship in economic growth, Factors affecting Entrepreneurial Growth

### **Unit- 2: Entrepreneurial Development**

**(25 Hours)**

- 2.1. Entrepreneurial Training - Need for Training – Types of training.
- 2.2. Entrepreneurship Development Programme: Objectives and Phases of EDPs, Problems and constraints of EDPs.



- 2.3. Role of Govt. in organising EDPs – Make in India.
- 2.4. Kerala Start Up Mission and Students Start up Mission - Technology Business Incubators in Kerala - Role of KSIDC and KFC in promotion of Entrepreneurship in Kerala.
- 2.5. Institutional support to entrepreneurs – Venture Capital, Angel Fund investors.
- 2.6. Institutional Finance to Entrepreneurs- preparation of project report for getting financial assistance.

**Unit- 3: Business Structures, Gender and Entrepreneurship**

**(25 Hours)**

- 3.1. Meaning of Small, Medium and Large Enterprise- Relationship between Small and Large enterprise – Role of Small Enterprises in Economic Development.
- 3.2. Micro Small Medium Enterprises Development Act- Role/ Importance of MSMEs in Developing Countries.
- 3.3. Meaning, Characteristics and challenges of Women Entrepreneurship in India – Measures for the development of Women Entrepreneurship in India.
- 3.4. Growth and Problems of Women Entrepreneurship in Kerala.

**Unit- 4: Challenges of Entrepreneurship**

**(20 Hours)**

- 4.1. Problems faced by entrepreneurs – Challenges of rural entrepreneurs.
- 4.2. Globalisation and Entrepreneurship
- 4.3. Sickness – Causes & Rehabilitation of sick units – Role of BIFR in revival of sick companies - Case studies of successful enterprises and sick enterprises.

**Essential Readings:**

1. Bhandari Ramesh, Entrepreneurship and Women in Empowerment, Alfa Publications.
2. Coulter, Entrepreneurship in Action, PHI 2nd Edition
3. Desai, Vasant, 'Project Management and Entrepreneurship', Himalayan Publishing House, Mumbai, 2002.
4. E. Gordon & K. Natarajan, Entrepreneurship Development Himalaya 2008
5. G. Barani, Performance of Women Entrepreneurs, Serials Publications New Delhi

6. Gupta and Srinivasan, 'Entrepreneurial Development', S Chand & Sons, New Delhi.
7. Hisrich R D and Peters M P, "Entrepreneurship" 5th Edition Tata McGraw-Hill, 2002.
8. Khanka, S S. 'Entrepreneurial Development', S Chand & Company Ltd. New Delhi
9. LallMadhumira and SahaiShikha, Entrepreneurship, Excel Books
10. Mcdaniel Bruce A., Entrepreneurship and innovation- An Economic Approach, M.E.SHARPE, INC.
11. Rabindra N. Kanungo "Entrepreneurship and innovation", Sage Publications, New Delhi, 1998.
12. Ram Chandran, 'Entrepreneurial Development', Tata McGraw Hill, New Delhi

#### **Additional Readings:**

1. Rathore B.S., Entrepreneurial Opportunities in Modernising Economy , Abhishek Publications
2. Roy Rajeev, Entrepreneurship, Oxford Latest Edition
3. Saini, J. S., 'Entrepreneurial Development Programmes and Practices', Deep & Deep Publications (P), Ltd.
4. Sarvate Dilip, Entrepreneurial Development, Concepts and Practices, Everest Prakashans.
5. Seth Amita, Entrepreneurship and E Business Development for Women, ALB Books.

## ACKNOWLEDGEMENT

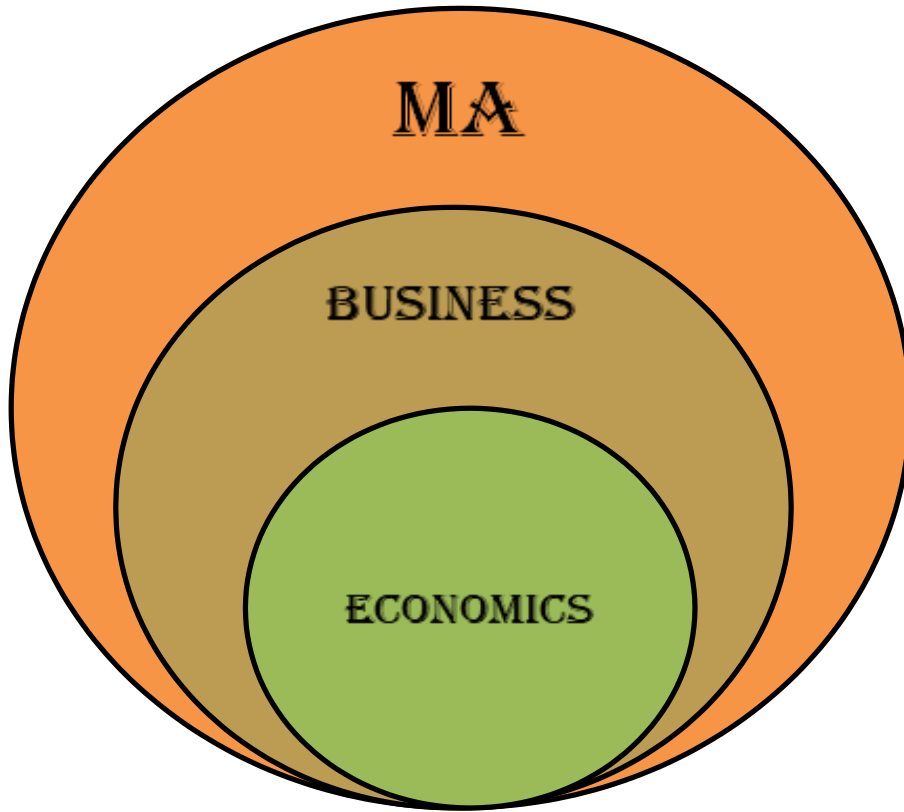
The syllabus for M.A. Business Economics is the result of a lot of support, advice, suggestions and assistance from many esteemed personalities. I have great pleasure in recording my sincere thanks to all who have been directly or indirectly instrumental in the preparation of the syllabus of P.G. course in Business Economics under Mahatma Gandhi University, Kottayam.

I extend my acknowledgement with due respect and gratitude to the honorable Vice-Chancellor, Pro-Vice Chancellor, Registrar, Members of the Syndicate and Academic Council for their sincere co-operation and guidance towards the completion of this work. I am extremely indebted to all the members of Expert Committee for their experienced guidance and selfless efforts at each level of syllabus preparation. I express my sincere gratitude to the Chairman and all the members of P.G. Board of Studies in Economics.

I owe my special thanks to the efforts of members of University Academic Section and other staff. I also record my sincere thanks to all professionals, academicians and other stakeholders for their valuable suggestions and support.

Convener

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