

**M.Lib.I.Sc.**

**(Integrated-2 Years)**

**Master of Library and Information Science**

**PROGRAM STRUCTURE AND SYLLABUS**

**2020-21 ADMISSION ONWARDS**

**(UNDER MAHATMA GANDHI UNIVERSITY PGCSS REGULATION 2019)**



**EXPERT COMMITTEE IN LIBRARY AND INFORMATION SCIENCE**

**MAHATMA GANDHI UNIVERSITY 2020**

## EXPERT COMMITTEE MEMBERS IN LIBRARY AND INFORMATION SCIENCE

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## **M.Lib.I. Sc Degree Program**

(Mahatma Gandhi University Regulations PGCSS 2019 from 2020-21 Academic years)

### **1. Aim of the program**

The M.Lib.I.Sc. Program (integrated) is designed with the following aims.

1. To train the students to identify, select and provide access to information in a variety of formats.
2. To enable the students to identify the needs of particular user groups and develop collections, services, programmes and policies to meet these needs;
3. To develop the students to apply a wide range of electronic resources, and techniques foreffective information retrieval;
4. To equip the students to apply appropriate research methodologies to issues and professional concerns in LIS;
5. To develop in the students a commitment to professional values, standards and ethics.

### **2. Eligibility for admission:**

Graduation in any subject with minimum marks of 45%. The minimum requirement for admission for SC/ST to M.Lib.I.Sc is a pass in the qualifying examination.

### **3. Medium of instruction and assessment**

The medium of instruction shall be in English. Continuous assessment of students shall be followed on an internal basis based on the Regulations and external examination conducted by University at the end of each semester. The final assessment shall be the combination of both internal and external components governed by Regulation.

### **4. Faculty under which the degree is awarded: Social Science**

**5. Specialization offered, if any** : Nil

**6. Note on compliance with the UGC Minimum Standards for the conduct and award of Post Graduate degrees:** Since the UGC has changed the name of degree/PG in Library Science as M.Lib.I.Sc. instead of MLISc, that change is also incorporated.

## THE PROGRAM STRUCTURE

Semester	Course Code	Title of Course	Type of Course	Hrs. per Week	Credit	Total Credits
<b>I</b>	LS020101	Foundations of Library and Information Science	Core (Theory)	4	4	<b>20</b>
	LS020102	Information, Knowledge and Communication	Core (Theory)	4	4	
	LS020103	Library and Information Centre Management	Core (Theory)	4	4	
	LS020104	Knowledge Organization – Library Classification	Core (Theory)	4	4	
	LS020105	Knowledge Organization - Library Cataloguing	Core (Theory)	4	4	
<b>II</b>	LS020201	Information Sources, Services and Products	Core (Theory)	4	4	<b>20</b>
	LS020202	Knowledge Organization-Library Classification	Core (Practical)	4	4	
	LS020203	Knowledge Organization-Library Cataloguing	Core (Practical)	4	4	
	LS020204	Information Technology	Core (Theory)	4	4	
	LS020205	Computer Application in Libraries	Core (Theory)	4	4	
<b>III</b>	LS020301	Research Methodology	Core (Theory)	4	4	<b>18</b>
	LS020302	Information Processing and Retrieval	Core (Theory)	4	4	
	LS020303	Information Processing and Retrieval	Core (Practical)	4	4	
	LS020304	Information Technology	Core (Practical)	3	3	
		Elective		3	3	
<b>IV</b>	LS020401	Information Technology Applications in LIS	Core (Theory)	4	4	<b>22</b>
	LS020402	Information Technology Applications in LIS	Core (Practical)	4	4	
		Elective		3	3	
		Elective		3	3	
	LS020403	Dissertation	Core	5	4	
	LS020404	Comprehensive Viva	Core		2	
	LS020405	Internship	Core		2	
		Total Credits				

## ELECTIVES

	Course Code	Title of Course	Teaching Hrs. per Week	Credit
<b>GROUP A</b>	LS800301	Competency Development	3	3
	LS800401	Digital Libraries	3	3
	LS800402	Statistical Methods	3	3
<b>GROUP B</b>	LS810301	Planning and Management of Library and Information Centres	3	3
	LS810401	Information Systems and Products	3	3
	LS810402	Technical Communication	3	3
<b>GROUP C</b>	LS820301	Information Literacy	3	3
	LS820401	Digital Resources	3	3
	LS820402	Knowledge Management	3	3

## FIRST SEMESTER COURSES

Course Code	Title of Course	Type of Course	Credits
LS020101	Foundations of Library and Information Science	Core	4
LS020102	Information, Knowledge and Communication	Core	4
LS020103	Library and Information Centre Management	Core	4
LS020104	Knowledge Organization – Library Classification -Theory	Core	4
LS020105	Knowledge Organization -Library Cataloguing - Theory	Core	4

### LS020101- FOUNDATIONS OF LIBRARY AND INFORMATION SCIENCE

(4 credits)

#### **UNIT 1        Library in the Social Context**

Library: Conceptual Change.  
Role of Libraries in Modern Society and Education.  
Five Laws of Library Science, Implications of Five Laws

#### **UNIT 2        Types of Libraries**

Types of libraries: their distinguishing features and functions.  
National Libraries, Public Libraries, Special Libraries,  
Kerala State Central Library,  
Academic Libraries: School, College and University libraries  
National Library of India

#### **UNIT 3        Resource Sharing and Extension Service**

Resource Sharing, Library Extension Service, Library Publicity  
Library Networks: NICNET, DELNET, ERNET, INFLIBNET

#### **UNIT 4        Library Movement and Public Library Legislation**

Need for Library Legislation  
Essential Features for Library Legislation  
Library Movement and Library Legislation in India;  
Public Library Movement and Legislation in Kerala;  
Kerala Public Libraries Act, 1989  
Press and Registration Act, Indian Copy Right Act,  
Delivery of Books and Newspaper Act.  
National Mission on Libraries

## **UNIT 5      Library and Information Science Profession**

Librarianship as a Profession Professional Ethics  
Professional Associations and Their Role: IFLA, ILA, IASLIC,  
IATLIS, CILIP, SLA, ALA, ASLIB  
Promotion of library and information services by UNESCO, UGC, and  
RRRLF

### **Reading list**

1. Choudhury, G. G. et al. Librarianship: An introduction. London: Facet, 2004.
2. Ajaykumar Raval. Handbook of public library system. New Delhi: Discovery Publishing, 2013.
3. Anil K Dhiman and Suresh C Sinha. Academic Libraries. New Delhi: EssEss Publication, 2002.
4. Anil K Dhiman. Handbook of special libraries and librarianship. New Delhi: Ess Ess Publication, 2008
5. Khanna, J. K. Library and society. New Delhi: Ess Ess Publications, 1994.
6. Kumar, P. S. G. Library in India Series. New Delhi: B. R. Publishing Corporation, 2008.
7. Macdougall, Alan F. and Prytherch, Ray, ed. Handbook of library cooperation. Mumbai: Jaico Publishing, 1997.
8. Ranganathan, S. R. The five laws of Library Science. Bangalore: Sarada Ranganathan Endowment for Library Science, 1988.
9. Paslithil, A. Public library movement: Kerala. Delhi: Kalpaz Publications, 2006.
10. Sharma, S K. Libraries and Society. New Delhi: Ess Ess Publication, 1987



**LS020102 – INFORMATION, KNOWLEDGE AND COMMUNICATION  
(4 credits)**

**UNIT 1 Information and Communication**

Information: Characteristics, Nature, Value and Uses  
Conceptual difference between Data, Information and Knowledge  
Communication: Channels – Formal and Informal  
Communication Models;  
Communication Barriers  
Trends in Scientific Communication.

**UNIT 2 Information Science**

Genesis and Development; Definitions and Scope  
Information Science as a Discipline and its Relationship with other Subjects  
Bibliometrics, Informetrics, Webometrics, Scientometrics, Altmetrics  
Bibliometric Laws and Models

**UNIT 3 Library, Information and Society**

Information Society: Genesis and Characteristics; Intellectual Property Rights:  
IPR Legislations in India  
Fair Use provision in Copyright; Censorship, Data Security  
Right to Information Act, Information Technology Act  
National Policy of Information  
Open Access Movement.

**UNIT 4 Economics of Information**

Information industry  
Cost analysis: Cost Effectiveness Analysis; Cost Benefit Analysis Information  
Audit; Marketing of Information Services and Products Knowledge  
Management: Types of Knowledge;  
Relation with Information Management;  
Knowledge Management Procedures.  
Role of Library Professionals in Knowledge Management

## UNIT 5      **Sociology of Information**

Categories of Information Users, Information needs;  
Definition and Types  
User studies; Methods of Data Collection  
Patterns of User Behavior  
Information Behavior Models

### **Reading list**

1. Andral, N. Communication theories and models. Mumbai: Himalaya Publishing House, 2005.
2. Bawden, David and Robinson, Lyn. Introduction to Information Science. London: Facet Publishing, 2012.
3. Case, Donald O. Looking for information: a survey of research on information seeking, needs and behaviour. 2<sup>nd</sup> ed. Amsterdam: Academic Press, 2007.
4. Feather, John. The information society: a study of continuity and change. 5<sup>th</sup> ed. London: Facet Publishing, 2008.
5. McGarry, K. J. Changing context of information: an introductory analysis. 2<sup>nd</sup> ed. London: Library Association, 1993.
6. McGarry, K. J. Communication, knowledge and librarian. London: Clive Bingley, 1975.
7. McQuail, Denis and Windahl, Sven. Communication models for the study of masscommunications. London: Longman, 1981.
8. Meadows, A. J., ed. Knowledge and communication: essays on the information chain. London: Library Association, 1991.
9. Norton, Melanie J. Introductory concepts in Information Science. New Jersey: Information Today, 2008.
10. Vickery, Brian C. and Vickery, Alina. Information Science in theory and practice. 3<sup>rd</sup> ed. Munchen: K. G. Saur, 2004.

## **LS020103 - LIBRARY AND INFORMATION CENTRE MANAGEMENT**

**(4 credits)**

### **UNIT 1 Library Management**

Concept of Management  
History of Management Thought  
Principles of Management Functions of Management  
Library and Information Centre Organization; Patterns of Organization

### **UNIT 2 Housekeeping Operations**

Acquisition: Collection Development: Selection, Ordering and Accessioning  
Technical Processing: Classification, Cataloguing and Physical Processing of Documents  
Maintenance of Collection: Shelving, Rectification, Stock Verification, Binding and Weeding out, Care and Preservation

### **UNIT 3 Reader Services**

Circulation of Documents: Issue of Membership, Charging Systems  
Reference Collection and Service Routines  
Serials Control: Selection, Ordering,  
Recording the Receipt and Display Documentation Services  
Special Collections and Services

### **UNIT 4 Library Administrative Tools and Techniques**

Library Committee, Library Rules, Staff Manual, Library Statistics, Annual Report

### **UNIT 5 Library Budgeting**

Methods of Financial Estimation, Sources of Finance, Types of Expenditure Types of Budgets - Line budget, Performance Budget, PPBS, ZBB

## Reading list

1. Bryson, Jo. Effective library and information centre management. Hampshire, U. K.: Gower, 1990.
2. Bryson, Jo. Managing information services: A transformational approach. 2<sup>nd</sup>ed. Aldershot, UK: Ashgate Publishing, 2006.
3. Evans, G. Edward G. Management techniques for librarians. 2<sup>nd</sup>ed. New York: Academic Press, 1983.
4. Evans, G. Edward and Aire, Camila A. Management basics for information professionals. 3<sup>rd</sup>ed. London: Facet, 2013
5. Khanna, J. K. Handbook of library administration. New Delhi: Crest Publishing House, 2001.
6. Koontz, Harold and Weirich, Heinz                                      Essentials of management: An international and leadership perspective. 9<sup>th</sup>ed. New Delhi: Tata McGraw-Hill, 2013.
7. Mittal, R. L. Library administration: Theory and Practice. 5<sup>th</sup>ed. New Delhi: EssEss Publications, 2007.
8. Principles of management. Retrievable from  
<http://www.saylor.org/site/textbooks/Principles%20of%20Management.pdf>
9. Ranganathan, S. R. Library administration. New Delhi: EssEss Publications, 2006.
10. Stueart, Robert D. and Moran, Barbara B. Library and Information Centre Management. Colorado: Libraries Unlimited, 2004

## **LS020104- KNOWLEDGE ORGANIZATION – LIBRARY CLASSIFICATION**

**(Theory - 4 credits)**

### **UNIT 1      Library Classification**

Concept, Meaning, Definition, Evolution, Need and Functions  
Canons of Library Classification for Idea Plane  
Principles of Helpful Sequence

### **UNIT 2      Notation**

Notation, Need, Qualities and Types  
Hospitality in Array and Chain - Different Devices  
used Mnemonics - Types and Functions  
Class Number, Book Number and Collection Number

### **UNIT 3      Facet Analysis and Fundamental Categories**

Concept of Facet Analysis  
Ranganathan's Five Fundamental Categories  
Postulates of Facet Analysis and Facet Sequence  
Principles of Facet Sequence  
Common Isolates - ACI and PCI

### **UNIT 4      Library Classification Schemes**

Enumerative and Faceted Schemes Salient features  
of DDC, UDC and CC,Web Dewey

### **UNIT 5      Universe of Knowledge**

Different types of Subjects - Simple, Compound, Complex Subjects  
Modes of Formation and Development of Subjects

## Reading List

1. Foskett, A. C. Subject approach to information. 5<sup>th</sup> ed. London: Library Association, 1996.
2. Husain, Shabahat. Library Classification: Facets and Analyses. Delhi: B.R. Publishing Corporation, 2004.
3. Kaula, P. N. A treatise on colon classification. New Delhi: Sterling Publishers, 1985.
4. Ranganathan, S. R. 1962. Elements of Library Classification. 3<sup>rd</sup> ed. Bombay: Asia Publishing, 1962.
5. Ranganathan, S. R. Prolegomena to Library Classification. 3<sup>rd</sup> ed. Bangalore: SRELS, 1989
6. Satija, M. P. Colon Classification. 7<sup>th</sup> edition. New Delhi: Sterling, 1993.
7. Satija, M. P. The theory and practice of the Dewey Decimal Classification System. Oxford: Chandos Publishing, 2007.
8. Nath, M. Universe of knowledge and development of subjects. Jaipur: Pointer, 2008.
9. Rajendra Kumbhar. Library Classification: Trends in the 21<sup>st</sup> Century. UK: Chandos, 2009.

## **LS020105 - KNOWLEDGE ORGANIZATION – LIBRARY CATALOGUING**

**(THEORY- 4 credits)**

### **UNIT 1 Library Catalogue**

Catalogue - Meaning and Definition. Types of Catalogue.

Library Catalogue - Meaning and Definition - Objectives and Functions

Physical forms of Library Catalogue - Card catalogue, Computer Catalogue – OPAC

Inner Forms of Library Catalogue - Alphabetical, Classified and Alphabetico classed

Normative Principles of Library Cataloguing

### **UNIT 2 Catalogue Codes and Entry Formats**

Anglo-American Cataloguing Rules - Special Features Classified Catalogue Code

Special features, ISBD, RDA

Entry format - AACR2, CCC

### **UNIT 3 Kinds of Entries**

Types of entries according to AACR2 - Main entry, Added Entries,

Analytical entries and Reference entries - Format and Structure

Types of entries according to CCC - Main entry, Cross Reference Entry,

Class Index Entry, Book Index Entry and Cross Reference Index Entry -

Structure and Format,

Filing of Entries in Alphabetical and Classified Order - ALA Filing rules

### **UNIT 4 Subject Cataloguing**

Subject Catalogue - Subject Entries in AACR2 and CCC

List of Subject headings –

LC List of Subject Headings and Sears List of Subject Headings

Verbal Indexing Languages: Chain Indexing, Pre-coordinate and Post

Coordinate Indexing

## **UNIT 5      Centralized and Cooperative Cataloguing**

Centralized Catalogue Services - Card Service, MARC Service,  
Bibliographic Service, CIP, CIS and Prenatal Cataloguing

Cooperative Cataloguing Programmes - NPAC, Union Catalogue

### **Reading list**

1. Aswal, R. S. MARC - 21: Cataloguing format for 21st century. New Delhi: Ess Ess Publications, 2004
2. Bowman J. H. Essential cataloguing. London: Facet Publishing, 2003
3. Foulonneu, M. Metadata for Digital Resources. Oxford, UK: Chandos, 2008.
4. Girja Kumar and Krishan Kumar. Theory of cataloguing. Rev. Ed.5. New Delhi: South AsiaBooks, 1983.
5. Read, J. Cataloguing without tears: managing knowledge in the information society. Oxford: Chandos Publishing, 2003.
6. Sangma, S. K. AACR 2 with MARC 21: Cataloguing Practice. New Delhi: Centrum Press, 2012
7. Sangma S. K. Cataloguing rules in Library science. New Delhi: Centrum Press, 2013
8. Smiraglia, R. P. Metadata: A Cataloger's Primer. USA: Haworth, 2005
9. Taylor, A. G. and Miller, David P. Wynar's introduction to cataloging and Classification. Ed.10. London: Libraries Unlimited, 2006.

### **Codes / Standards**

1. Anglo-American Cataloging Rules (most recent edition to be used)
2. Dublin Core and other relevant metadata standards for different kinds of objects /resources Library of Congress Subject Headings
3. MARC 21 and related standards for bibliographic records
4. OCLC. 2002. Bibliographic formats and standards. 3rd ed. Dublin, Ohio: OCLC (Also available online at <http://www.oclc.org/oclc/bib/toc.htm>)
5. Ranganathan, S. R. Classified Catalogue Code, etc. 5<sup>th</sup> ed. Bangalore: SRELS, 1964 MARC21 and related standards for bibliographic records
6. Sears List of Subject Headings, 21<sup>st</sup>ed.



## SECOND SEMESTER COURSES

Course Code	Title of Course	Type of Course	Credits
LS020201	Information Sources, Services and Products	Core	4
LS020202	Knowledge Organization -Library Classification (Practical)	Core	4
LS020203	Knowledge Organization Library Cataloguing (Practical)	Core	4
LS020204	Information Technology (Theory)	Core	4
LS020205	Computer Application in Libraries (Theory)	Core	4

### LS020201- INFORMATION SOURCES, SERVICES AND PRODUCTS (4 credits)

#### UNIT 1 **Physical Media of Information**

Evolution of physical media;

Classification of information sources – Print and non-print; Documentary and Non-Documentary; Primary, Secondary and Tertiary Sources of Information -- their categories and characteristics.

#### UNIT 2 **Ready Reference Sources: Print and Digital**

Criteria for the evaluation of reference sources

Detailed Study of Dictionaries, Encyclopedias, Yearbooks, Directories, Handbooks and Manuals, Biographical Sources, Geographical Sources, Statistical Sources, Sources of Current Information;

E-resources: E-books, E-journals, ETDs, Databases, Subject Gateways; Open Access Resources

#### UNIT 3 **Information Services**

Reference service – Types and Steps; Reference Interview;

Virtual Reference Service; Referral service

Other Services: CAS, SDI, Document Delivery,

Abstracting and Indexing services; Translation, Reprography

## **UNIT 4      Information Systems and their Services**

Study of National, International Systems and Services:

NISCAIR, DESIDOC, NASSDOC, SENDOC, AGRIS, CAS, BIOSIS, ERIC,  
INIS, INSPEC, MEDLARS, OCLC, NKN, BITNET,  
Clarivate Analytics, ProQuest, Ebsco

### **Record of Term Work:**

Evaluation of not less than 30 reference sources including electronic sources.

### **Reading list**

1. Bopp, Richard E. and Smith, Linda C. Reference and information services: An introduction, 4<sup>th</sup>ed. Libraries Unlimited, 2011.
2. Cassel, Kay Ann and Hiremath, Uma. Reference and information services: An introduction, 3<sup>rd</sup>ed. London: Facet Publishing, 2013.
3. Gurdev Singh. Information Sources, Services and Systems. New Delhi: PHI Learning, 2013
4. Hurt, C. D. Information Sources in Science and Technology. 3rd ed. Westport, Conn.:Libraries Unlimited, 1998.
5. Katz, William A. Introduction to reference work, 7<sup>th</sup>ed. New York: McGraw Hill, 1997.
6. Krishan Kumar. Reference service, 5<sup>th</sup>ed. New Delhi: Vikas Publishing House, 2004.
7. Ranganathan, S. R. Reference Service. 2nd ed. Bombay: Asia Pub. House, 1961.
8. Sewa Singh. Manual of reference and information sources. New Delhi: B R. Publishing,2004.
9. Stebbins, Leslie, F. Student guide to research in the digital age: how to locate and evaluate information sources. Santa Barbara: Libraries Unlimited, 2005
10. Webb, William H. et al. Sources of information with social sciences. 3<sup>rd</sup> ed. Chicago:ALA, 1986.

**LS020202 - KNOWLEDGE ORGANIZATION – LIBRARY CLASSIFICATION  
(PRACTICAL - 4 credits)**

Classification of Simple, Compound and Complex Subject Books and Periodicals according to 22<sup>nd</sup> edition of DDC and 6<sup>th</sup> edition of CC.

**Record of Term Work:** Classification of not less than 75 documents, of simple and complicated specific subjects using DDC and CC. Book Numbers have to be derived using the Facet Formula prescribed in CC.

**LS020203- KNOWLEDGE ORGANIZATION – LIBRARY CATALOGUING  
(PRACTICAL - 4 Credits)**

Cataloguing of books and Periodicals according to AACR2R and CCC edition 5

Cataloguing of Single-volumed and multi- volumed books: Cataloguing of Simple

Books Cataloguing of Books by Personal Authors and Corporate Bodies

Cataloguing of Simple Periodical Publications

Use 19th edition of Sears's List of Subject Headings for deriving headings for subject  
and entries according to AACR2R

Use Chain indexing for deriving headings for Class Index Entries according to CCC5

**Record of Term Work:**

Preparation of a Sample Dictionary Catalogue of not less than 30 documents prepared  
in the card form.

**LS020204 - INFORMATION TECHNOLOGY (THEORY) (4 credits)**

**UNIT- 1. Computers: Architecture and Technology**

Basic Computer Architecture-CPU; Generation of Computers  
Classification of Computers Storage Technology –  
Primary Memory, Secondary Storage Input and Output Devices

**UNIT- 2. Software**

Programming Languages; Generations of Programming Languages.  
Types of Software-System Software and Application Software Operating System-  
Windows and Linux  
Application Software –DBMS, Word Processor, Presentation Software,  
Electronic Spreadsheet

**UNIT -3. Fundamentals of Communication Technology**

Data Communication;Transmission Media  
Computer Networks-Types of Computer Networks; LAN, MAN, WAN,  
LAN Topologies-Bus, Ring, Star, Tree, Mesh, Hybrid

**UNIT- 4. Data Processing**

File Design, Data files, and Records  
File Organization: Serial, Sequential, Direct access, Indexed Sequential and  
Random Access File Organization  
Database: Concepts, Organization and Type.

## Reading List

1. Rowley, Jennifer: Information Systems, Ed.2, London: Clive Bingley, 1998
2. Devarajan, G.Information Technology in Libraries.Ess Ess Publications
3. Amjath Ali. (2004). Information Technology in Libraries.Ess Ess Publications
4. Basandra, S. K, Computers Todeay, New Delhi: Gogotha, 1998
5. Satyanarayana, R: Information Technology and its Facets, Delhi: Manic, 1996
6. Rajaraman, V: Fundamentals of Computers. New Delhi: PHI,1995
7. Satish Jain: Information Technology: O Level made Simple. New Delhi: BPB,Latest edition  
(All Module)
8. Shroff,Rustam: Computer Systems and Applications, Mumbai: Himalaya, 2000
9. Ravishankar,S: Computer Awareness and Applications Delhi: Himalaya,1999
10. Johar,Amit and Jauhari,B S: Computers Today.Vol.1,Mumbai: Himalaya,1993

## **LS020205- COMPUTER APPLICATION IN LIBRARIES (THEORY - 4 Credits)**

### **UNIT 1- Computer Applications in Libraries**

Computer Applications in Libraries and Information Centres.

Need and Advantages

Application of Computers in Library Operations and Content Management

### **UNIT 2 Library Automation**

Need for library Automation Planning and Implementation

Areas of Library Automation

Automation of Library Housekeeping Operations-Acquisition, Cataloguing, Circulation, Serial Control, OPAC

Integrated Library Management Software: KOHA, SOUL.

RFID and its Application in Libraries

### **UNIT 3- Library Automated Services**

Alerting Services

Bibliographic Full Text Services.

Document Delivery Services

Reference Services

### **UNIT 4 Institutional Repositories**

Institutional Repositories-Concepts and Characteristics Structure, Contents and

Standards of Institutional Repositories

Institutional Repository Software – D space, Eprints, Fedora

## Reading list

1. Kumar, PSG, Ted. Computerisation of Indian Libraries. Delhi: BRPC, 1987.
2. Haravu, L J, Library automation and networking in India, Annals of Library Science and Documentation, 1993, 40 (1), 32-40,
3. William Saffaday. An Introduction for Automation for Libraries. ALA, 1999.
4. Elmasri, Ramez and Navathe, Shamakant B. Fundamentals of Database Systems. 5<sup>th</sup> ed. Boston: Pearson/Addison Wesley, 2007.
5. Matthew, Neil et al. Professional Linux Programming. Mumbai: SPD, 2001.
6. Rowley, Jennifer. The electronic library. London: Library Association Publishing, 1998.
7. Michael, Randal K. Mastering UNIX Shell Scripting. Canada: Robert Ispen, 2003.
8. Peterson, Richard. Linux: The Complete Reference. New York: McGraw-Hill, 2006
9. Ravichandra Rao. Library automation. New Delhi: Wiley Eastern, 1990.
10. Williams, Brian K. and Sawyer, Stacey C. Using information technology: A practical introduction to computers & communications, 11<sup>th</sup> ed. McGraw-Hill, 2014.



### THIRD SEMESTER COURSES

Course Code		Type of Course	Credits
LS020301	Research Methodology	Core	4
LS020302	Information Processing and Retrieval (Theory)	Core	4
LS020303	Information Processing and Retrieval (Practical)	Core	4
LS020304	Information Technology (Practical)	Core	3
	Elective	Elective	3

#### LS020301 RESEARCH METHODOLOGY (4 credits)

##### UNIT 1 Research

Concept, Meaning and need of research

Research Process

Types of research-fundamental, applied including Inter-disciplinary and multi-disciplinary approach; Ethical aspects of research

##### UNIT 2 Research Design

Types of research design

Identification and formulation of research problem

Hypothesis: formulation and testing

Literature search: print, non-print and electronic sources

Review of related literature

##### UNIT 3 Research Methods

Scientific method, Historical method, Descriptive method

Survey method Case study method, Experimental method

Delphi method; Brainstorming method

##### UNIT 4 Research Techniques and Tools

Questionnaire, Interview, Observation

Scales and Scaling Techniques

Online Research Tools

Sample and Sampling Techniques

## **UNIT 5      Data Analysis, Interpretation and Report Writing**

Processing data: Editing, Coding and Analyzing Data

Descriptive and Inferential data analysis

Presentation of data- tables and graphs Techniques of data analysis: SPSS

Structure, style and contents of research report:

Style manuals-MLA and APAE-citation and reference management tools

– Zotero and EndNote

How to avoid plagiarism- Best practices and methods

Current trends in Library and Information Science research in India

### **Reading list**

1. Alvesson, M. and Skoldberg, K. Reflexive methodology: new vistas in qualitative research. Ed. 2. London: Sage Publication, 2009.
2. Busha, Charles T. and Harter, Stephen. P. Research methods in librarianship. New York: Academic Press, 1980.
3. Greenfield, T. Research methods: guidance for postgraduates. London:
4. Hodder Arnold, 1996.
5. Kothari, C. R. Research methodology. New Delhi: New Age International, 2011.
6. Krishan Kumar. Research methods in Library and Information Science. Rev. Ed. 1999. New Delhi: Har-Anand Publications, 1999.
7. Kumar, P S G. Research methods and statistical techniques. New Delhi: B. R. Publications, 2004.
8. Lancaster, F. W. and Powell, R. R. Basic research methods for librarians. New Jersey: Ablex Publishing, 1995.  
Martyn, John and Lancaster, F. Wilfrid. Investigative methods in library and Information Science: an introduction. Arlington, Virginia: Information Resources Press, 1981.
9. Powell, R. R. and Silipigni, C. L. Basic research methods for librarians. Ed. 4. Westport: Libraries Unlimited, 2004.
10. Slater, M., ed. Research methods in Library and Information Studies. London: Library Association Publishing, 1990.

## **LS020302 - INFORMATION PROCESSING AND RETRIEVAL**

**(THEORY-4 Credits)**

### **UNIT 1      Organization of Knowledge in Classification Schemes**

Organization of Subjects in CC, DDC and UDC  
Comparative Study of CC, DDC and UDC Classification in Digital Age

### **UNIT 2      Bibliographic Record Formats**

ISO 2709, Z39.50, MARC, MARC 21, UNIMARC, CCF, ISBD  
Metadata Formats - FRBR, Dublin Core

### **UNIT 3      Subject Indexing**

Pre-coordinate indexing systems - PRECIS, POPSI  
Post-Coordinate indexing - Thesaurus, Uniterm Indexing, Keyword Indexing,  
Citation Indexing, Automatic Indexing

### **UNIT 4      Information Retrieval Systems**

Information Retrieval Systems - Purpose, Functions and Components  
IR Models: Boolean, Probabilistic and Vector Processing Models; Bayesiannetwork  
model; Structured Text Retrieval Models.  
Evaluation of Information Retrieval Systems - ASLIB Cranfield study,  
MEDLARS Study, TREC

### **UNIT 5      Natural Language Processing**

Application of NLP in Information Retrieval Systems

## Reading list

1. Baeza –Yates, Ricardo. Modern information retrieval. Delhi: Pearson Education, 1999.
2. Choudhury, G. G. and Choudhury, Sudatta. Organizing information from the shelf to the web. London: Facet Publishing, 2007.
3. Choudhury, G. G. Introduction to modern information retrieval. 3<sup>rd</sup> ed. London: Facet Publishing, 2010.
4. Date, C.J. An Introduction to database systems. Reading, MA: Addison-Wesley, 2000
5. Korfhage, Robert R. 1997. Information, storage and retrieval. New York: Wiley, 1997.
6. Kumar, P S G. Knowledge organization, Information processing and retrieval theory. B. R. Publishing Corporation, 2003.
7. Kumar, P S G. Knowledge organization, Information processing and retrieval practice. B. R. Publishing Corporation, 2003.
8. Neelameghan, A. Online database searching and retrieval: Strategies, procedures, commands and problems – A brief guide. Bangalore: SRELS, 1995.
9. Sharma, C. K. and Sharma, A. K. Information process and retrieval. Atlantic Publishers, 2007.

**LS020303- INFORMATION PROCESSING AND RETRIEVAL (PRACTICAL)**  
**(4 credits)**

**UNIT 1      Classification of Complex Subjects**

Classification of Simple, Compound and Complex subjects according to UDC (Abridged edition 1961) and fascicules

**UNIT 2      Cataloguing of Complex Titles**

Preparation of bibliographic description of non-book materials, periodical publications and E-resources as per AACR2R

***Records of Term Work:***

1. Sample Dictionary Catalogue of not less than 25 documents prepared in the cardform.

**LS 020304 INFORMATION TECHNOLOGY (PRACTICAL)**

**(4 credits)**

- UNIT 1      Operating System - Windows; Linux
- UNIT 2      Word Processing - MSWord; Open Office Writer
- UNIT 3      DBMS – MS Access
- UNIT 4      Spreadsheet – MS Excel; presentation – MS Power Point

**ELECTIVE**

## FOURTH SEMESTER - COURSES

Course Code	Title of Course	Type of Course	Credits
LS020401	Information Technology Applications in LIS (Theory)	Core	4
LS020402	Information Technology Applications in LIS (Practical)	Core	4
	Elective	Elective	3
	Elective	Elective	3
LS020403	Dissertation	Core	4
LS020404	Comprehensive Viva	Core	2
LS020405	Internship	Core	2

### LS020401 INFORMATION TECHNOLOGY APPLICATIONS IN LIS (THEORY)

(4 credits)

#### UNIT 1 Internet in Libraries

Basics of Internet

Applications of Internet in Libraries, web based resources & Services

Library 2.0/3.0

Library websites/portals-design & development, Library networks, consortia

#### UNIT 2 Digital Libraries

Digital library - Definition, scope and characteristics

Digital library initiatives - Major initiatives in the World and in India

Digital library Technologies-Digital representation and compression

Identification, accessing, processing, storage, delivery and use of digital Resources

Digital library creation - prerequisites; content development; metadata development; and search options

Open source digital library software – GSDL

#### UNIT 3 Web Technology Applications

Search Engines-Cluster based & building Search engines, Security issues

Social networking Tools-Semantic web, RSS feeds, webcasts, Podcasts, Blogs

## **UNIT 5      Modern Technologies in Libraries**

Cloud Computing Applications

Artificial Intelligence;

Robotics

Augmented Reality,

Internet of Things

### **Reading list**

1. Arthur, Lowell Jay and Burns, Ted. Unix Shell Programming. New Delhi: Galgotia, 1995.
2. Date, C. and Darwen, H. A Guide to the SQL Standard. 3rd ed. Reading, MA: Addison-Wesley, 1994.
3. Date, C.J. An Introduction to Database Systems. 7th ed. Boston, MA, USA: Addison-Wesley Longman, 2000.
4. Elmasri, Ramez and Navathe, Shamkant B. Fundamentals of Database Systems. 5<sup>th</sup>ed. Boston: Pearson/Addison Wesley, 2007.
5. Matthew, Neil et al. Professional Linux Programming. Mumbai: SPD, 2001.
6. Rowley, Jennifer. The electronic library. London: Library Association Publishing, 1998.
7. Michael, Randal K. Mastering UNIX Shell Scripting. Canada: Robert Ispen, 2003.
8. Peterson, Richard. Linux: The Complete Reference. New York: McGraw-Hill, 2006
9. Ravichandra Rao. Library automation. New Delhi: Wiley Eastern, 1990.
10. Williams, Brian K. and Sawyer, Stacey C. Using information technology: A practical introduction to computers & communications, 11<sup>th</sup> ed. McGraw-Hill, 2014.



**LS020402- INFORMATION TECHNOLOGY APPLICATIONS IN LIS**  
**(PRACTICAL-4 Credits)**

- Unit 1-** Library Automation Packages – KOHA
- Unit 2 -** Digital Library/Institutional Repository Software – Greenstone/D space
- Unit3-** Library Website / Portal Design,
- Unit 4-** Creation of Metadata – Dublin Core
- Unit 5-** Reference Management Software – Zotero

**ELECTIVE**

**ELECTIVE**

**LS020403 DISSERTATION (4 credits)**

Students have to carry out research on a topic approved by the Departmental, under the guidance of a faculty member and prepare a dissertation. Appropriate size of the dissertation shall be 100 typed pages in A4 size paper.

**LS020404 COMPREHENSIVE VIVA (2 credits)**

**LS020405 INTERNSHIP (2 Credits)**

Internship is on the job training to assimilate professionalism to one's career. In Institute of Library and Information Science is providing 20 days training for students at any Library and Information Science Centre approved by the Institute during the fourth semester. The students would prepare an individual report after the internship and the same should be attested by the organization under which the students did the internship. The individual report will be submitted to the HOD for evaluation. This practical experience will help them a great deal when they will found themselves in the Library and Information Science profession.

## **ELECTIVES**

### **LS800301- COMPETENCY DEVELOPMENT (3 Credits)**

#### **UNIT 1 Professional and Personal Competencies**

Professional and personal competencies

Soft skills and hard skills

Categories of soft skills - Corporate skills, employability skills and life skills

#### **UNIT 2 Communication Skills**

Types of communication – verbal and non-verbal

Types of oral communication; Structure of an oral presentation;

Body language; Use of visual aids

Listening skills; Types of listening -- Passive Listening, Active Listening,

Reflective Listening

#### **UNIT 3 Stress Management**

Understanding stress; Types of stress

Symptoms of work stress

Causes of harmful work stress

Personality and stress

Stress management techniques

#### **UNIT 4 Other Management Skills**

Time Management: Delegation and time management

Barriers to time management

Identifying and handling time consuming tasks, Procrastination

Techniques of time management

Negotiation skills: Types of negotiation Stages

of negotiation; Skills of negotiation

**LS800401 DIGITAL LIBRARIES (3 credits)**

**UNIT 1 Digital Libraries**

Digital library - Definition, scope and characteristics  
Digital library initiatives - Major initiatives in the world and in India  
Design and organization of digital libraries - Architecture,  
Interoperability, Compatibility  
User interfaces, protocols and standards

**UNIT 2 Digital Library Technologies**

Digital representation and compression  
Publication and file formats  
Scanning, OCR, editing and publishing  
Network platforms, server management

**UNIT 3 Digital Resources Management**

Digital collection - nature and scope  
Scholarly communication - formats – Multimedia and Internet-related formats,  
Identification of, accessing, processing, storage, delivery and use of  
digital resources  
Digital library user - assessment of user behaviour and needs

**UNIT 4 Digital Library-Creation and Use**

Digital Library Creation - prerequisites; content development; metadata  
development; and search options  
Open source software – GSDL  
Digital preservation and conservation - archiving  
Digital information - Intellectual Property issues; rights management

**UNIT I - Introduction to Statistics**

Origin and meaning of Statistics- General uses, relation with other disciplines, limitations and minuses of Statistics.

Measures of central tendency- arithmetic mean, weighted arithmetic mean, median, mode, geometric mean, Harmonic mean.

Measures of dispersion - Definition and characteristics of good dispersion. Range, Quartile deviation, mean deviation, standard deviation and variance, percentiles, deciles. Relative measure of dispersion- coefficient of variation. Definition of measures of skewness and measures of kurtosis.

**UNIT 2- Correlation and Regression**

Correlation: Karl Pearson's coefficient of correlation and its properties. Scatter diagram. Concept of rank correlation, Spearman's rank correlation coefficient, repeated ranks. Simple regression, regression equation, properties and uses.

**UNIT 3 - Probability and Probability Distribution**

Random experiment- sample space, events, types of events, classical and frequency approaches to probability, Addition theorem for two events, independence of events, conditional probability, multiplication theorem.

Random variable: Discrete and continuous random variables. Binomial, Poisson and Normal distributions (Concept and definition only), mean and variance (without derivation)

**UNIT 4 - Testing of Hypothesis**

Hypothesis testing: Types of hypotheses; testing of hypotheses: significance level, one tailed test, two tailed tests, Type I error and Type II error, Power of a test, Z test, t test, Chi square test for variance, F test, Chi square test for independence of attributes. ANOVA (One way only).

(Note: This paper discusses the theoretical concepts in statistics applicable to Library and Information Science. Therefore, only simple problems may be discussed).

**LS810301 - PLANNING AND MANAGEMENT OF LIBRARY AND INFORMATION  
CENTRES (3 credits)**

**UNIT1- Schools of Management Thought**

Classical, Neo-classical and Modern management theories;  
Principles of scientific management;  
Fayol's principles; Functions of Management

**UNIT 2- System Analysis and Design**

Systems Theory; Open and Closed Systems;  
Project management Techniques – PERT/ CPM, decision tables;  
data flow diagram

**UNIT 3- Human Resource Management**

Organizational structure  
Job analysis and description; recruitment, selection and induction; training;  
performance appraisal, Motivation, Group dynamics, Stress management

**UNIT 4- Marketing Management**

Marketing of information services and products.

**UNIT 5 - Other Realms of Management**

Quality Management: TQM, Quality audit; SERVQUAL, LibQual,  
ISO 9000 series of Standards  
Crisis Management  
Change Management  
Space Management.

**LS810401 INFORMATION SYSTEMS AND PRODUCTS (3 credits)**

**UNIT- 1 Libraries and Information Agencies**

History and Development, Libraries, Documentation Centres and Information Centres  
Data Banks and Archives, Information Analysis Centres, Referral Centre,  
Clearing houses, Translation Centres and Reprographic Centres

**UNIT 2 Information System**

Definition, Characteristics and Properties of a System  
Concept, Types, Characteristics and Components of Information System  
Planning and Designing of information system  
Role of information system in technology transfer and national development

**UNIT- 3 Global Information Systems**

BIOSIS, AGRIS, INIS, INSPEC, MEDLINE, OCLC, JANET, PubMed, IEE Electronic  
Library, ACM Digital Library, EBSCO, PROQUEST, Elsevier,  
Ingenta, J-Gate, Portals, Wikis

**UNIT -4 Documentation and Information Centres and Systems in India**

NISCAIR, NASSDOC, DESIDOC, SENDOC, INFLIBNET, DELNET,  
NICNET, UGC-INFONET, INDEST

**UNIT- 5 Information Products and Services**

Concept, Definition and Types Reference Service CAS, SDI, Document  
Delivery, Translation and Reprographic Services  
Information Analysis and Consolidation - Reports, Reviews,  
House Journals, Bibliographies, Indexes, Abstracts, etc.

**LS810402 TECHNICAL COMMUNICATION (3 credits)**

**UNIT 1- Communication Process**

Types: Verbal, Non-verbal, Formal, Informal; Types of writing;  
Technical writing: Principles, characteristics;  
Language as a medium for communication, readability; Audience Research

**UNIT 2 - Organization, Lay out and Presentation of Information**

Preparation of: Learned papers Popular Articles Technical reports Project proposals  
Book design and page layout.

**UNIT 3 - Repackaging and Consolidation**

Preparation of: Trend reports Reviews, State-of- the Art Report, Digest  
Abstracts – Types, Preparation, Guidelines

**UNIT 4 - Mechanics of Writing and Presentation**

Common problems in spelling, grammar, usage and punctuation  
Use of Style manuals – Chicago, APA and MLA; Reference Management  
Software Copy editing and proof reading.  
Oral Presentation Skills; Tips for effective visual aids

## LS820301 – INFORMATION LITERACY (3 credits)

### **UNIT 1- Introduction to Information Literacy**

Information: Characteristics of information;  
Types of information; Need for Information  
Literacy; Dimensions of information literacy  
Information literacy models; Information Literacy Standards  
Information Literacy Assessment Tools

### **UNIT 2- Sources of Information**

Documentary and non-documentary;  
Variety of documentary sources – primary, secondary and tertiary with  
examples of each category;  
Taxonomy of bibliographies- national, trade, subject;  
Indexing and abstracting periodicals and databases in Science, Social  
Sciences and humanities, Citation indexes; Open Access.

### **UNIT 3- Ready Reference Sources (Emphasis on electronic sources)**

Dictionaries, encyclopedias, yearbooks, directories, handbooks, manuals,  
geographical sources, statistical sources, current sources.

### **UNIT 4- Retrieval of Information**

Major library classification schemes with emphasis on  
Dewey Decimal Classification  
Bibliographic records – library catalogues, indexes, OPACs; Access  
points Search strategy, use of Boolean logic.  
Search engines and directories; Techniques of retrieving relevant information  
from the Net; Invisible web, virtual libraries, institutional repositories;  
Evaluation of information from the Net.



**UNIT 1-      Introduction to Digital Resources**

Digital resources: Definition, characteristics, scope and challenges

Variety of digital resources: E-books, e-journals, Databases, Electronic

Theses and Dissertations, Subject gateways, Multimedia,

Geospatial e-resources

**UNIT 2-      Electronic Resources: Collection Development**

Selection tools Licensing and negotiating Digital Rights Management

Issues in library provision Open digital resources

**UNIT 3 -      Electronic Resources Management**

Electronic resources life cycle

ERAMS – A 2 Z lists, Open URL, Link resolvers, Federated search services,

Webdiscovery services

Marketing strategies for the digital resources in the library

Innovative library services using digital resources

**UNIT 4-      Digital Resources Initiatives in India**

Initiatives for the production, storage and dissemination of digital

information: Library consortia: INDEST, UGC INFONET, DAE, FORSA

Scholarly Journals: Indian Academy of Sciences, INSA, MedIND,

Indian Journals.com

ETDs: ETDs of IITs, IISc. Vidyanidhi, ShodhGanga,

Digital Libraries and Institutional repositories: Digital Library of India,

EPrints@iisc, Librarian's Digital Library

Online Courseware: NPTEL, e-PG-Pathshala, SWAYAM

**LS820402 KNOWLEDGE MANAGEMENT (3 credits)**

**UNIT 1- Knowledge Management Basics**

KM-Concepts and definition

Need for knowledge management  
Types of knowledge; KM systems

Knowledge creation and knowledge architecture – Nonaka's model.

**UNIT 2 - Knowledge Capture, Codification and Transfer**

Capturing tacit knowledge – methods  
Knowledge codification – tools and procedures  
knowledge testing;  
Knowledge transfer

**UNIT3- Knowledge Base**

Knowledge mapping  
Decision trees, decision tables,  
frames  
Knowledge works

**UNIT 4 - Knowledge Management System Tools and Portals**

Data visualization  
Tools and techniques of knowledge management  
Neural networks, data mining; managing knowledge workers  
Knowledge management in Library and Information Centres