

SCHEME AND SYLLABUS OF M.Lib.I.Sc (2 YEAR) PROGRAMME

Course No.	Course Title	Credits	Duration of Exam
FIRST SEMESTER			
LS1 C01	Foundations of Library and Information Science	4	3 Hrs
LS1 C02	Library and Information Centre Management	4	3 Hrs
LS1 C03	Information, Knowledge and Communication	4	3 Hrs
LS1 C04	Knowledge Organization – Library Classification (Theory)	4	3 Hrs
LS1 C05	Knowledge Organization - Library Classification (Practical)	4	3 Hrs
	Total	20	
SECOND SEMESTER			
LS2 C01	Information Sources and Services	4	3 Hrs
LS2 C02	Knowledge Organization - Library Cataloguing (Theory)	4	3 Hrs
LS2 C03	Knowledge Organization Library Cataloguing (Practical)	4	3 Hrs
LS2 C04	Information Technology Applications in LIS (Theory)	4	3 Hrs
LS2 C05	Information Technology (Practical)	4	3 Hrs
LS2 C06	Internship	2	
	Total	22	
First Year	Total Credits	42	
THIRD SEMESTER			
LS3 C01	Information Processing and Retrieval (Theory)	4	3 Hrs
LS3 C02	Research Methodology	4	3 Hrs
LS3 C03	Information Systems and Products	4	3 Hrs

LS3 C04	Information Technology Applications in LIS (Practical)	5	3 Hrs
LS E	Elective	3	3 Hrs
	Total	20	
FOURTH SEMESTER			
LS4 C01	Planning and Management of Library and Information Centers	4	3 Hrs
LS4 C02	Dissertation and Viva Voce	5	
LS E	Elective	3	3 Hrs
LS E	Elective	3	3 Hrs
LS E	Elective	3	3 Hrs
	Total	18	
Second Year	Total Credits	38	
	TOTAL CREDITS	80	

ELECTIVES

Course No.	Course Title	Credits	Duration of Exam
GROUP A			
LS E01	Information Security	3	3 Hrs
LS E02	Data Science	3	3 Hrs
LS E03	Information Literacy	3	3 Hrs
GROUP B			
LS E04	Digital Resources	3	3 Hrs
LS E05	Information Processing and Retrieval (Practical)	3	3 Hrs
LS E06	Statistical Methods	3	3 Hrs
GROUP C			
LS E07	Digital Libraries	3	3 Hrs
LS E08	Technical Communication	3	3 Hrs
LS E09	Knowledge Management	3	3 Hrs

SEMESTER 1

LS1 C01- FOUNDATIONS OF LIBRARY AND INFORMATION SCIENCE

(4 credits)

- UNIT 1 Library in the Social Context**
Development of Libraries in India
Library: Conceptual change.
Role of Libraries in Modern Society and Education.
Five Laws of Library Science.
Implications of Five Laws
- UNIT2 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
Digital Libraries: Functions, Features
- UNIT 3 Resource Sharing and Extension Service**
Resource Sharing
Library Extension Service, Library Publicity
Library Networks: NICNET, DELNET, ERNET, INFLIBNET
- UNIT4 Library Movement and Public Library Legislation**
Need for Library Legislation
Essential features for Library Legislation
Library Movement and Library Legislation in India; National Mission on
Libraries
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.
- UNIT 5 Library and Information Science Profession**
Librarianship as a Profession
Professional Ethics and human value
Professional Associations and Their Role: IFLA, ILA, IASLIC, IATLIS, CILIP,
SLA, ALA, ASLIB
Promotion of library and information services by UNESCO, UGC, and RRRLF
Professional Skills and Competencies
Role of Library and Information Professionals in Digital Era
Women Librarianship

Reading list

1. Choudhury, G. G. et al. Librarianship: An introduction. London: Facet, 2004.
2. AjaykumarRaval. 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: EssEss Publication, 2008
5. Khanna, J. K. Library and society. New Delhi: EssEss 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: SaradaRanganathan 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: EssEss Publication, 1987
11. Bhatt (R K). History and development of libraries in India. 1995. Mittal Publications, New Delhi.
12. Kumar, Krishan. Library organisation. 1993. Vikas, New Delhi.
13. C.A. Augustine, G. Devarajan, Public library system in India / editors, Ess Ess publications,1990

LS1 C02 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 Organisation

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

Special Collections and services

UNIT 4 Library Physical Planning, Administrative Tools and Techniques

Library Building

Library Planning: Need, Objectives and Procedures

Library Furniture and Equipment

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. 2nded. Aldershot, UK: Ashgate Publishing, 2006.
3. Evans, G. Edward G. Management techniques for librarians. 2nded. New York: Academic Press, 1983.
4. Evans, G. Edward and Aire, Camila A. Management basics for information professionals. 3rded. 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. 9thed. New Delhi: Tata McGraw-Hill, 2013.
7. Mittal, R. L. Library administration: Theory and Practice. 5thed. New Delhi: EssEssPublications, 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.

LS1 C03 – INFORMATION, KNOWLEDGE AND COMMUNICATION

(4 credits)

UNIT 1 Information and Communication

Information: Characteristics, nature, value and uses

Conceptual difference between data, information, knowledge and wisdom

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

UNIT3 Library, Information and Society

Information Society: genesis and characteristics;

Intellectual Property Rights: IPR Legislations in India

Fair use provision in Copyright; Censorship

Right to Information Act, Information Technology Act

National policy of information

Open access movement.

UNIT4 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

User studies

Methods of data collection

Patterns of user behavior

Information behavior models

Reading list

1. Andal, 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. 2nd ed. Amsterdam: Academic Press, 2007.

4. Feather, John. The information society: a study of continuity and change. 5th ed. London: Facet Publishing, 2008.
5. McGarry, K. J. Changing context of information: an introductory analysis. 2nd 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 mass communications. 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. 3rded. Munchen: K. G. Saur, 2004.

LS1 C04 KNOWLEDGE ORGANIZATION – LIBRARY CLASSIFICATION (THEORY) (4 credits)

UNIT 1 Library Classification

Concept, meaning, definition, need and functions
 Normative principles of classification
 Canons of library classification
 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

Phase Relation

Devices in Library Classification

UNIT 4 Library Classification Schemes

Enumerative and faceted schemes

Salient features of DDC, UDC and CC

Current Trends in Library Classification WebDewey

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. 5th ed. London: Library Association, 1996.
2. Husain, Shabhat. 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. Krishan, Kumar. Theory of Classification. 4th rev. ed. Delhi: Vikas Pub. House, 1998.
5. Ranganathan, S. R. 1962. Elements of Library Classification. 3rd ed. Bombay: Asia Publishing, 1962.
6. Ranganathan, S. R. Prolegomena to Library Classification. 3rd ed. Bangalore: SRELS, 1989
7. Satija, M. P. Colon Classification. 7th edition. New Delhi: Sterling, 1993.
8. Satija, M. P. The theory and practice of the Dewey Decimal Classification System. Oxford: Chandos Publishing, 2007.
9. Nath, M. Universe of knowledge and development of subjects. Jaipur: Pointer, 2008.
10. RajendraKumbhar. Library Classification: Trends in the 21st Century. UK: Chandos, 2009.
11. SAYERS (W C B). Manual of classification for librarians. Rev. by Arthur Maltby. Ed. 5. 1975. Andre Deutsch, London.
12. SAYERS (W C B). Introduction to library classification. Rev. by Arthur Maltby. Ed. 9. 1958. Grafton, London.

LS1 C05 KNOWLEDGE ORGANIZATION – LIBRARY CLASSIFICATION (PRACTICAL) (4 credits)

Classification of simple, compound and complex subject books and periodicals according to 22nd edition of DDC and 6th 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.

SEMESTER II

LS2 C01 INFORMATION SOURCES AND SERVICES

(4 credits)

- UNIT1 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 Users and their Information Needs**
Categories of information users; Information needs, definition; Types and models; Information seeking behavior; User studies, methods, technique and evaluation
Role of Reference Librarian and Information Officer in Electronic Environment
- UNIT 4 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 5 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 75 reference sources including electronic sources.

Reading list

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

LS2 C02 KNOWLEDGE ORGANIZATION – LIBRARY CTALOGUING (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 Alphabeticoclassed

UNIT 2 Catalogue Codes and Entry Formats

Anglo-American Cataloguing Rules - Special features

Classified Catalogue Code - Special features

Entry format - AACR2, CCC, ISBD- G

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 - Word by word arrangement – Letter by letter arrangement- 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

Bibliographic Standards: ISBD, MARC, CCF, etc.

Centralized catalogue services - Card service, MARC service, Bibliographic service, CIP, CIS and Prenatal cataloguing

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 Asia Books, 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. 5th ed. Bangalore: SRELS, 1964
MARC 21 and related standards for bibliographic records
6. Sears List of Subject Headings, 21sted.

LS2 C03 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.

Cataloguing of e-resources.

Use 19th edition of Sears'sList of Subject Headings for deriving headings for subject added 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 50 documents prepared in the card form.

LS2 C04 INFORMATION TECHNOLOGY APPLICATIONS IN LIS (THEORY)(4 credits)

UNIT 1 Library Automation

Need for library automation

Planning and implementation

Areas of library automation

Automation of library housekeeping operations

Integrated library management systems: KOHA, SOUL, e-Granthalaya

Criteria for evaluation of library management systems

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 of, 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

UNIT3 Institutional Repositories

Institutional repositories-concepts and characteristics

Design and architecture of institutional repositories

Contents and standards of institutional repositories

Institutional repository software – DSpace, EPrints, Fedora

UNIT 4 Internet in Libraries

Application of the Internet in libraries

Web based resources and services

Library 2.0/3.0

Library websites / portals-design and development

Library networks, library consortia, WebOPAC

UNIT 5 Modern Technologies in Libraries

RFID-characteristics, features, components and functioning

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, Shamakant B. Fundamentals of Database Systems. 5th 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, 11th ed. McGraw-Hill, 2014.

LS2 C05 INFORMATION TECHNOLOGY (PRACTICAL)

(4 credits)

- | | |
|---------------|---|
| UNIT 1 | Operating system – Windows; Linux |
| UNIT 2 | Word processing – MS Word; Open Office Writer |
| UNIT 3 | DBMS – MS Access |
| UNIT 4 | Spreadsheet – MS Excel; Presentation – MS Power Point |
| UNIT 5 | Internet tools and technologies |

LS2 C06 INTERNSHIP (2 CREDITS)

Department of Library and Information Science in Rajagiri College of Social Science is providing 20 days of hands on training for students in every year at reputed institutions. It is undoubtedly clear that internship in present day is a wonderful combination of theoretical knowledge, practical experience and professional skill which are emergently necessary for students. This practical experience will help them a great deal when they will found themselves in the Library and Information Science profession.

SEMESTER III

LS3 C01 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; Bayesian
network 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. 3rd ed. London: Facet Publishing, 2010.
4. Date, C J. An Introduction to database systems. Reading, MA: Addison-Wesley, 2000
6. Korfhage, Robert R. 1997. Information storage and retrieval. New York: Wiley, 1997.
7. Kumar, P S G. Knowledge organization, Information processing and retrieval theory. B. R. Publishing Corporation, 2003.
8. Kumar, P S G. Knowledge organization, Information processing and retrieval practice. B. R. Publishing Corporation, 2003.
9. Neelameghan, A. Online database searching and retrieval: Strategies, procedures, commands and problems – A brief guide. Bangalore: SRELS, 1995.
10. Sharma, C. K. and Sharma, A. K. Information process and retrieval. Atlantic Publishers, 2007.

LS3 C02 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 APA
E-citation and reference management tools – Zotero ,EndNote and Mendeley
Research Ethics
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: Hodder Arnold, 1996.
4. Kothari, C. R. Research methodology. New Delhi: New Age International, 2011.
5. Krishan Kumar. Research methods in Library and Information Science. Rev. Ed. 1999. New Delhi: Har-Anand Publications, 1999.
6. Kumar, P S G. Research methods and statistical techniques. New Delhi: B. R. Publications, 2004.
7. Lancaster, F. W. and Powell, R. R. Basic research methods for librarians. New Jersey: Ablex Publishing, 1995.
8. 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.

LS3 C03 -INFORMATION SYSTEMS AND PRODUCTS (4 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, UGC-INFONET, INDEST

UNIT 5 Information Products and Services

Concept, Definition and types

Information analysis and consolidation - Reports, Reviews, House journals,
bibliographies, indexes, abstracts, etc.

Reading list

1. Bopp, Richard E. and Smith, Linda C. Reference and information services: An introduction, 4th ed. Libraries Unlimited, 2011.

2. Cassell,, Kay Ann and Uma Hiremath. Reference and Information Services: An introduction, 3rd ed, Chicago: ALA, 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. Reference and information services: A reader for the nineties. London: Scarecrow Press, 1986.
6. Krishan Kumar. Reference Service, 5th ed. New Delhi: Vikas Publishing House, 2004.
7. Rastogi, K.G. Reference services in Library Science. New Delhi: Alfa Publications, 2006.
8. Stebbins, Leslie F. Student guide to research in the digital age: how to locate and evaluate information sources. Santa Barbara: Libraries Unlimited, 2005.
9. Valecich, J. Information systems today: Managing the digital world. New Delhi: PHI, 2009.

LS3 C04 INFORMATION TECHNOLOGY APPLICATIONS IN LIS (Practical) (5 credits)

Unit 1 Library automation packages – Koha

Unit 2 Digital library/Institutional Repository software – Greenstone/DSpace

Unit3Library website / portal design

Unit 4 Creation of Metadata – Dublin Core

Unit 5Reference management software --Zotero

SEMESTER IV

LS4 C01 - PLANNING AND MANAGEMENT OF LIBRARY AND INFORMATION CENTRES (4 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

Principles of Marketing Management
Marketing of information services and products.
Marketing techniques and strategy.

UNIT 5 Other Realms of Management

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

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. 2nd ed. Aldershot, UK: Ashgate Publishing, 2006.
3. Corral, Sheila and Brewerton, Antony. The new professionals handbook: Your guide to information services management. London: Library Association, 1999.
4. Evans, G. Edward G. Management techniques for librarians. 2nded. New York: Academic Press, 1983.
5. Evans, G. Edward and Alire, Camila A. Management basics for information professionals. 3rded. London: Facet, 2013.
6. Khanna, J. K. Handbook of library administration. New Delhi: Crest Publishing House, 2001.
7. Mittal, R. L. Library administration: Theory and Practice. 5thed. New Delhi: EssEss Publications, 2007.
8. Seetharama S. Guidelines for planning and management of libraries and information centres. Calcutta: IASLIC, 1990.
9. Stueart, Robert D. and Moran, Barbara B. Library and Information Centre Management. Colorado: Libraries Unlimited, 2004.
10. Walters, Suzanne. Library Marketing That Works! New York: Neal-Schuman, 2004.

LS4 C02 DISSERTATION AND VIVA VOCE (4credits)

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. The students should also appear for a viva-voce.

ELECTIVES

LS E01 INFORMATION SECURITY (3credits)

UNIT 1 Introduction

Introduction to Information Security

Need for Information Security

IS assets – IT & Network infrastructure, Intellectual Property, Data, Reputation

Security Risk Analysis

Three Principles of Information Security - CIA

UNIT 2 Attacks And Vulnerabilities

Security Breaches - DoS, DDOS, Wire Tapping, Backdoor, Rootkits, SPAM

Malicious Attacks - Bruteforce attack, Dictionary Password attack, IP spoofing, Hijacking, Social Engineering

Counter Measures - Protecting your system, Countering Malware, Protecting with Firewalls, Acceptable User Policy

UNIT 3 Security Technologies

Intrusion Detection System

Encryption Definition, Digital Signature Non repudiation

RSA, PKI, Digital Certificate, Certification Authority, VPN

UNIT 4 Legal And Ethical Issues

Software Licences

Information Security Policy

IS Standards – ISO/IEC 27001

Cyber Laws in India – Objective and Scope of IT Act 2000

LS E02- DATA SCIENCE(3 credits)

UNIT 1: Genesis and Development of Data Science.

Scope, Data Science as a discipline, Interrelationship with other disciplines

UNIT 2: Application of Data Science

Data Science Life cycle

Statistics and Exploratory data analysis

UNIT 3: Machine learning

Deep learning

Big data and SQL

UNIT 4: Data Analysis and Visualization

Research and development on data Science

LS E03 – 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.

LS E04- DIGITAL RESOURCES (3 credits)

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 Z lists, Open URL, Link resolvers, Federated search services, Web discovery 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,

IndianJournals.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

LS E05- INFORMATION PROCESSING AND RETRIEVAL (PRACTICAL)

(3 credits)

UNIT 1 Classification of Complex Subjects

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

Record of Term Work: Classification of not less than 75 documents, of simple and complicated specific subjects using UDC.

LS E06- STATISTICAL METHODS (3credits)

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).

LS E07- DIGITAL LIBRARIES (3 credits)

UNIT1 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

UNIT2 Digital Library Technologies

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

UNIT3 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

UNIT4 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

LS E08– 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.

UNIT3 Repackaging and Consolidation

Preparation of:

Trend reports

Reviews

State-of- the art report

Digests

Abstracts – Types, Preparation, Guidelines

UNIT4 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

LS E09- 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