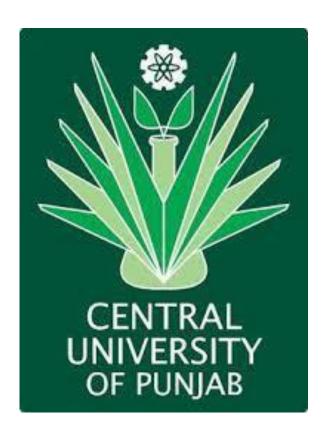# CENTRAL UNIVERSITY OF PUNJAB, BATHINDA

**Master of Library and Information Science (M. Lib. I. Sc.)**

# Department of Library and Information Science

## Session: 2019-21

## SEMESTER - I

| COURSE CODE | COURSE TITLE | Course Type | L | T | P | CR |
|---|---|---|---|---|---|---|
| LIS.506 | Fundamentals of Library and Information Science | Compulsory Foundation | 4 | 0 | 0 | 4 |
| LIS.507 | Information Sources and Services | Core Course | 4 | 0 | 0 | 4 |
| LIS.508 | Foundations of Computer & Information Technology in Libraries | Compulsory Foundation | 4 | 0 | 0 | 4 |
| LIS.509 | Foundations of Computer & Information Technology in Libraries | Skill based Practical | 0 | 0 | 8 | 4 |
| **Discipline Elective (Any one of the following)** | | | | | | |
| LIS.510 | Information Literacy | Disciplinary Elective | 3 | 0 | 0 | 3 |
| LIS.511 | Information Sources in Science and Technology | | | | | |
| **ID courses offered by other departments** | | | | | | |
| | IDC | ID | 2 | 0 | 0 | 2 |
| **Total** | | | **17** | **0** | **8** | **21** |

## SEMESTER – II

| COURSE CODE | COURSE TITLE | Course Type | L | T | P | CR |
|---|---|---|---|---|---|---|
| LIS.521 | Knowledge Organization – Classification | Core Course | 4 | 0 | 0 | 4 |
| LIS.522 | Knowledge Organization – Cataloguing and Metadata | Core Course | 4 | 0 | 0 | 4 |
| LIS.523 | Knowledge Organisation – Classification (Practice) | Core Course | 4 | 0 | 0 | 4 |
| LIS.524 | Knowledge Organisation - Cataloguing and Metadata (Practice) | Core Course | 4 | 0 | 0 | 4 |
| **Discipline Elective (Any one of the following)** | | | | | | |
| LIS.525 | Knowledge Management System | Disciplinary Elective | 3 | 0 | 0 | 3 |
| LIS.526 | Preservation and Conservation of Library Material | | | | | |
| **ID courses offered by other departments** | | | | | | |
| | IDC | ID | 2 | 0 | 0 | 2 |
| **Seminar** | | | | | | |
| LIS.542 | Seminar | Skill based | 0 | 0 | 2 | 1 |
| **Internship** | | | | | | |
| LIS.591 | Internship | Skill based | 0 | 0 | 8 | 4 |
| **Total** | | | **21** | | **10** | **26** |

## SEMESTER – III

| COURSE CODE | COURSE TITLE | Course Type | L | T | P | CR |
|---|---|---|---|---|---|---|
| LIS.551 | Information Storage and Retrieval | Core | 4 | 0 | 0 | 4 |
| LIS.552 | Management of Libraries and Information Centres | Core | 4 | 0 | 0 | 4 |
| LIS.553 | Library Automation and Digital Library | Core | 4 | 0 | 0 | 4 |
| LIS.554 | Research Methodology and Statistical Techniques | Compulsory Foundation | 4 | 0 | 0 | 4 |
| LIS.555 | Library Automation and Digital Library | Core | 0 | 0 | 4 | 2 |
| **Discipline Elective (Any one of the following)** | | | | | | |
| LIS.556 | Engineering and Technological Library and Information System | Disciplinary Elective | 3 | 0 | 0 | 3 |
| LIS.557 | Technical Writing | | | | | |
| **Compulsory Foundation including MOOC** | | | | | | |
| | Student can Select any one course through MOOC | MOOC | 4 | 0 | 0 | 4 |
| **Value Added** | | | | | | |
| | Value added course offered by CUP | Value added | 1 | 0 | 0 | 1 |
| **Total** | | | **24** | | **4** | **26** |

IQAC

2

| COURSE CODE | COURSE TITLE | Course Type | L | T | P | CR |
|---|---|---|---|---|---|---|
| LIS.571 | ICT and Networking Technology and Library Networks | Core | 4 | 0 | 0 | 4 |
| LIS.572 | Emerging trends in LIS | Core | 2 | 0 | 0 | 2 |
| LIS.573 | Academic Library and Special Library Systems | Core | 2 | 0 | 0 | 2 |
| LIS.574 | Overview: ICT, Digital Library and Library Automation | DEC | 0 | 2 | 0 | 2 |
| LIS.575 | Overview: Information Sources, Systems and Services | DEC | 0 | 2 | 0 | 2 |
| **Discipline Elective (Any one of the following)** | | | | | | |
| LIS.580 | Agriculture Information Sources and Systems | Disciplinary Elective | 3 | 0 | 0 | 3 |
| LIS.581 | Social Science Information Sources and Systems | | | | | |
| LIS.582 | Public Library and community based information systems | | | | | |
| LIS.583 | Business Information Systems | | | | | |
| LIS.584 | Health Sciences Information Systems | | | | | |
| LIS.585 | Information Analysis, Consolidation and Repackaging | | | | | |
| **Value Added** | | | | | | |
| | Value added course offered by CUP | Value added | 1 | 0 | 0 | 1 |
| **Seminar** | | | | | | |
| LIS.544 | Seminar | Skill based | | | 2 | 1 |
| **Project** | | | | | | |
| LIS.599 | Project work | Project | 0 | 0 | 12 | 6 |
| **Total** | | | **12** | **4** | **14** | **23** |
| **Grand Total** | | | **74** | **4** | **36** | **96** |

**List of Value Added Courses**
The list of Value added courses has been provided to choose any two courses in a programme

| S No. | Name of Course |
|---|---|
| 1. | Ethics for Science |
| 2. | Professional Ethics |
| 3. | Academic Writing |
| 4. | Peace and Value Education |
| 5. | Stress Management |

| | |
|---|---|
| 6. | Personality Development through Life Skills |
| 7. | Physical & Mental Well Being |
| 8. | Pedagogical Studies |
| 9. | Data Analysis using Spread sheet |
| 10. | Soft Skill Training |
| 11. | Leadership |
| 12. | Personnel Management |
| 13. | Human Resource Management |
| 14. | Physical Resource Management |
| 15. | Reasoning Ability |
| 16. | MS Office Specialist |
| 17. | Practical Taxation |
| 18. | Ethical Issues & Legal Awareness |
| 19. | Disaster Management |
| 20. | Nutrition and Specialty Foods |
| 21. | Shorthand & Typing |
| 22. | SPSS Application |

Evaluation Criteria for Theory Courses
  A. Continuous Assessment: [25 Marks]
    i.    Surprise Test (minimum three) - Based on Objective Type Tests (10 Marks)
    ii.   Term paper (10 Marks)
    iii.  Assignment(s) (5 Marks)
  B. Mid Semester Test-1: Based on Subjective Type Test [25 Marks]
  C. Mid Semester Test-2: Based on Subjective Type Test [25Marks]
  D. End-Term Exam: Based on Objective Type Tests [25 Marks]
*Every student has to take up 2 ID courses of 2 credits each (Total 04 credits) from other disciplines in any two semesters of the program.
*Every student has to take up 2 MOOC courses of 4 credits each (Total 08 credits) from https://epgp.inflibnet.ac.in
*Value added courses may be offered through MOOC if facilities are not available in the university

**Course Code: LIS.506**
**Course Name: Fundamentals of Library & Information Science**

| L | T | P | Cr |
|---|---|---|----|
| 4 | 0 | 0 | 4 |

**UNIT – I: Library as a Social Institution**　　　　　　　　　**14 hours**
- Library as a Social Institution
- Development of Libraries in India; Committees and Commissions on Libraries in India
- Types of the Library (Academic, Public, Special, National)
- Role of Library and Information Centres in Modern Society
- Five Laws of Library Science and their implications

**UNIT – II: Role of Professional Associations**　　　　　　　**14 hours**
**and Organizations for the Development of Libraries**
- National Library of India: Concept, Functions and Services
- Professional Associations: ILA, IASLIC, CILIP, ALA, Aslib, IATLIS, SLA
- Role of National and International Organizations: UGC, RRRLF, UNESCO and IFLA

**UNIT – III: Library Legislation and Legal Issues**　　　　　**16 hours**
- Library Legislation: Need, Purpose, Objectives and Model Library Act
- Library Legislation in India: Structure and Salient Features
- IPR and Legal issues – categories, conventions, treaties, Laws
- Press and Registration Act
- Delivery of Books (Public Libraries) Act
- Right to Information Act

**UNIT – IV: Information and Communication and Professional Ethics**
　　　　　　　　　　　　　　　　　　　　　　　　　　**16 hours**
- Information: Characteristics, Nature, Value and Use of Information Conceptual difference between Data, Information, Knowledge and Wisdom, Communication channels, models and barriers
- Information Life Cycle - Generation, Collection, Storage and Dissemination
- National Knowledge Commission and National Mission on Libraries
- Information Intermediaries
- Librarianship as a Profession
- Professional Skills and Competencies
- Professional Ethics
- Role of Library and Information Professionals in Digital Era

**Suggested Readings**

1. CHAPMAN (E A) and LYNDEN (F C). Advances in librarianship. 2000. Academic Press, San Diego.
2. CHOWDHURY (G G), BURTON (P F) and McMENEMY (D). Librarianship: the complete introduction. 2008. Neal-Schuman Publishers, New York.
3. FEATHER (J). The information society: a study of continuity and change. Ed. 6. 2013. Facet Publishing, London.
4. Hocine Cherifi, Jasni Mohamad Zain, Eyas El-Qawasmeh (2011**)** Digital Information and Communication Technology and Its Applications, Springer
5. KHANNA (J K). Library and society. 2011. ESS ESS Publications, New delhi.
6. KRISHAN KUMAR. Library organisation. 1997. South Asia Books, New Delhi.
7. Michael Buckland Information and Society. 2018. Gildan Media/MIT Press.
8. RANGANATHAN (S R). Five laws of library science. Ed. 2. 2006. Sarada Ranganathan Endowment for Library Science, Bangalore.
9. SINGH (S P). Special libraries in the electronic environment. 2005. Bookwell, New Delhi.
10. VENKTAPPAIAH (V) and MADHUSUDHAN (M). Public library legislation in the new millennium. 2007. Bookwell, New Delhi.

**Course Code: LIS.507**
**Course Title: INFORMATION SOURCES AND SERVICES**

| L | T | P | Cr |
|---|---|---|----|
| 4 | 0 | 0 | 4  |

**Unit – I Reference and Information Sources:** 16 hours

- Information Sources - Nature, Characteristics, Types and Formats.
- Documentary sources of information: Print, non-print including electronic sources – Definition, need and use.
- Non-documentary information sources:  Human, Institutional and Electronic ; Nature, types, characteristics and utility.
- Categories:  Primary, Secondary and Tertiary information sources
- Electronic Information Resources - Subject Gateways, Web Portals, Bulletin Boards Discussion Forums /Groups, Social media as a source of information
- Databases: Bibliographic, Numeric, Full text, Abstracting, indexing and citations Databases
- Evaluation of Reference sources and web resources.

**Unit – II Reference Services** 16 hours
- Reference Service: Concept, types, theories and trends.
- Referral Service: Concept, types
- Reference interview
- Information Users and their Information Needs: Categories of information users, Ascertaining Users' Information need.

**Unit – III Information Services and Products**: 14 hours
- Information Services and products. : Concepts, definition, need and trends.
- Community Information Services
- Alerting Services: need, techniques and evaluation (CAS and SDI).
- Bibliographic, referral, Inter Library Loan, document delivery and translation services.

**Unit – IV National Centres, Information Systems and Services: 14 hours**
Study of National, International and Commercial Information Systems and Services (NISCAIR, DESIDOC, SENDOC, ENVIS, INFLIBNET, DELNET, NICNET, ERNET, National Knowledge Network (NKN), Biotechnology Information System): Background, their services and products.

**Suggested Readings**
1. CHENEY (F N) and WILLIAMS (W J). Fundamental reference sources. Ed. 3. 2000. ALA, Chicago.
2. CRAWFORD (John). Evaluation of library and information services. 2nd ed., 2010. ASLIB, London.
3. FARMER (LSJ), Ed. The human side of reference and information services in academic libraries: adding value in the digital world.2007. Chandos Publishing, Oxford.
4. FOSKETT (D J). Information service in libraries. Ed.2. 1967. Archon Book Hamden, Connecticut.
5. FOURIE (D) and DOWELL (D). Libraries in the information age., 2nd ed. 2009. Libraries Unlimited, New York.
6. Gurdev Singh. Information Sources, Services and Systems. 2013 Prentice Hall India Learning Private Limited
7. KATZ (William A). Introduction to reference work: reference service and reference process. v.2. Ed. 8. 2001. McGraw-Hill, New York
8. KRISHAN KUMAR. Reference service. Ed. 5. 2009. Vikas Publishing, New Delhi.
9. RANGANATHAN (S R). Reference service. Ed 2. 1990. Ranganthan Endowment for Library Science, Bangalore.
10. WALFORD (A J). Guide to reference books. v.3. Ed. 4. 1996. Library Association, London.

11. WOODSWORTH (Anne) and WILLIAMS (James F). Managing the economics of owning, learning and contracting out information services. 2018. Gower, London.

**Course Code: LIS.508**
**Course Title: Foundations of Computer & Information Technology in Libraries**

| L | T | P | Cr |
|---|---|---|----|
| 4 | 0 | 0 | 4 |

### UNIT – I:  Introduction to Computers                              16 hours
- Computers: Generations, Types, Hardware, Input and Output Devices, Computer Architecture
- Data Representation and Storage (ASCII, ISCII, Unicode)
- Introduction to System Software and Application Software
- Operating Systems: DOS, Window, IOS, Linux and its variants, etc.
- Applications Software: Word Processing, Spreadsheets, PowerPoint Presentation, Graphics Software: Basic Functions and Potential Uses
- Communication Software: FTP, Telnet, Email and Messaging

### UNIT – II Introduction to Communication Technology         14 hours
- Computer Networks - Topologies, Types of Networks – LAN, MAN, WAN.
- Internet - Web browsers, WWW, E-mail; Search Engines, Meta and Entity Search engines.
- Internet Protocols and Standards – HTTP, SHTTP, FTP, SMTP, TCP/IP, URI, URL.
- Hypertext, Hypermedia, Multimedia, Video conferencing, Virtual Reality, Augmented Technologies.

### UNIT – III: Database Management Systems                      16 hours
- Database: Concepts and Components
- Database Structures, File Organization and Physical Design
- Database Management System: Basic Functions, Potential Uses

### UNIT – VI: Internet Technology                                    14 hours
- Basics of Internet
- Search Engines and Meta Search Engines
- Internet Search Techniques
- IOT (Internet of things)
- Introduction to Web Servers: Apache Server and Internet Information Server

**Suggested Readings**
1. NEELAMEGHAN (A) and LALITHA (S K). Tutor +: A learning and teaching package on hypertext link commands in WINISIS. 2001. Sarada Ranganathan Endowment for Library Science, Bangalore.
2. NEGUS (Christopher). Linux bible. Ed. 10th, 2019. John Wiley, New York.
3. RAJARAMAN (V). Introduction to information technology. Ed. 3rd rev. 2018. Prentice-Hall of India, New Delhi.
4. Rajaraman, V. and Adabala N. Fundamentals of Computer. Ed. 6th rev. 2014. Prentice Hall of India.
5. Thomas R. Kochtanek (2017), Library Information Systems: From Library Automation to Distributed Information Access Solutions, Libraries Unlimited
6. UNESCO. CDS/ISIS for windows: reference manual. v1.5. 2004. UNESCO, Paris.
7. WALKENBACH (John), et al. Office 2007 bible. 2007. John Wiley, New York.

| | **L** | **T** | **P** | **Cr** |
|---|---|---|---|---|

**Course Code: LIS.509**
**Course Title: Foundations of Computer & Information Technology in Libraries (Practical)**

| **L** | **T** | **P** | **Cr** |
|---|---|---|---|
| 0 | 0 | 8 | 4 |

**Unit I Operating Systems and Application Software**
- Installation and Functions of Different Operating Systems: Window & Linux
- Setting of Desktop, Library Server and its Maintenance
- MS Office: Word, Excel, Access and PowerPoint Presentation

**Unit II Database Creation and Library Software**
- Installation and Creation of Databases: Import, Export, Hyperlinks and using XAMP (Apache, MySQL, PhP,)

**Unit III** Applications of Cloud based Services
- Google drive
- Drop Box
- One Drive
- Google docs

**Suggested Readings**
1. CHOWDHURY (G G) and CHOWDHURY (Sudatta). Organizing information: from the shelf to the web. 2007. Facet Publishing, London.
2. CHOWDHURY (G G) and CHOWDHURY (Sudatta). Searching CD-ROM and online information sources. 2001. Library Association, London.
3. Dania, Bilal (2014). Library Automation: Core Concepts and Practical

System Analysis. Libraries Unlimited Inc.
4. NEELAMEGHAN (A) and LALITHA (S K). Tutor +: A learning and teaching package on hypertext link commands in WINISIS. 2001. Sarada Ranganathan Endowment for Library Science, Bangalore.
5. NEGUS (Christopher). Linux bible. Ed. 10th, 2019. John Wiley, New York.
6. SIMPSON (Alan). Windows XP bible. 2004. John Wiley, New York.
7. UNESCO. CDS/ISIS for windows: reference manual v1.5. 2004. UNESCO, Paris.
8. WALKENBACH (John), et al. Office 2007 bible. 2007. John Wiley, New York.
9. WINSHIP (Ian) and McNAB (Alison). The student's guide to the Internet.2000. Library Association, London.

| | L | T | P | Cr |
|---|---|---|---|---|
| **Course Code: LIS.510**<br>**Course Title: Information Literacy** | 3 | 0 | 0 | 3 |

## Unit I: Introduction to Information Literacy          13 hours
- Information: Characteristics of information; Types of information; Information society, Information literacy models, standards; concept of lifelong learning.

## Unit II: Types of Information Literacy          10 hours
- Digital literacy, Digital divide and information literacy, Media literacy, computer literacy.

## Unit III: Information Literacy and Librar          12 hours
- Information literacy and types of libraries, Resource literacy, Research literacy.
- Types of Library Users and  User Education

## Unit III: Information Literacy Policies          10 hours
- International and national initiatives, Policies and guidelines IFLA, ALA, UNESCO, Information literacy skills and best practices.

## Suggested Readings
1. Association of College and Research Libraries (ACRL). (2018). Information Literacy
2. Bawden, D. (2001). Information and digital literacies: a review of concepts. Journal of documentation, 57(2), 218-259.
3. Competency Standards for Higher Education. American Library Association.

4. Michael C. Alewine & Mark Canada (2017). Introduction to Information Literacy for students John Wiley & Sons.
5. Presidential Committee on Information Literacy, American Library Association. (1989).
6. Torras, M. C. & Saetre, T. P. (2009). Information Literacy Education. Oxford: Chandos Publishing.

**Course Code: LIS.511**
**Course Title: Information Sources in Science and Technology**

| L | T | P | Cr |
|---|---|---|----|
| 3 | 0 | 0 | 3 |

### Unit I: Information Sources                     13 hours
- Documentary    and Non-Documentary Sources; Primary, Secondary and Tertiary Sources of Information.

### Unit II: Reference Sources                      10 hours
- Categories, Characteristics   and Usefulness (dictionaries, encyclopedias, yearbooks, directories, biographical sources, geographical sources, statistical sources, sources of current information) Evaluation of Reference Sources.

### Unit III:  Electronic Sources of Information         12 hours
- Electronic Sources: E-Books, E-Journals, ETDs, Web-OPAC; Subject Gateways/Portals, Databases, Bulletin Boards, Discussion Group/Forum, Multimedia Resources,; Search Engines, search strategies, access to information sources.

### Unit IV: Information Sources in Science and Technology      10 hours
- Web of Science, Scopus, Scifinder, Major abstracting and indexing databases in Science and Technology. Open Access Resources like arXiv, ChemXseer, PubMed.

**Suggested Readings**
1. Albert, Walker. (1974). House Journals. In Kent, A. et al. (Eds.). Encyclopaedia of
2. Borowick, J. N. (1996). Technical Communication and its Applications. 2nd  Ed. Prentice Hall.
3. Chowdhury, G. G. & Chowdhury, Sudatta. (2001). Searching CD-ROM and Online
4. Information Sources. Library Association Publishing.
5. Eleaner, Mitchell & Walters, Sheila A. (1995). Document Delivery Services: Issues and Answers. Learned Information Inc.

6. Guha, B. (1983). Documentation and Information – Services, Techniques and

7. Systems. 2nd ed. World Press.

8. Hutchins, John. (1998). Translation Technology and Translator. Machine Translation

9. James E. Bobick & G. L. Berard (2011). Science and Technology Resources: A Guide for Information Professionals and Researchers. Libraries Unlimited Inc.

10. McGrath, Mike. (2004). Interlending and Document Supply: A Review of Recent

11. Literature. XLVII. Interlending and Document Supply. Vol. 32(1), pp. 50-54.

12. Penland, Patric R. (1971). Content Analysis. In Kent, Allen and Lancour, Harold (Eds). Encyclopaedia of Library and Information Science. New York: Marcel Dekker Inc. Vol. 5, pp. 632- 665. Prior, Albert. (1997). Intermediaries and Electronic Information – What Role for the

13. Rowley, J. (1999). The Electronic Library. 4th ed. London: Library Association

14. Publishing.

15. Saracevic, T. et al. (1990). Nature of Interaction between Users and Intermediaries in Online Searching: A Qualitative Analysis. In Proceedings of the 53rd Annual Meeting of the American Society for Information Science. Vol. 27, pp. 47-54.

16. Singer, Carol A. (2012). Fundamentals of Managing Reference Collections. Facet publishing .

17. Subramanyam, K. (1980). Trade Catalogues: Technical Literature. In Kent, A. et al. (eds.). Encyclopaedia of Library and Information Science. Marcel Dekker. Vol. 30, pp. 190- 198.

18. Walford, A. J. (1968-70). Guide to Reference Materials (3 Vols). Library Association.

19. Library and Information Science. Marcel Dekker. Vol. 11, pp. 61-64.

20. Review. Vol. 7, pp. 7-14.

## SEMESTER – II

**Course Code: LIS.521**
**Course Title: Knowledge Organization – Classification (Theory)**

| L | T | P | Cr |
|---|---|---|----|
| 4 | 0 | 0 | 4 |

### Unit – I: Introduction to Knowledge Organisation                16 hours

- Knowledge Organisation: Basic concept, Nature and Modes of Formation of Subjects.
- Knowledge Organisation - Classification – Theories, Cannons, and

Principles;
- Species of Library Classification.
- Faceted and Enumerative Schemes of classification
- Brief introduction to descriptive and dynamic theory of classification
- Major Classification schemes in brief

**Unit – II Colon Classification (CC) and Universal Decimal Classification (UDC)**                                                    **16 hours**
- Colon Classification (CC): Salient features and Components:
- Facet analysis, principles of facet sequence, Fundamental Categories (PMEST), Devices, Notational System, Three planes, Mnemonics, Phase Relations, Common Isolates (ACI and PCT), Rounds and Levels, Index.
- Universal Decimal Classification (UDC): Salient Features
- Nature and Scope, Structure, Notational System, Arrangement and Tables in UDC.
- Common Auxiliary Tables:  Scope and Examples.
- Common Auxiliary Signs:  Scope and Types
- Master Reference File (UDC MRF): Basic Concept UDC Translations: Current Status.

**Unit – III Dewey Decimal Classification (DDC)**                    **14 hours**
- Salient Features and Components of DDC: Structure and layout, organization of basic classes, hierarchy, coverage, notation, simplicity, memorability, hospitality, Chain-Structure, flexibility, manual, DDC Summaries, Relative Index, Table Schedules Summaries, entries, notes.

**Unit – IV Current Trends and Organization of the Web Resources**
                                                                      **14 hours**
- Online Versions:  Web Dewey, UDC online and LC Web (Brief Description).
- Brief Introduction of OCLC Classify,
- UDC  Online  Summary.
- Folksonomy:  Basic  concept, Tagging and Social Bookmarking.
- Semantic Web: concept, need, purpose, and advantages.
- Simple Knowledge Organisation System (SKOS), Taxonomies,

**Suggested Readings**
1. Batley, S. (2014).Ed. 2nd. Classification in theory and practice. Oxford: Chandos.
2. Dhyani, P. (2008). Library classification: Theory and principles. New Delhi: New Age International (P) Ltd, New Delhi.
3. Krishan, K. (1979). Theory of classification (4th Ed.). New Delhi: Vikas pub.

4. Ranganathan, S. R. (2006). Philosophy of library classification. Copenhagen: E. Munksgaard.
5. Satija, M. P. (2011). A guide to the theory and practice of colon classification. New Delhi: EssEss Publications
6. Satija, M. P. (2012). Exercises in the 23rd edition of dewey decimal classification. New Delhi: EssEss pub.
7. Satija, M. P. (2013). The theory and practice of the Dewey Decimal Classification system (2ndEd.). Oxford: Chandos Pub.
8. Wali, M. L., & Baba A. M. (1982).Manual of library classification practice for Dewey Decimal and Colon classification schemes. Srinagar: the auths.

**Course Code: LIS.522**
**Course Title: Knowledge Organization – Cataloguing and Metadata**

| L | T | P | Cr |
|---|---|---|----|
| 4 | 0 | 0 | 4 |

**Unit – I Forms of Library Catalogue**                                **16 hours**
- Library Catalogue: Concept, objectives and functions
- Physical forms of Library Catalogue:
- Conventional and Non-conventional, Web OPAC.
- Types of Catalogue:   Dictionary Catalogue, Classified Catalogue, Alphabetico-Classed Catalogue, Alphabetico-Subject Catalogue

**Unit – II Catalogue Entries and Subject Cataloguing**                **14 hours**
- Catalogue Entries: Main entry and Added entries (According to CCC 5th ed. and AACR-2).
- Subject Cataloguing:  Meaning, purpose, objectives, approaches (Chain Procedure and Sear's List of Subject Headings).

**Unit – III Normative Principles and Union Catalogue**                **14 hours**
- Union Catalogue:  Concept, purpose, Union Catalogues  of INFLIBNET, DELNET and OCLC.
- Selective, Simplified and Centralized Cataloguing. Authority File, Shelf List, ISBN, ISSN
- Principles  of Cataloguing
- Canons and Principles of Cataloguing: Their application to CCC and AACR -2 and its revision.

**Unit – IV Current Trends in Cataloguing**                            **16 hours**
- Standards for Bibliography Record Formats and Description: ISBD, MARC 21, CCF, RDA, FRBR and Bibframe.
- Metadata: meaning,  purpose,  use, & types.
- Metadata Standards:   DUBLINCORE, MARC 21, METS, EAD, MODES,
- Standards for Bibliographic Information Interchange & Communication ISO 2709, Z39.50, Z39.71,

**Suggested Readings**

1. Bowman, J. H. (2003). Essential cataloguing. London: Facet.
2. Chan, L. M., & Hodges, T. (2015). Cataloging and classification: An introduction (3rded.). Lanham, Md: Scarecrow Press.
3. Chowdhury, G. G., & Chowdhury, S. (2007). Organizing information: From the shelf to the Web. London: Facet.
4. Girja, K., & Krishan, K. (2011). Theory of cataloguing (5t hed.). Delhi: Vikas Pub. House.
5. Gorman, M., Winkler, P. W., Joint Steering Committee for Revision of AACR., & American Library Association. (2003). Anglo-American cataloguing rules. Ottawa: Canadian Library Association.
6. Sanghamitra Pradhan (2019), Cataloguing of Non-print Resources: A Practical Manual. Ess Ess Pubns
7. Sears, M. E., & In Westby, B. M. (2018). Sears List of subject headings (22nd ed.). New York: H.W. Wilson.
8. Welsh, A. & Batley, S. (2012). Practical cataloguing: AACR, RDA and MARC 21. London: Facet Publishing.

| L | T | P | Cr |
|---|---|---|----|
| 4 | 0 | 0 | 4 |

**Course Code: LIS.523**
**Course Title: Knowledge Organisation - Cataloguing and Metadata (Practice)**

**Unit – I Anglo American Cataloguing Rules, 2nd ed. 1988 part -    14 hours**
- Single authorship. Shared authorship.
- Collections and works produced under editorial direction.
- Works of mixed responsibility (Collaborators).
- Revision of works. Adaptation of texts. Biographical works.
- Pseudonyms. Sacred scriptures and Multi-volume documents.

**Note:** Sears List of Subject Headings will be followed for Subject Cataloguing.

**Unit – II AACR - 2                                    14 hours**
- Corporate authorship Government bodies: Executive, Legislative, Judiciary; Institutions, Associations, Conferences Proceedings).
- Composite books (With and without collective title page, bound with).Microforms.
- Computer files. Sound recordings. Motion pictures and Video recordings.
- Serials (to be set in question No. 1 only)

**Note:** Sears List of Subject Headings will be followed for Subject Cataloguing.

**Unit – III Classify Catalogue Code , 5th ed. by Dr. S.R. Ranganathan**
                                                                    **20 hours**

- Single authorship. Shared authorship.
- Work of mixed responsibility (Collaborators).
- Adaptation of texts and Pseudonyms.
- Multi-volume documents.
- Corporate authorship (Government bodies: Executive, Legislative, Judiciary; Institutions, Associations, Conference Proceedings).
- Composite books (ordinary and artificial).
- Festschrift volumes.
- Serials (to be set in question No. 1 only)

**Note:** Chain Procedure will be followed for Subject Cataloguing.

**Unit IV: Classify Cataloguing**                                  **12 hours**
- MARC 21
- LCSH (Library of Congress Subject Heading)

**Suggested Readings**
1. Chan, L. M. (2015). Cataloguing and classification: An Introduction (3rded.). New York: Scarecrow Press.
2. Gorman, M., Winkler, P. W. (Eds.), Joint Steering Committee for Revision of AACR., & American Library Association. (2003). Anglo-American cataloguing rules. Ottawa: Canadian Library Association.
3. Ranganathan, S.R. (2000). Cataloguing practice (2nd ed.). Bangalore: Sarada Ranganathan Endowment for Library Science.
4. Ranganathan, S. R., & Neelameghan, A. (2006). Classified catalogue code: With additional rules for dictionary catalogue code. New Delhi: Ess Ess Pub..
5. Sears, M. E. (2018). Sears list of subject headings (22nd ed.). New York: H.W. Wilson.
6. Welsh, A., & Batley, S. (2012). Practical cataloguing: AACR, RDA and MARC 21. London: Facet Publishing.

**Course Code: LIS.524**
**Course Title: Knowledge Organisation – Classification (Practice)**

| L | T | P | Cr |
|---|---|---|----|
| 4 | 0 | 0 | 4 |

**Unit – I Classification of Documents according to DDC (23rd Ed.)**

                                                                    **14 hours**

- Classification of Documents representing simple subjects.
- Classification of documents using tables.

**Unit – II Classification according to DDC (23rd Ed.)**            **14 hours**
- Classification of documents representing compound subject.

- Classification of documents representing complex subject.

## Unit – III Classification of same document according to DDC    16 hours
- The students will be asked to classify same title according to both DDC.

## Unit – IV Classification of documents according to UDC (3rd Abridged Ed.)
**16 hours**
- Classification of Documents representing simple subjects.
- Classification of documents using Auxiliary tables.
- Classification of documents representing compound subject.
- Classification of documents representing complex subject.

## Suggested Readings
1. British Standards Institution., & International Federation for Documentation. (1961). Universal Decimal Classification: Abridged English edition (3rd rev. ed.). London: BSI
2. Dewey, M., & Custer, B. A. (2011). Dewey decimal classification and relative index (23rd  Ed.). (Vol. 4). Albany: OCLC
3. Ranganathan, S.R. (2007).Colon Classification (6th rev. ed.). Bangalore: Sarda Ranganathan Endowment for Library Science.
4. Satija, M. P. (2011). A guide to the theory and practice of colon classification.  New Delhi: Ess Ess Publications.
5. Satija, M. P. (2012). Exercises in the 23rd edition of the Dewey decimal classification.  New Delhi: EssEss Publications.
6. Satija, M. P. (2013). The theory and practice of the Dewey Decimal Classification system (2nd ed.).  Oxford: Chandos Pub.
7. Singh, S. (2011). The theory and practice of the Dewey decimal classification system.  New Delhi: Isha Books.

**Course Code: LIS.525**
**Course Title: Knowledge Management**

| L | T | P | Cr |
|---|---|---|----|
| 3 | 0 | 0 | 3 |

## Unit I -Knowledge Management: Basics                             12 hours
- KM Meaning, Principles, Tools, Components and Architecture.
- Knowledge Economy: Features, characteristics, Need, complex nature of  knowledge, taxonomy of knowledge

## Unit II– Knowledge Management: Strategies                        13 hours
- Capturing tacit knowledge – methods
- Knowledge codification – tools and procedures
- Knowledge Mapping; Knowledge testing; Knowledge transfer

### Unit III – Knowledge Management System: Tools                    10 hours

- Data visualization
- Data mining
- Managing knowledge workers

### UNIT IV – Knowledge Management Portals                    10 hours

- Knowledge Management in Library and Information Centers
- Knowledge creation and knowledge architecture – Nonaka's model
- Types of knowledge; KM Systems

**Suggested Readings**

1. Anderson, Paul. (2012). Web 2.0 and beyond: principles and technologies. CRC Press
2. Awad, Elias M (2011). Knowledge Management. Prentice Hall India.
3. Cappelli, Peter. (2010). The performance effects of it-enabled knowledge management practices. Cambridge.
4. Christee Gabour Atwood. (2009). Knowledge Management Basics. ASTD Pess.
5. Dalkir, Kimiz & Liebowitz, Jay (2011). Knowledge Management Theory & Practice. MIT Press
6. Easterby-Smith, Mark & Lyles, Marjorie A. (2011). Handbook of organizational learning and knowledge management. Wiley.
7. Hislop, Donald. Ed. 3rd (2013). Knowledge Management in organization. Oxford.
8. Holsapple, Clyde. (2013). Handbook on Knowledge Management 1: Knowledge
9. Jennex, Murray E. (2008). Knowledge Management: Concepts, Methodologies, Tools and Applications. Information Science Reference.
10. Liebowitz, Jay (2012). Knowledge Management Handbook: Collaboration and Social
11. Matters. Springer
12. Networking. Taylor and Francis.

**Course Code: LIS.526**
**Course Title: Preservation and Conservation of Library Material**

| L | T | P | Cr |
|---|---|---|----|
| 3 | 0 | 0 | 3  |

### Unit-I Library Materials: Preservation and Conservation                    13 hours

- Need for Preservation and Conservation
- Evolution of Writing Materials
- Palm leaves and Birch Bark: Their Nature and Preservation
- Manuscripts, books, Periodicals, Newspapers, Pamphlets etc
- Non-Book Materials
- Guidelines of National Mission on Manuscripts

**Unit -II Hazards to Library Materials and Control Measures**      **10 hours**
- Environmental Factors
- Biological Factors
- Chemical Factors
- Disaster Management

**Unit-III Binding**      **12 hours**
- Different Types of Binding for Library Documents
- Binding Materials
- Binding Process
- Standards for Library Binding

**Unit -IV Restoration and Reformatting**      **10 hours**
- Material Repair
- Microfilming and Digitisation

**Suggested Readings**
1. Bogdan, Zerek (2014). Preservation and protection of library collections. Chandos Publishing.
2. Diringer, D. (1953). The Hand Produced Book, London: Hutchinson's.
3. Feather, John (1996). Preservation and the Management of Library Collections. 2nd Ed. London:  Library Association Publishing.
4. Feather, John (1996). Preservation and the Management of Library Collections. 2nd Ed. London:  Library Association Publishing.
5. Filliozat, Gean (1947). Manuscripts on Birch Bark (Bhurjapatra) and their Preservation. Indian Archives, Vol.1, No.2, pp.102-108.
6. Harvey, Ross (1993). Preservation in Libraries, A Reader London: Bowker.
7. Harvey, Ross. (1994). Preservation in libraries: principles, strategies and practices for librarians. London: Bowker Saur.
8. Harvey, Ross. (1994). Preservation in libraries: principles, strategies and practices for librarians. London: Bowker Saur.
9. Hendersen, Kathryn Luther and Henderson, William T. (ed) (1991). Conserving and Preserving Library Materials. Urbana Champaign: University of Illinois.
10. India. National Archives of India, (1988). Repair and Preservation of Records. New Delhi: National Archives of India.
11. Johnson, Arthur W. (1988). The Practical Guide to Book Repair and Conservation. London: Thames and Hudson.
12. Majumdar, P.C. (1957). Birch Bark (Bhurjapatra) and Clay Coated Manuscripts in the Gilgit Collection - their Repair and Preservation. Indian Archives, Vol 11, Nos. 1-2, pp. 77-84.
13. National Archives of India. (1988). Repair and Preservation of Records. New Delhi.

14. Prajapati, C.L.(1997). Archivo-Library Materials – Their Enemies and Need of First Phase Conservation. New Delhi: Mittal Publications.
15. Ranbir Kishore, (1962). Preservation and Repair of Palm Leaf Manuscripts, Ibid; Vol.14, pp. 73-78
16. Singh, R.S. (1995) Conservation of Documents in Libraries, Archives and Museums. New Delhi: Aditya Prakashan.
17. Suri, Jina Harisagara, (1947). Palm Leaf Manuscripts in Jaisalmir, Ibid, Vol.1, No.3, pp 234-35

**Course Code: LIS.542**
**Course Title: Seminar**

| L | T | P | Cr |
|---|---|---|----|
| 0 | 0 | 8 | 4 |

Each student to present two seminar in a semester which will be evaluated by the three internal faculty members. The criteria will be as follow:
- Selection of topic
- Presentation
- Interaction/response

**Course Code: LIS.591**
**Course Title: Internship Programme**

| L | T | P | Cr |
|---|---|---|----|
| 4 | 0 | 0 | 4 |

    A. Report on Internship Programme
    B. Viva-Voce

**Objectives:**
i.   To train the students in practical librarianship in the working environment of the library by deputing them in different types of libraries for a period of one month.
ii.  To train them in preparing the Internship Report in a prescribed format based on their practical training and learning.

- **Note: - Each student shall have to undergo an Internship Programme at a library, selected by the Department for a period of one month, immediately after the Second Semester Examination.**

**Course Code: LIS.551**
**Course Title: Information Storage and Retrieval**

| L | T | P | Cr |
|---|---|---|----|
| 4 | 0 | 0 | 4 |

## Unit – I Indexing Systems and Techniques                    16 hours
- Assigned and Derived Indexing.
- Pre Coordinate and Post Coordinate indexing.
- Chain Indexing, PRECIS, POPSI. Key Word Indexing:
- KWIC, KWAC, KWOC.
- Concept of Automatic Indexing.
- Citation Indexing: Features of Scopus. Web of Science, Google Scholar

## Unit – II Vocabulary Control                                14 hours
- Vocabulary Control: Need, Purpose, Functions, types and characteristics.
- Vocabulary Control Tools
- Subject Headings: Library of Congress Subject Headings, Sears List of Subject Headings and Medical Subject Headings, Thesaurus
- Features, Structure and Construction, ERIC, UNESCO Thesaurus. Taxonomies.

## Unit – III Information Searching and Media                  14 hours
- Search Methods and Search Strategy: Boolean Search, Heuristic Search, Proximity Search, Phrase Search, Truncation search.etc.
- Information Searching in Different Media: Print, Electronic and Internet.
- Federated Search: Concept and Features.
- Web-Scale Discovery System (WSDS): Concept and Features.
- Search engines, Meta search engines, Z39.50 and metadata. DOI: Concept. Data Mining,

## Unit – IV Information Retrieval System and Abstracting System    16 hours
- Abstracting Concept, Definition and types
- Information Retrieval System: Concept, definition, types, characteristics, components of ISRS. Information Retrieval Models.
- Library information retrieval systems
- Evaluation of an Information Retrieval System: Recall, Precision and Relevance, Relevance feedback.

### Suggested Readings
1. Aitchison, J., Gilchrist, A. & Bawden, D. (2005). Thesaurus construction and use: a practical manual. (4th ed.). London: Taylor and Francis.
2. Bates, M.J. (2012). Understanding information retrieval systems: management, types and standards. Boca Raton, FL: CRC press.

3. Cleveland, D. & Cleveland, A. (2013) Introduction to indexing and Abstracting. (4th ed.). Englewood: Libraries Unlimited.
4. Fransson, J. (2011). Efficient Information searching on the web: a handbook in the art of searching for information. Sweden: Fransson
5. Kowalski, G.J. & Maybury, M.T. (2002). Information Storage and Retrieval System: theory and implementation. (2nd ed.). New York: Kluwer.
6. Manning, C. D., Raghavan, P., & Schütze, H. (2008). Evaluation in information retrieval. Introduction to information retrieval, 151-175.

**Course Code: LIS.552**
**Course Title: Management of Libraries and Information Centres**

| L | T | P | Cr |
|---|---|---|----|
| 4 | 0 | 0 | 4 |

## Unit 1: Schools of Management Thought                    14 hours
- Classical, Neo-classical and Modern management theories
- Principles of Scientific        Management
- Fayol's   Principles
- Functions of Management (POSDCORB)

## Unit – II Library Resource Management                    14 hours
- Library and Information Centers Management - Book Selection Tools and Principles
- Library Acquisition, Technical Processing, Circulation, Serial Control, Maintenance and Stock Verification;
- Preservation and Conservation; Hazards and Control Measures of Library Materials.

## Unit – III - Human Resource Management and Marketing        16 hours
- Human Resource Management – Planning, Job Analysis, Job Description, Job Evaluation, Selection, Recruitment, Motivation, Training and Development, Performance Appraisal; Staff Manual.
- Project Management - SWOT, PEST, PERT / CPM.
- Total Quality Management (TQM) - Concepts, Principles and Techniques, Six Sigma;
- Evaluation of Services of Libraries and Information Centers.
- Marketing of Library Products and Services – Plan, Research, Strategies, Mix, Segmentation, Pricing and Advertising; Management Consultancy.

## Unit – IV – Library Planning and Financial Management        16 hours
- Financial Management in Libraries - Sources of Finance, Resource Mobilisation, Budgeting Methods; Cost Effective and Cost Benefit

Analysis, Annual Reports & Statistics; Library Authority and Committee.

- Library Building, Furniture and Equipments; Green Library Building; Information Commons; Makers Space; Security and Safety.
- Management Information System (MIS), MBO, Change Management, Disaster Management, Crisis Management.

**Suggested Readings**

1. Beard well, Ian & Holden, Len. (1997). Human Resource Management: A contemporary perspectives. Financial Times/ Prentice Hall.
2. Bryson Jo. (2018). Effective Library and Information Management. Jaico Pub. House
3. Bryson, J. (2017). Managing information services: A sustainable approach. Routledge Pub.
4. Christian, A. R. (2013). Academic library management: Universities, colleges and institutions. Jaipur: Vista Publishers.
5. Dorado, A. (2012). New trends in library management. London: Koros
6. Drucker, Peter F. (2002). Management Challenges for the 21st century. Oxford; Butterworth Heinemann.
7. Durean, J. M. & Clements, D. W. G. (1986). Principles of the preservation of library materials. IFLA.
8. Edwards, E. G. (2005). Developing Library & Information Centre Collections. Westport: Libraries Unlimited.
9. Evans, G. Edward & Layzell, Patricia. (2007). Management Basics for Information Professionals, 2 Ed. Libraries Unlimited.
10. Harvey, Poss. (1993). Preservation in libraries: a reader. RR Bowker.
11. Johnson, P. (2018). Fundamentals of collection development & management (4th ed.). Chicago: American Library Association.
12. Kotler, Philip (2015). Marketing Management. 15th Ed. New Delhi: Pearson. Narayana, G J. (1991).
13. Krishan, K. (2007).Library Management in Electronic Environment. New Delhi: Har-Anand Publication.
14. Library and Information management. Prentice Hall of India. Paton, Robert A. (2000). Change Management. Response Books.
15. McKnight, S. (2011). 101 ideas for successful library management. London: Facet.
16. Mittal, R. L. (2007). Library administration: Theory and practice (4th ed.). Delhi: EssEss Pub.
17. Rowley, Jennifer (2016). Information Marketing. Routledge.
18. Sood, N. M. (2011). Fundamentals of library administration and management. New Delhi: Mahaveer& Sons.
19. Stoner, James A F (et.al). (2003). Management: Global Perspectives. 10th Ed. Pearson India.

20. Stueart, R. D., Moran, B. B. & Morner, C. J. (2017). Library and information center management. 9th Ed. Englewood, Colo: Libraries Unlimited.
21. Thanuskodi, S. (2013). Challenges of academic library management in developing countries. Hershey PA: Information Science Reference.
22. Velasquez, D. (2013). Library management 101: a practical guide. Chicago: ALA Editions, an imprint of the American Library Association.

**Course Code: LIS.553**
**Course Title: Library Automation and Digital Library**

| L | T | P | Cr |
|---|---|---|---|
| 4 | 0 | 0 | 4 |

## Unit I: Library Automation                                   16 hours
- Library Automation Needs, scope and Definition
- Library Automation – Areas, Planning, Selection of Hardware and Software, Implementation and Evaluation
- Standards for Library Automation.
- Barcode, RFID, NFC (Near Field Communication), QR Code, Biometric, Smartcard: Features and Applications.

## UNIT – II: Library Automation Standard and tools        14 hours
- In-house Operations: Acquisition, Cataloguing, Circulation, Serial Control, OPAC, etc. Bibliographic Standards: CCF, Dublin Core and MARC 21
- Introduction to Metadata: Types of Metadata
- Library Software Packages: Overview and House Keeping Operations
- Case Studies: Koha

## Unit – III: Digital Library                                    16 hours
- Digitization – Planning, Selection of Materials, Hardware, Software, Process, Issues.
- Digital Library: Genesis, Characteristics, Types, Architecture; Standards, Formats and Protocols, DOI.
- Digital Preservation - Need, Purpose, Standards, Methods, Techniques, Projects (National and International).
- Digital Library Initiatives – National and International.

## Unit – VI: Institutional Repositories                         14 hours
- Institutional Repositories - Need, Purpose, Types and Tools;
- Institutional Repositories in India; Shodhganga, National Digital Library etc
- ROAR, DOAR, SHARPA-ROMIO.

**Suggested Readings**

1. Bishop, A. P., Van House, N. A., & Buttenfield, B. P. (Eds.). (2003). Digital library use: Social practice in design and evaluation. MIT Press.
2. Boardman, Mark. 2005. The language of websites. London: Rutledge Taylor & Francis Group.
3. Bolan, Kimberly, & Cullin, Robert. 2011. Technology made simple: An improvement guide for small and medium libraries. Chicago: American Library Association.
4. Bradley, Phil. 2003. WWW: How to design and construct web pages. London: Aslib.
5. Chowdhury, G. G. & Chowdhury, Sudatta. (2003). Introduction to Digital Libraries. : Ane Books.
6. Chowdhury, G. G., & Chowdhury, Sudatta. 2001. Information sources and searching on the World Wide Web. London: Facet Publishing.
7. Chowdhury, G. G., & Foo, S. (Eds.). (2012). Digital libraries and information access: research perspectives. Facet Publishing.
8. Cohn, John M., Kelsey, Ann L., & Fiels, Keith Michael. 1998. Planning for library automation: A practical handbook. London: Library Association.
9. Deegan, Marilyn & Tanner, S. (2006). Digital Preservation.Facet Publishing.
10. Fox, Edward; Andre Goncalves, Marcos & Shen, Rao (2012) Theoretical Foundations for Digital Libraries: The 5SApproach. Morgan and Claypool
11. Ingersoll, Patricia, & Culshaw, John. 2004. Managing information technology: A handbook for systems librarians. Westport, CT: Libraries Unlimited.
12. Jones, Richard et al. (2006). The Institutional Repository. Oxford: Chandos Publishing.
13. Judith, Andrews & Derek, Law. (2017). Digital Libraries. Routledge.
14. Lucy A. Tedd & Andrew Large. (2004). Digital Libraries: Principles and Practice in a Global Environment. G.G. Saur.
15. Osborne, Larry N., & Nakamura, Margaret. 2004. Systems analysis for librarians and information professionals (2nd ed.). Englewood, CO: Libraries Unlimited.
16. Purcell, Aaron. (2016). Digital Library Programs for Libraries and Archives: Developing, Managing, and Sustaining Unique Digital Collections. ALA
17. Rao, Ravichandran I. K. 1990. Library automation. New Delhi: Wiley Eastern.
18. Reynolds, Dennis. 1985. Library automation: Issues and applications. New York: Bowker.

19. Rice-Lively, Mary Luhn, & Chen, Hsin-Liang. 2006. Scenarios and information design; A user-oriented practical guide. Oxford: Chandos Publishing.
20. Rowley, J.E. 1993. 2nd ed. Computer for libraries. London: Clive Bingley.
21. Satyanarayana, N. R. 1995. A manual of computerization of libraries. New Delhi: Viswa Prakashan.
22. Satyanarayana, N. R. 2014. A manual of library automation and networking. Lucknow: Ess Ess Pub.
23. Xavier, C. 2017. World Wide Web design with HTML. New Delhi: TMH.

**Course Code: LIS.554**
**Course Title: Research Methodology and Statistical Techniques**

| L | T | P | Cr |
|---|---|---|----|
| 4 | 0 | 0 | 4 |

**Unit – 1 Concept of Research**                              **16 hours**
- Research - Concept, Characteristics, Scope and Research Ethics
- Types of Research – Basic and Applied, Interdisciplinary and Multidisciplinary.
- Research Methods: Historical, Descriptive, Experimental and Delphi.
- Research Design - Selection and Formulation of Research Problem, Review of Literature; Hypothesis – Formulation, Types and Testing; Sampling Techniques.

**Unit – II Research methods and Statistical Techniques**        **16 hours**
- Methods of Data Collection (Qualitative and Quantitative): Questionnaire, Interview, Observation, Library Records, Scales and Checklist.
- Data Analysis and Interpretation
- Statistical Techniques (Parametric and non-parametric)
- Statistical Packages – Spreadsheet, SPSS, Bibexcel, 'R' Statistics.

**Unit – III Research Report Writing**                        **14 hours**
- Research Proposal and Report Writing and Citation Tools – Structure, Style, Contents, Guidelines;
- Style Manuals; Online Citation Tools; Reference Style Management Tools;
- Anti-plagiarism Tools; Evaluation of Research Report.

**Unit IV Research Metrics**                                  **14 hours**
- Metric Studies in LIS - Bibliometrics, Scientometric, Webometrics, Altmetrics;
- Impact Factors – Journal, Institutional and Authors; h-Index, g-Index, i10 Index.

- Research Trends in Library and Information Science

**Suggested Readings**
1. Charles H. Busha & Stephen, P. Harter.1980. Research Methods in Librarianship: Techniques and Interpretation. New York: Academic Press
2. Goode, William J and Hatt, Paul K.2017. Methods in Social Research. Asia law House.
3. Goon, A M. 2016. Fundamental of Statistics. Calcutta: World Press
4. Gopal, M. H: 1992. An Introduction to Research Procedure in Social Sciences. New Delhi, Vikas, Pub. House
5. Krishnaswami, O.R. 2013. Methodology of Research in Social Sciences. New Delhi : Himalaya
6. Leo, Egghe and Rousseau, Ronald. 2001. Elementary Statistics for Effective Library and Information Service Management. London: Aslib
7. Marurice, B. Line.1989. Library Surveys: an introduction to the use, planning procedure and presentation of surveys. 2nd ed. London : Bingley
8. Mary Lee, Bundi. 1983. Reader in Research Methods for Librarianship USA: Greenwood Press.
9. Powell, Ronad, R. 2004. Basic research methods for librarians. Norwood: Ablex
10. Powell, Ronald R. and Connaway, Lynn Silipigni. 2010. 5th Ed. Basic Research methods for Librarians. 4th ed. Westport: Libraries unlimited

**Course Code: LIS.555**
**Course Title: Library Automation and Digital Library**

| L | T | P | Cr |
|---|---|---|----|
| 0 | 0 | 4 | 2 |

**I. Library Automation Practice**
- Koha
- NewGenLib
- Other available software

**II. Digital Library Software**
- D-Space
- E-Print
- Greenstone

**Course Code: LIS.556**
**Course Title: Engineering and Technological Library and Information System**

| L | T | P | Cr |
|---|---|---|----|
| 3 | 0 | 0 | 3 |

**UNIT– I: Engineering and Technological Libraries and their Development**
**12 hours**

- Objectives and Functions

- History and Development of Libraries with Special Reference to India
- Role of Engineering and Technological Libraries
- Role of Agencies in the Growth and Development of Engineering and Technological
- Libraries in India

## UNIT – II: Collection Development and Management      13 hours
- Periodicals, Conference Literature, Grey Literature, Patents, Standards, Specifications and Government Publications
- Non-Book Materials
- Electronic Resources and Online Databases

## UNIT – III: Library Organization and Administration and Information Services      10 hours
- Organizational Structure
- Staff Manual, Library Surveys, Statistics and Standards, etc.
- CAS, SDI, Abstracting and Indexing Services Library Bulletin, Newspaper Clipping Services Computerized Services
- Resource Sharing and Networking: INDEST – AICTE Consortium
- Information Literacy Programmes

## UNIT – IV: Financial and Human Resource Management      10 hours
- Determination of Finance, Sources of Finance
- Types of Budget
- Nature, Size, Selection, Recruitment, Qualification and Training
- Responsibilities and Duties
- Competency Development

**Note: Reading list to be provided by the concerned teacher.**
**Course Code: LIS.557**
**Course Title: Technical Writing**

### Unit -1 Communication Process
**13 hours**

| L | T | P | Cr |
|---|---|---|----|
| 3 | 0 | 0 | 3 |

- Overview of Communication Process
- Characteristics Features of Technical Writing
- Target Groups in Written Communication
- Reader-Writer Relation

## Unit -2 Linguistics                                            10 hours
- Language as a Medium for Communication of Thought
- Functional English Style : Semantics, Syntax and Diction
- Readability and Text
- Aberrations in Technical Writing

## Unit -3 Structure and Functions of Technical Communication 12 hours
- Structure : Definition, Purpose, Characteristics and Functions
- Collection, Organisation and Presentation of Data including Illustration
- Case Studies : Preparation of Short Communication, Review Article, Technical Reports, Monographs, Dissertations and House Bulletins

## Unit -4 Technical Editing and Editorial Tools              10 hours
- The Editor
- Editorial Process
- Editorial Tools

## Suggested Readings
1. Huckin,T.N. and Leslie, A.O. (1984). English for Science and Technology. New York: Mc Graw Hill.
2. IGNOU, (1989). Editing in Distance Education (IGNOU Handbook-6). New Delhi: IGNOU.
3. IGNOU, (1990). General Principles of Writing. New Delhi: IGNOU.
4. Reep, D.C. (2014). Technical Writing, Principles, Strategies, and Readings. Ed. 8th. Pearson.
5. Sherman, T.A. (2018). Modern Technical Writing. Franklin Classics.
6. Simon, A.R and Simon, J. (1993). Computer Professional's Guide to Effective Communications. New York: McGraw Hill.
7. SIS. (1990). Fourth Training Course in Technical Communication, Jodhpur: SIS. Wilcox, D.L. and Nolte, L. W. (1997). Public Relations Writing and Media Techniques. New York: Harper and Row Publishers.
8. Swain, D.V. and Swain, J.R. (1991). The Issue of Audience. In Scripting for the New Audio-Visual Technologies, 2nd ed. Chapter 4. Boston: Focal Press.
9. Taneja, R.D. (1990). Audience Analysis and Adaptation: In Fourth Training Course in Technical Communication. New Delhi: SIS.
10. Vallins, G.H. (1988). Good English. Bombay: Rupa.
11. Weisman, H. M. (1992). Basic Technical Writing. 6th Ed. Columbus: Charles Orenill Publishing.

## Course Code:
## Course Title: From MOOC (Compulsory Foundation)

Student can select any one course through MOOC

**Course Code: LIS.571**
**Course Title: ICT and Networking Technology and Library Networks**

| L | T | P | Cr |
|---|---|---|----|
| 4 | 0 | 0 | 4 |

### Unit - I Web Technology                                    14 hours
- Telecommunication - Transmission Channels, Mode, and Media, ISDN, PSDN, Multiplexing, Modulation, Standards and Protocols.
- Wireless Communication – Media, Wi-fi, Li-fi, Satellite Communication, Mobile Communication.

### Unit – II Security                                          16 hours
- Data Security, Network Security, Firewalls, Cryptographic Techniques, Anti-virus software, Anti-spyware, Intrusion Detection System

### UNIT – III – Basics of Programming Languages               14 hours
- Programming Languages – Object Oriented, Procedural, High Level, Scripting; Web Languages.

### Unit – IV Semantic Web                                      16 hours
- Ontology – Tools (RDF, RDFS, Potege); Semantic Web, Linked Data, Big Data, Data Mining, Data Harvesting.
- Application of Artificial Intelligence, Expert Systems and Robotics in Libraries;
- Social Mobile Analytics Cloud (SMAC);

**Suggested Readings**

1. Adler, S. and others.  Extensible Stylesheet Language (XSL) Version 1.0, (W3C Recommendation accessed at http://www.w3.org/TR/xsl) 2000.
2. Benz, B. and Durant, JR. 2003. XML 1.1 Programming Bible (Covers J2EE, Java, Databases, Web Services and .NET). New Delhi: Wiley Publishing
3. Blood, Rebecca.  2009. The Weblog Handbook:  Practical Advice on Creating and Maintaining Your Blog. Basic Books.
4. Bray, T., Hollander, D. and Layman, A. Namespaces in XML. (Accessed at http://www.w3.org/REC-xml-names/) 2nd Ed. 2006.
5. Bray, T. Ed. 4th. 2006. Extensible Markup Language (XML) 1.0, 2nd ed. W3C Recommendation, http://www.w3.org/TR/REC-xml
6. Darnell, R. and others. 2008. HTML 4 Unleashed: The Comprehensive Solution. New Delhi: BPB Publication

7. Bhumika S. Zalavadia (2016) Static and Dynamic Webpage Development with HTML, CSS, JavaScript, jQuery, PHP, MySQL and AJAX. Penram International Publishing (India) Pvt.Ltd
8. Hjelm, J. and Stark, P. 2002. XSLT: The Ultimate Guide to Transforming Web Data. New York: John Wiley
9. Mercer, D. 2001. XML: A Beginner's Guide. New York: McGraw Hill (Osborne)
10. Willinsky, John. 2009. Access Principle: Case for Open Access to Research and Scholarship. Cambridge: MIT Press, Digital Libraries and Electronic Publishing.

| | L | T | P | Cr |
|---|---|---|---|---|
| **Course Code: LIS.572** **Course Title: Emerging Trends in LIS** | 4 | 0 | 0 | 4 |

### Unit – I Web Based Services                                         8 hours
- Mobile based Library Services and Tools – Mobile OPAC, Mobile Databases, Mobile Library Website, Library Apps, Mobile Library Instructions, Augmented Reality, SMS Alerts, Geo-Location, Reference Enquiry.

### Unit – II Web Technology                                            7 hours
- Web 2.0 and 3.0 - Library 2.0- Concept, Characteristics, Components; Instant Messaging, RSS Feeds, Podcasts, Vodcasts, Ask a Librarian
- Web – Scale Discovery Services

### Unit – III Social Web Networks                                      7 hours
- Collaborative Services- Social Networks, Academics Social Networks, Social Tagging, Social Bookmarking.
- Twitter, Facebook etc

### Unit IV - Content Management Systems                                8 hours
- Content Management Systems – Architecture, Data Integration, CMS Software – Selection, Implementation and Evaluation.
- Research Information Management System – Definition, Need & Objective
- Research Information Management Tools (VIVO, Harvard Profile, IRINS)

### Suggested Readings
1. Adler, S. and others. Extensible Stylesheet Language (XSL) Version 1.0, (W3C Recommendation accessed at http://www.w3.org/TR/xsl )
2. Benz, B. and Durant, JR.2003. XML 1.1 Programming Bible (Covers J2EE, Java, Datadases, Web Services and .NET). New Delhi: Wiley Publishing

3. Blood, Rebecca. 2002. The Weblog Handbook: Practical Advice on Creating and Maintaining Your Blog. Cambridge: Perseus Publishing
4. Bray, T., Hollander, D. and Layman, A. Namespaces in XML. (Accessed at http://www.w3.org/REC-xml-names/)
5. Bray, T.. 2000. Extensible Markup Language (XML) 1.0, 2nd ed. W3C Recommendation, http://www.w3.org/TR/REC-xml
6. Darnell, R. and others. 1999. HTML 4 Unleashed: The Comprehensive Solution. New Delhi: Techmedia
7. Goodman, D. 1998. Dynamic HTML: Definitive Reference. Cambridge: O'Reilly
8. Hjelm, J. and Stark, P. 2002. XSLT: The Ultimate Guide to Transforming Web Data. New York: John Wiley
9. Mercer, D. 2001. XML: A Beginner's Guide. New York: McGraw Hill (Osborne)
10. Willinsky, John. 2006. Access Principle: Case for Open Access to Research and Scholarship. Cambridge: MIT Press, Digital Libraries and Electronic Publishing.

**Course Code: LIS.573**
**Course Title: Academic Library and Special Library Systems**

| L | T | P | Cr |
|---|---|---|----|
| 2 | 0 | 0 | 2 |

## UNIT- I – Academic Library and Collection Development          8 hours
- Academic Libraries: Definition, Aims, Objectives and Roles.
- Role of UGC in the development of academic libraries in India.
- Library Collection: Types and Character.
- Collection Development Policy: Concept, Significance and Elements, Patron-Driven Acquisition (PDA). Collection assessment and evaluation methods Quantitative and Qualitative tools/approaches. Marketing of Academic Library Services and Products. Activities and tools of marketing in academic libraries.

## UNIT- III Financial Management and HRM of Academic Library:  8hours
- Financial Management: Concept and Sources of finance.
- Library Expenditure: Principles and Classification of Library Expenditure.
- Methods of Financial Estimation.
- Budgetary Standards and Norms.
- Preparation of Library Budget: Calculation of Expenditure,
- Contents of a Budget Document, Principles of Budget-making.
- Auditing:  Concept, Types of Audit (Pre and Post Audit).
- Human Resource Management (HRM) in Academic Libraries: Categories of Manpower.
- Staffing and Recruitment.

- Significance of Leadership and Motivation.

## Unit – III Special Libraries: 7 hours
- Special Libraries Concept, role, characteristics, and functions.
- Development of special libraries in India.
- Role of IASLIC.
- Library and Information Policy at National Level in India.

## Unit – VI Special Library Organization and Administration: 7 hours
- Collection Development of and Management of Government documents, maps, manuscripts, newspaper clippings, serials, specifications (patents and Standards) technical reports, theses.
- Financial Management auditing: Sources of finance, budgeting techniques. Accounting and Auditing.
- Manpower development and recruitment: Qualifications, Job Description, Staff Manual.
- Library Building: Principles, planning and features. Information Services:
- Resource Sharing: Concept, Areas, Factors of Development.

## Suggested Readings
1. Cowley, John. (1982). Personal Management in Libraries. Clive Bingley.
2. Dale, Penny; Beard, Jill & Holland, Matt (2017). University Libraries and Digital Learning Environment. Ashgate.
3. Evans, G E.(1983). Management Techniques for Librarians. Academic Press.
4. Felicia Etim (2016). Quality Services in Academic Libraries. Authorhouse
5. Galvin, TJ. (1979). The Structure and Governance of Library Networks. New York: Marcel Dekker.
6. Gurdev Singh. (2015). Academic Library System and Services. ESS ESS.
7. Hingwe, K S. (1982). Management of University Libraries in India. The World Press. Kent, A &
8. Khan Rajib Hossain (2015) University Library Systems and Services, LAP Lambert Academic Publishing
9. Krishan Kumar. (1987). Library Administration and Management. Vikas.
10. Kylie Bailin, Benjamin Jahre, Sarah Morris (2018) Planning Academic Library Orientations: Case Studies from Around the World,Chandos Publishing, Cambridge
11. Matarazzo , James M .(2013). Toby Pearlstein Special Libraries: A Survival Guide. Libraries Unlimited.

12. Mishra R. K. (2013) Special Library System and Information Services. Anmol.
13. Mittal, R L. (2007). Library Administration: Theory and Practice. Ess Ess.
14. Mount, Ellis, & Renée Massoud. (1999) Special Libraries and Information Centers: An Introductory Text. . Washington, DC: SLA Publishing,
15. Nasirudheen T. (2018). Library Movement and Development in India: A State Wise Scan. Ess Ess Publications.
16. R.S. Aswal (2003). Information Networks in India EssEss.
17. Ranganathan, S R. (1989). Library Book Selection. Sarada Rangnathan Endowment for Library Science.
18. Semertzaki, Eva (2011). Special Libraries as Knowledge Management Centres, Chandos Publishing.
19. Shumaker, David. (2011). Special Libraries. In Encyclopedia of Library and Information Sciences, New York: Taylor and Francis.

**Course Code: LIS.574**
**Course Title: Overview: ICT, Digital Library and Library Automation**

| L | T | P | Cr |
|---|---|---|----|
| 0 | 2 | 0 | 2 |

**Unit - I**
- Management - Principles, Functions and Schools of thought.
- Library and Information Centers Management - Book Selection Tools and Principles; Library Acquisition, Technical Processing, Circulation, Serial Control, Maintenance and Stock Verification; Preservation and Conservation; Hazards and Control Measures of Library Materials.
- Human Resource Management – Planning, Job Analysis, Job Description, Job Evaluation, Selection, Recruitment, Motivation, Training and Development, Performance Appraisal; Staff Manual.
- Financial Management in Libraries - Sources of Finance, Resource Mobilisation, Budgeting Methods; Cost Effective and Cost Benefit Analysis, Annual Reports & Statistics; Library Authority and Committee.
- Project Management - SWOT, PEST, PERT / CPM.
- Total Quality Management (TQM) - Concepts, Principles and Techniques, Six Sigma; Evaluation of Services of Libraries and Information Centers.
- Library Building, Furniture and Equipments; Green Library Building; Information Commons; Makers Space; Security and Safety.
- Management Information System (MIS), MBO, Change Management, Disaster Management, Crisis Management.
- Knowledge Management – Principles, Tools, Components and Architecture.
- Marketing of Library Products and Services – Plan, Research, Strategies, Mix, Segmentation, Pricing and Advertising; Management Consultancy.

**Unit - II**

- Computer Technology - Character Representation (ASCII, ISCII, Unicode); Computer Hardware, Software; Storage Devices; Input and Output Devices.
- Types of Software - System Software, Application Software.
- Programming Languages – Object Oriented, Procedural, High Level, Scripting; Web Languages.
- Telecommunication - Transmission Channels, Mode, and Media, ISDN, PSDN, Multiplexing, Modulation, Standards and Protocols.
- Wireless Communication – Media, Wi-fi, Li-fi, Satellite Communication, Mobile Communication. Computer Networks - Topologies, Types of Networks – LAN, MAN, WAN.
- Internet - Web browsers, WWW, E-mail; Search Engines, Meta and Entity Search engines.
- Internet Protocols and Standards – HTTP, SHTTP, FTP, SMTP, TCP/IP, URI, URL.
- Hypertext, Hypermedia, Multimedia, Video conferencing, Virtual Reality, Augmented Technologies.
- Data Security, Network Security, Firewalls, Cryptographic Techniques, Anti-virus software, Anti-spyware, Intrusion Detection System.
- Web 2.0 and 3.0 - Library 2.0- Concept, Characteristics, Components; Instant Messaging, RSS Feeds, Podcasts, Vodcasts, Ask a Librarian
- Collaborative Services- Social Networks, Academics Social Networks, Social Tagging, Social Bookmarking.
- Web – Scale Discovery Services
- National Information Systems and Networks: NISCAIR, DESIDOC, SENDOC, ENVIS, INFLIBNET, DELNET, NICNET, ERNET, National Knowledge Network (NKN), Biotechnology Information System Network
- International Information Systems and Networks: INIS, AGRIS, INSPEC, MEDLARS, BIOSIS, ERIC, Patent Information System (PIS), Biotechnology Information System (BIS).
- Library Resource Sharing and Library Consortia – National and International.

**Unit – III**

- Library Automation – Areas, Planning, Selection of Hardware and Software, Implementation and Evaluation; Standards for Library Automation.
- Barcode, RFID, QR Code, Biometric, Smartcard: Features and Applications.
- Digitization – Planning, Selection of Materials, Hardware, Software, Process, Issues.
- Digital Library: Genesis, Characteristics, Types, Architecture; Standards, Formats and Protocols, DOI.

- Digital Preservation - Need, Purpose, Standards, Methods, Techniques, Projects (National and International).
- Digital Library Initiatives – National and International.
- Institutional Repositories - Need, Purpose, Types and Tools; Institutional Repositories in India; ROAR, DOAR, SHARPA-ROMIO.
- Content Management Systems – Architecture, Data Integration, CMS Software – Selection, Implementation and Evaluation.
- Application of Artificial Intelligence, Expert Systems and Robotics in Libraries; Social Mobile Analytics Cloud (SMAC); Cloud Computing.
- Ontology – Tools (RDF, RDFS, Potege); Semantic Web, Linked Data, Big Data, Data Mining, Data Harvesting.
- Community Information Services.
- Reference Service – Concept and Types; Referral Services
- Alerting Services - CAS, SDI, Inter Library Loan and Document Delivery.
- Mobile based Library Services and Tools – Mobile OPAC, Mobile Databases, Mobile Library Website, Library Apps, Mobile Library Instructions, Augmented Reality, SMS Alerts, Geo-Location, Reference Enquiry.

**Unit – IV**
- Research - Concept, Purpose, Functions, Scope and Ethics; Types of Research – Basic and Applied, Interdisciplinary and Multidisciplinary.
- Research Methods: Historical, Descriptive, Experimental and Delphi.
- Research Design - Selection of Research Problem, Review of Literature; Formulation of Research Problem; Hypothesis – Formulation, Types and Testing; Sampling Techniques.
- Methods of Data Collection: Questionnaire, Interview, Observation, Library Records, Scales and Checklist.
- Data Analysis and Interpretation - Presentation of Data; Statistical Methods/ Techniques.
- Statistical Packages – Spreadsheet, SPSS, Bibexcel, 'R' Statistics.
- Research Report Writing and Citation Tools – Structure, Style, Contents, Guidelines; Style Manuals; Online Citation Tools; Reference Style Management Tools; Antiplagiarism Tools; Evaluation of Research Report.
- Metric Studies in LIS - Bibliometrics, Scientometric, Webometrics, Altmetrics;  9. Impact Factors – Journal, Institutional and Authors;  h-Index, g-Index,  i10 Index.
- Trends in Library and Information Science Research.

**Transaction Mode**
Interactive lectures, question-answer sessions, discussions, self-study, group discussion, collective thinking, presentation for sharing and interpreting, debates to understand divergent issues, Buzz groups to engage in learning process, Seminar presentation, Group discussion, Team teaching

**Suggested Readings**
- CBSE UGC-NET/SET: Library & Information Science (Paper II & III) Guide (Popular Master Guide)
- UGC NET/JRF/SET Library And Information Science (Paper-II)
- Trueman's UGC NET Library & Information Science

**Course Code: LIS.575**

| L | T | P | Cr |
|---|---|---|----|
| 0 | 2 | 0 | 2 |

**Course Title: Overview: Information Sources, Systems and Services Automation**

**Unit – I**
- Data, Information, Knowledge and Wisdom.
- Information Life Cycle - Generation, Collection, Storage and Dissemination.
- Role of Information in Planning, Management, Socio-economic, Cultural, Educational and Technological Development.
- Information Science - Relationship with other subjects, Information Society and Knowledge Society.
- Communication – Concept, Types, Theories, Models, Channels and Barriers; Trends in Scholarly Communication.
- Information Industry - Generators, Providers and Intermediaries.
- IPR and Legal Issues - Categories, Conventions, Treaties, Laws.
- Plagiarism: Concept and Types.
- Right to Information Act (RTI); Information Technology Act.
- National Knowledge Commission; National Mission on Libraries.

**Unit – II**
- Historical Development of Libraries in India; Committees and Commissions on Libraries in India.
- Types of Libraries – Academic, Public, Special and National.
- Library Legislation and Library Acts in Indian States; The Press and Registration of Books Act; The Delivery of Books and Newspapers (Public Libraries) Act.
- Laws of Library Science.
- Library and Information Science Profession - Librarianship as a Profession, Professional Skills and Competences; Professional Ethics.
- Professional Associations - National – ILA, IASLIC, IATLIS; International – IFLA, ALA, CILIP, ASLIB, SLA; Role of UGC, RRRLF and UNESCO in Promotion and Development of Libraries.
- Library and Information Science Education in India.
- Library Public Relations and Extension Activities.
- Type of Users - User Studies, User Education.
- Information Literacy - Areas, Standards, Types and Models; Trends in Information Literacy.

**Unit – III**

- Information Sources - Nature, Characteristics, Types and Formats.
- Sources of Information - Primary, Secondary and Tertiary; Documentary and Non-Documentary.
- Primary Information Sources (Print and Electronic) - Journals, Conference Proceedings, Patents, Standards, Theses & Dissertations, Trade Literature.
- Secondary Information Sources (Print and Electronic) - Dictionaries, Encyclopedias, Bibliographies, Indexing & Abstracting, Statistical sources, Handbooks and Manuals.
- Tertiary Information Sources (Print and Electronic)- Directories, Year Books, Almanacs.
- Reference Sources - Bibliographical, Biographical, Educational, Language and Geographical.
- Electronic Information Resources - Subject Gateways, Web Portals, Bulletin Boards, Discussion Forums /Groups.
- Databases: Bibliographic, Numeric, Full text, Multimedia; Open Access Databases.
- Institutional and Human Resources. 10. Evaluation of Reference Sources and Web Resources.

**Unit - V**

- Universe of Knowledge - Nature and Attributes; Modes of Formation of Subjects.
- Knowledge Organisation - Classification – Theories, Cannons, and Principles; Simple Knowledge Organisation System (SKOS), Taxonomies, Folksonomy, Trends in Classification.
- Mapping of Subjects in Library Classification Schemes – DDC, UDC and CC.
- Knowledge Organisation: Cataloguing - Cannons and Principles; Centralized and Co-operative Catalogue; Library Cataloguing Codes: CCC and AACR - II.
- Standards of Bibliographic Record Formats and Description – ISBD, MARC 21, CCF, RDA, FRBR, Bibframe.
- Standards for Bibliographic Information Interchange & Communication – ISO 2709, Z39.50, Z39.71.
- Metadata Standards: Dublin Core; MARC21, METS, MODES, EAD. Indexing Systems and Techniques: Assigned - Pre-coordinate; Post-Coordinate; Derived- Title-based; Vocabulary Control.
- Abstracting – Types and Guidelines.
- Information Retrieval System – Features, Components, Models and Evaluation.

**Transaction Mode**

Interactive lectures, question-answer sessions, discussions, self-study, group discussion, collective thinking, presentation for sharing and interpreting, debates to understand divergent issues, Buzz groups to engage in learning process, Seminar presentation, Group discussion, Team teaching

**Suggested Readings**
1. CBSE UGC-NET/SET: Library & Information Science (Paper II & III) Guide (Popular Master Guide)
2. Trueman's UGC NET Library & Information Science
3. UGC NET/JRF/SET Library And Information Science (Paper-II)

**Course Code: LIS.580**
**Course Title: Agriculture Information Source and Systems**

| L | T | P | Cr |
|---|---|---|----|
| 3 | 0 | 0 | 3 |

**UNIT – I: Agricultural Science Libraries and their Development**

**13 hours**

Objectives and Functions
- History and Development of Libraries with Special Reference to India
- Role of ICAR, Committees and Other Agencies in the Development of Agricultural
- Libraries in India

**UNIT – II: Collection Development and Management          10 hours**
- Periodicals, Conference Literature, Grey Literature, Patents, Standards, Specifications and Government Publications, etc.
- Non-Book Materials
- Electronic Resources and Online Databases

**UNIT – III: Library Organization, Administration and Information Services   12 hours**
- Organizational Structure
- Staff Manual, Library Surveys, Statistics and Standards, etc.
- CAS, SDI, Abstracting and Indexing Services Library Bulletin, Newspaper Clipping Services Computerized Services
- Resource Sharing and Networking: AGRIS, INAGRIS, CABI, etc. Information Literacy Programmes

**UNIT – IV: Financial and Human Resource Management          10 hours**
- Determination of Finance, Sources of Finance
- Types of Budget
- Nature, Size, Selection, Recruitment, Qualification and Training

- Responsibilities and Duties
- Competency Development

**Suggested Readings**

1. BHATT (V S). Information resources in agricultural research in 40 years of agricultural research in India. 1989. ICAR, New Delhi.
2. CHOTEY LAL (C). Agricultural libraries and information systems: a handbook for users. 1998. R K Techno Science Agency, New Delhi.
3. DAYMATH (Y) and RUTTAN (V W). Agricultural development: an international perspective. 1979. John Hopkins, Baltimore.
4. DESHMUKH (P P). Standardization of library and information services with special reference to scientific and agricultural libraries. 1990. ABC, New Delhi.
5. KUMAR (P S G). Agricultural librarianship: MLISc elective paper. 2008. B.R. Publication, New Delhi.
6. SHARMA (R D). The agricultural information network for India. 1989. Society for Information Science, New Delhi.
7. SUBBAIHA (R). Agricultural librarianship in India: an overview. 1988. Metropolitan, New Delhi.
8. SWAMINATHAN (M S). Report of the working group on agricultural research and education for the formulation of the eighth plan. 1989. Planning Commission, ICAR, New Delhi.

| | L | T | P | Cr |
|---|---|---|---|---|
| **Course Code: LIS.581** | 3 | 0 | 0 | 3 |

**Course Code: LIS.581**
**Course Title: Social Science Information Sources and Systems**

**Unit – I Structure and Development of Social Sciences          13 hours**
- **Social Sciences:** Definition, scope, landmarks and research trends in the disciplines of Political Science, Economics, Sociology, Psychology, History.

**Unit – II Social Science Information Sources          12 hours**
Evaluation of the following Information sources :
- Print and non-print, electronic and Web-based British Humanities Index. Current Sociology. Historical Abstracts. International Bibliography of the Social Sciences. Political Science Abstracts. Population Index. Social Science Citation Index. Sociological Abstracts. UN Demographic Yearbook. Business Periodicals Index. New Palgrave Dictionary of Economics. Social Science Index.
- Gazetteer of India. PAIS International. Wealth of India. Wilson Social Science abstracts. ECONLIT, PsychINFO, RePEC.

### Unit – III Social Science Information Institutions          10 hours
Study of the following Social Science Institutions engaged in information generation  and dissemination:

- Centre for Policy Research. ICSSR. ICWA. Institute for Defence Studies and Analysis.  Indian Institute of Public Administration National Council for Applied Economic Research. National Institute of Public Finance and Policy. Tata Institute of Social Sciences. UNESCO. Indian Council of Historical Research. Institute of Economic Growth.

### Unit – IV Social Science Information System          13 hours

- Concept and evaluation. Evaluation of existing Information Associations, Systems and Networks in Social Sciences at national and international level. International Political Science Association. International Sociological Association. Socio Site. International Social Science Council (ISSC). International Committee for Social Science Information and Documentation (ICSSD). Social Science Research Network (SSRN).

**Suggested Readings:**
1. Agrawal, S.P.  (1987). Social science information and documentation: search for relevance in India. New Delhi: Concept Pub.
2. Agrawal, S.P.  (1989). Development of library services in India:  social science information. New Delhi: Concept.
3. Association of Librarians and Information Professionals in the Social Sciences. (2010).
4. Innovations in social sciences information and research support. London:  Association of
5. Librarians and Information Professionals in the Social Sciences.
6. Binwal, J.C. (Ed.). (1990). Social science information: problems and prospects. New
7. Delhi: Vikas Pub.
8. Birdsall, W. F. (1994). Myth of electronic library: librarianship and social change in
9. America. Westport: Greenwood.
10. Bulick, S. (1982). Structure and subject interaction: towardx a sociology of knowledge in the social sciences. New York: Marcel Dekker.
11. Harmon-Jones, E. & Winkelman, P. (2006). Fundamentals of social science. New York: Guilford.
12. Indian Association of Social Science Institutions. (2012). National social science information system On-going and completed research projects in society related study area (2008-10). New Delhi: Indian Association Social Science Institutions
13. Research Centre on the Social Implications of Industrialization in Southern Asia. (1956).

14. Research information bulletin:  social science projects in Southern Asia.  Calcutta:
15. Research Centre on the Social Implications of Industrialization in Southern Asia.
16. British Library. (2006). Social science search: the complete research service. London: British Library.
17. Tyagi, K.G. & Johry, N. (Eds.). (2001). Directory of social science libraries and information centres in India. New Delhi: NASSDOC.
18. UNESCO, Social & Human Sciences Documentation Centre. (1988). Selective inventory of social science information and documentation services (3rd ed.). Berg: UNESCO.
19. Vyas, S.D. (1992). Social science information in India: error towards bibliographical control. New Delhi: Concept.
20. Rama Reddy, E. (1985). Social science information: some Indian sources. New Delhi: Affiliated East-west.
21. Related sources and websites of various Institutions in the field of Social Sciences.

**Course Code: LIS.582**
**Course Title: Public Library and Community based information System**

| L | T | P | Cr |
|---|---|---|----|
| 3 | 0 | 0 | 3 |

**Unit – I – Public Library**                                    **13 hours**
- Meaning, importance, functions.
- Role of Public Library in literacy and mass education.
- Public Library Movement in India: Recommendation by S.R. Ranganathan, Advisory Committee for India, UNESCO manifesto, Role of Raja Ram Mohan Roy Library Foundation (RRRLF) and National Library (Kolkata).
- Organisation of Public Library System: National, regional and State, Library governance.

**Unit – II - Public Library Legislation in India**                  **10 hours**
- Study of salient features of existing library acts in India: Andhra Pradesh, Arunachal Pradesh, Bihar, Chattisgarh, Goa,  Gujarat, Haryana, Karnataka, Kerala,  Maharashtra, Manipur, Mizoram, Odisha, Rajasthan, Tamilnadu, Uttar Pradesh, Uttaranchal, West Bengal.
- Library and Information Policy: Library and Information
- Policy at National and International level in India.

**Unit – III Organization of a Public Library**                    **12 hours**

- Manpower Development: Qualifications, recruitment, job description. Job analysis, staff manual.
- Library Finance: Sources, budgeting, accounting and auditing. Library Building and Equipment Planning, Concept of Modular Equipment Building. Library Furniture and Equipment.
- Collection Development: Print, Non Print (including Electronic documents. Organization of various Sections: Periodical, Technical, Reference, Circulation and Maintenance Section.

**Unit – IV Resource, Sharing and Automation:**                    **10 hours**

- Networking, Integrated public library system.
- Library Automation:  Automating the house- keeping services in various sections in the public libraries.
- Library services to special groups of people including physically handicapped, mentally challenged, visually impaired, Prisoners and Children.

**Suggested Readings**

1. American Library Association.  (1967)  Minimum Standards for Public Library Systems. Chicago. ALA.
2. Barua, B P. (1992). National Policy on Library and Information Systems and Services for India:  Perspectives and Projections. Popular.
3. Batt, Chris. (1998). Information Technology in Public Libraries. Library Association.
4. Corbett, E V. (1979). Fundamentals of Library organization and Administration. New York: Oxford IBH.
5. FAO, Agricultural information & documentation systems 1986.
6. Gardner, F M. (1978). Public Library Legislation: A Comparative Study. UNESCO.
7. Garforth, C. (2001). Agricultural knowledge and information systems in Hagaz, Eritrea. SD Dimensions. FAO
8. Gates, J K. (1990). Introduction to Librarianship. Neal-Schuman.
9. IFLA. IFLA Guidelines for Public Libraries. (2010) The Hague: IFLA
10. IFLA. The Public Library Service: IFLA/UNESCO Guidelines for development. (2001)
11.  John Carlo Bertot,  Charles R. McClure and  Paul T. Jaeger (2010) Public Libraries and the   Internet: Roles, Perspectives, and Implications, Libraries Unlimited
12. Leeuwis, C. (2015). 3rd Ed. Communication for rural innovation: rethinking agricultural extension. Blackwell Science.
13. Martin, Lowell A. (2003). Enrichment: A history of the Public Library in the United States in the Twentieth Century. Scarecrow.

14. Murison, W J. (1988). The Public Library: Its origin, purpose and significance. Clive Bingley.
15. Otsuka, Keijiro. Kalirajan K P. (2008). Agriculture in developing countries: technology issues. Sage
16. Patel, Jashu & Krishan Kumar (2004). Libraries and Librarianship in India. Westport: Greenwood
17. Ramirez, R. (1997). Understanding farmers' communication networks: combining PRA with agricultural knowledge systems analysis. International Institute for Environment and Development
18. Ranganathan, S R. (1959). Library Administration. Bangalore: SRELS.
19. Röling, Niels G (1988).Extension science: information systems in agricultural development. Cambridge University Press
20. Sharma, C D & Ojha D C (1989) Information systems: agriculture and environment. RBSA.
21. Shera, Jesse H. (2017). Foundations of the Public Library: The Origins of the Public Library Movements in New England (1629-1855). Andesite Press.
22. Spedding, C.R.W. (2012). An introduction to agricultural systems. (2nd. ed). Springer
23. Venkatappaiah, V. (1990). Indian Library Legislation. Vol.I&II Union Library Bills and Acts. Daya Publishing House.
24. White, Horbert S. (1985). Library Personnel Management. Knowledge Industry Publications.

**Course Code: LIS.583**
**Course Title: Business Information Systems**

| L | T | P | Cr |
|---|---|---|---|
| 3 | 0 | 0 | 3 |

**Unit – I Business Information:**                                    **12 hours**
- Nature and characteristics: Its role, generation and utilization.
- Systems view of business information. Components of Business Information Systems:
- Resources, centres, consultants, suppliers, financial organisations, industrial promoters, etc. Users of business information: Categories, role, functions, and need.

**Unit – II Business Information Sources and Products          10 hours**
- Sources of Information: Directories, Digests, Market, Research Reports, Trade Literature, Technical Notes, Company Profiles, Patent, Design and Trade Marks, Standards, Databases. Information services: CAS, SDI, Technical Enquiry Service, other computerised services

**Unit – III Business Information Institutions and Networks          13 hours**

- Information Networks: overview of Business Information Networks. Institutional: national and international: Studies related to the activities of: NIDCS, IIFT, ITPO, CII, FICCI, UNIDO, UNCTAD

**Unit – IV Organising Business Information for End user Support     10 hours**

- Database System: Business Measurement System
- Business Planning System. Text Management System: Text retrieval system
- Office systems Management Support Systems: Decision support systems; information centres.
- Resources of Business Information, CMIE

**Suggested Reading**

- Atherton, P. (1980). Handbook for information systems and services. In Handbook for information systems and services. Paris: UNESCO.
- Campbell, M.J. (Ed.). (1975). Manual of business library practice. NY: Shoe String
- Curtis, G., & Cobham, D. (2008). Business information systems: Analysis, design and practice. NY: Pearson Education.
- Kourouthanassis, Panos & Giaglis, George M .(2016).Pervasive information systems. Routledge.
- Kushniruk, Andre W & BoryckiHuman, Elizabeth (2008). Human, Social, and organizational aspects of health information systems.Hershey
- PressInc.

**Course Code: LIS.584**
**Course Title: Health Sciences Information Systems**

| L | T | P | Cr |
|---|---|---|---|
| 3 | 0 | 0 | 3 |

**Unit – I Health Science Information                    12 hours**

- Growth and development of Health Science. Types of Health Science libraries/information centres. Information Services: Current Awareness Service, SDI service, Indexing and abstracting service, Literature search. Users of Health Science information.

**Unit – II Health Science Information Sources            10 hours**

- Sources of Information: Documentary: Printed and non-print. (list to be provided by the concerned teacher).

**Unit –III Health Science Information Institutions         13 hours**

- National Medical Library. WHO. ICMR. Department of Biotechnology. Council of Ayurveda and Siddha. Council of Homeopathy. National

Institute of Health and Family Welfare. CDRI. CFRI. CFTRI. NIN. NII. NIC

### Unit – IV Information Systems and Networks                    10 hours
- HELLIS, MEDLARS, BIOSIS. Trends in Health Science Information System. Application of Hypertext, Hypermedia, Multimedia. Expert System and Artificial Intelligence.

### Suggested Reading
1. Balgrosky, Jean A. (2015). Essentials of health information systems and technology. Jones & Bartlett.
2. Carmel, M. (Ed.). (1995): Health care librarianship and Information work. (22nd ed.). Library Assn Pub Limited.
3. Dixit, R.P. (1995). Information management in Indian medical libraries. New Delhi: New Concepts.
4. Dixon, Brian. (2016). Health Information Exchange: Navigating and Managing a Network of Health Information Systems. Academic Press.
5. Gupta, S.P. (1993). Information technology and health science libraries. New Delhi: MLAI SP. Pub.
6. Kushniruk, Andre W & Borycki Human, Elizabeth (2008). Human, Social, and organizational aspects of health information systems. Hershey
7. Magnuson, J., Fu, Jr., P. C. (2014). Public health informatics and information systems. Springer.
8. McGlynn, Elizabeth A ; Brook, Robert H & Kerr, Eve A .(1998).Health Information Systems : Design Issues and Analytic Applications.Rand
9. Michelsen, Kai.(2015).Promoting better integration of health information systems : best practices and challenges. WHO
10. Rodrigues, Joel. (2010). Health information systems: concepts, methodologies, tools, and applications. Hershey
11. Siuly, S., Lee., et.al (2018). Health information systems. Springer.
12. Skurka, Margaret Flettre. (2017). Health information management: principles and organization for health information services. Wiley

### Course Code: LIS.585
### Course Title: Information Analysis, Consolidation, and Repackaging

| L | T | P | Cr |
|---|---|---|----|
| 3 | 0 | 0 | 3 |

### Unit – I Information Analysis, Consolidation and Repackaging    13 hours
- Concept, need and process.
- Guiding Principles for arrangement and presentation of idea in a helpful sequence.

- Information Consolidation Products: Concepts, types, design, development and methodology. Knowledge and skills required for information analysis and consolidation.

## Unit – II Information Products　　　　　　　　　　　　　10 hours
- Nature, concept, types, design and development.
- Information News-letters, Hand Books, House Bulletins, In-house Communication, Trade Bulletin, Product Bulletin, State-of-the-Art Report, Trend Report, Technical Digests

## Unit – III Content Analysis, Abstract and Abstracting　　　10 hours
- Content Analysis: Concept types and processes.
- Abstract: Definition and types, Characteristics and Qualities of good abstracts.
- Abstracting: need, process.
- Computers and Abstracting.
- Abstracting organizations and Services.

## Unit – IV Planning, Management and Marketing of an Information Analysis & Consolidation Unit　　　　　　　　　　　　　　12 hours
- Planning and Management of Information Analysis and Consolidation Units.
- Marketing of Information Concept, need and benefits;
- 5 Ps of Information Marketing;
- Marketing of profit and non- profit organization;
- Trends in marketing of Information Services and Information Marketing in India.

## Suggested Readings
1. Singh, Sewa (2014).Information analysis, consolidation and repackaging. Atlantic Publishers & Distributors Pvt Ltd
2. Cleveland, D. & Cleveland, A. (2013) Introduction to indexing and Abstracting. (4th ed).
3. Englewood: Libraries Unlimited.
4. Megan (2015). Digital content creation. Rosen Young Adult
5. Gupta, B.M. (Ed.). (1988-2000). Handbook of libraries, archives and information centres in India. (Vols 16.) New DelhiSouth Asia Books.
6. Koltay, T. (2010). Abstracts and abstracting: a genre and set of skills for the 21st century. Oxford, Chandos
7. Saracevic, T. & Wood, J.S. (1981). Consolidation of information: A handbook of evaluation, restructuring and repackaging of scientific and technical information. Paris: UNESCO.
8. Seetharama, S. (1997). Information consolidation and repackaging. New Delhi: Ess Ess Pub.

9.  Bhattacharya, G. & Gopinath, M.A.(Eds). (1981) Information Analysis and Consolidation: Principles, procedures and products. In DRTC Annual Seminar No. 18. Bangalore: DRTC.

**Course Code: LIS.544**
**Course Title: Seminar**

| L | T | P | Cr |
|---|---|---|----|
| 0 | 0 | 2 | 1  |

Each student to present two seminar in a semester which will be evaluated by the three internal faculty members. The criteria will be as follow:
- Selection of topic
- Presentation
- Interaction/response

**Course Code: LIS.599**
**Course Title: – Project Work**

| L | T | P  | Cr |
|---|---|----|----|
| 0 | 0 | 12 | 6  |

The Work for Paper shall start in the beginning of the forth semester for which each student will be allotted a topic for writing the Project Report. The Project Report will be submitted at the end of forth semester on the date to be decided by the Department.