

**CENTRAL UNIVERSITY OF PUNJAB
BATHINDA**



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

**Department of Library and Information
Science**

Session: 2020-22

PROGRAM OUTCOMES

The Program M. Lib. I. Sc. Focusses on Developing Skills for organizing information, processing, retrieval and managing libraries and information centres by applying the principles of librarianship and professional ethics.

- It also enhances the skill of implementing Information and Communication Technologies (ICT) to various operations of the library.

Course Structure of M. Lib. I. Sc. Programme

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.521	Knowledge Organization – Classification	Core Course	4	0	0	4
LIS.523	Knowledge Organisation – Classification (Practical)	Practical	0	0	8	4
LIS.507	Information Sources and Services	Core Course	4	0	0	4
Discipline Elective (Any one of the following)/MOOC						
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
ID courses offered by Library to other departments						
LIS.512 Scholarly Communication and Information Literacy Skills			2	0	0	2

SEMESTER – II

COURSE CODE	COURSE TITLE	Course Type	L	T	P	CR
LIS.508	Foundations of Computer & Information Technology in Libraries	Compulsory Foundation	4	0	0	4
LIS.509	Foundations of Computer & Information Technology in Libraries (Practical)	Skill based Practical	0	0	8	4
LIS.522	Knowledge Organization – Cataloguing and Metadata	Core Course	4	0	0	4
LIS.524	Knowledge Organisation – Cataloguing and Metadata (Practical)	Practical	4	0	8	4
Discipline Elective (Any one of the following)/MOOC						
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			17	0	26	26
ID courses offered by Library to other departments						
LIS 512	Scholarly Communication and Information Literacy Skills		2	0	0	2

SEMESTER – III

COURSE CODE	COURSE TITLE	Course Type	L	T	P	CR
LIS.551	Information Storage and Retrieval	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 (Practical)	Practical	0	0	4	2
Discipline Elective /MOOC						
LIS.556	Engineering and Technological Library and Information System	Disciplinary Elective	3	0	0	3
LIS.557	Technical Writing		3	0	0	3
Seminar						
LIS.544	Seminar	Skill based	0		0	1

				0		
Total			19	0	4	21

SEMESTER - IV

COURSE CODE	COURSE TITLE	Course Type	L	T	P	CR
LIS.552	Management of Libraries and Information Centres	Core	4	0	0	4
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
DEC						
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)/MOOC						
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						
xxxx	Value added course offered by CUP	Value added	1	0	0	1
Project						
LIS.599	Project work	Project	0	0	12	6
Total			18	4	14	26

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

** FC- Foundation Course, CC- Core Course, EC- Elective Course, IDC- Inter Disciplinary Course, PC- Practical Course.

L: Lectures, T- Tutorials, P- Practical

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Course Structure of M. Lib. I. Sc. Programme

SEMESTER – 1

Course Code: LIS.506

Course Name: Fundamentals of Library & Information Science

L	T	P	Cr
4	0	0	4

Learning Outcomes

After the Completion of course, the students will be able to:

- Classify the different types of libraries based on users.
- Apply the implications of the laws of library science with modern library services.
- Summarize the essentialities of the professional library associations across the globe.
- Evaluate the need of library legislation.
- Critically analyze the issues concerned with Intellectual Property Rights.
- Analyze the technological changes of the libraries and information centres.

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 and Organizations for the Development of Libraries

14 hours

- 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, 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. Bhatt, R. K. (1995). History and development of libraries in India. Mittal Publications.
2. Buckland, M. (2017). *Information and society*. MIT Press.
3. Butler, P. (2011). *An introduction to library science*. Read Books Ltd.
4. Cherifi, H., Zain, J. M., & El-Qawasmeh, E. (2011). Digital Information and Communication Technology and Its Applications. In *Conference proceedings DICTAP* (p. 74).
5. Chowdhury, G. G. (2008). *Librarianship: an introduction*. Facet Publishing.
6. Coghill, J. G., & Russell, R. G. (Eds.). (2016). *Developing librarian competencies for the digital age*. Rowman & Littlefield.
7. Ershova, T. V., & Hohlov, Y. E. (Eds.). (2013). *Libraries in the information society (Vol. 102)*. Walter de Gruyter.
8. Feather, J. (2013). *The information society: A study of continuity and change*. Facet publishing.
9. Kanakbala A. Jani, Kiran A. Jani. (2015). *Public Libraries Acts in India: With Library Related Other Acts*. Standard Publishers (India).
10. Khanna, J. K. (1994). *Library and society*. ESS Publications, New delhi.
11. Kumar, K. (1997). *Library organisation*. South Asia Books, New Delhi.
12. Lynden, F. C., & Chapman, E. A. (Eds.). (2002). *Advances in librarianship*. Academic Press.
13. Naib, S. (2013). *The Right to Information in India*. Oxford University Press.
14. Nasirudheen, T. (2018). *Library Movement and Development in India: A State Wise Scan*. Ess Ess Publications, New Delhi
15. Pandey, N & Dharni, K. (2015). *Intellectual Property Rights*. PHI Learning Private Limited.
16. Patel, J., Kumar, K., & Krishan, K. (2001). *Libraries and librarianship in India*. Greenwood Publishing Group.
17. Ranganathan, S.R. (2006). *Five laws of library science*. Sarada Ranganathan Endowment for Library Science, Bangalore.
18. Rubin, R. E. (2017). *Foundations of library and information science*. American Library Association.

19. Singh, S. P., & Kumar, K. (2005). *Special libraries in the electronic environment*. Bookwell.
20. Sobel, K. (2012). *Information Basics for College Students*. ABC-CLIO.
21. Taher, M. (2001). *Libraries in India's National Developmental Perspective: A Saga of Fifty Years Since Independence*. Concept Publishing Company.
22. Venkatappaiah, V., & M. Madhusudhan M. (2006). *Public Library Legislation in the New Millennium: New Model Public Library Acts for the Union, States and Union Territories*. Bookwell.

Course Code: LIS.507

Course Title: INFORMATION SOURCES AND SERVICES

L	T	P	Cr
4	0	0	4

Learning Outcomes

After the Completion of course, the students will be able to:

- Categorize the various types of information sources.
- Conceptualize reference service, referral service and reference interview.
- Examine the different information services and products along with their recent trends.
- Reflect upon various Information systems and their services to the user community.

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. Sweetland, J. H., & Cheney, F. N. (2001). *Fundamental reference sources*. American Library Association.
2. Crawford, J. (2010). *Evaluation of library and information services*. Routledge.
3. Farmer, L. (Ed.). (2007). *The human side of reference and information services in academic libraries: adding value in the digital world*. Elsevier.
4. Foskett, D. J. (1967). *Information service in libraries*. Archon Book Hamden, Connecticut.
5. Dowell, D. R., & Fourie, D. K. (2009). *Libraries in The Information Age: An Introduction And Career Exploration (Library And Information Science Text)*. Libraries Unlimited, New York.
6. Singh, G. (2013). *Information sources, services and systems*. PHI Learning Pvt. Ltd..
7. Katz, W. A. (2002). *Introduction to Reference Work: Reference services and reference practices*. Mc Graw Hill.
8. Krishan, K. (2009). *Reference service*. Vikas Publishing House.
9. Ranganathan, S. R. (1990). *Reference service*. Sarada Ranganathan Endowment for Library Science, Bangalore.
10. Walford, A.J. (1996). *Guide to reference books*. Library Association, London.
11. Woodsworth, A., & Williams II, J. F. (2018). *Managing the economics of owning, leasing and contracting out information services*. Routledge.

Course Code: LIS.521

Course Title: Knowledge Organization – Classification (Theory)

L	T	P	Cr
4	0	0	4

Learning Outcomes

After the Completion of course, the students will be able to:

- Conceptualize knowledge organization and library classification.
- Examine the various modes of formation of subjects.
- Analyze the need for organizing collections in the library
- Compare different types of classification systems
- Explore recants trends in organizing web based resources.

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.523**Course Title: Knowledge Organisation – Classification (Practical)**

L	T	P	Cr
0	0	8	4

Learning Outcomes

After the Completion of course, the students will be able to:

- Develop knowledge and skills to classify different subjects of documents using DDC and UDC.
- Employ call numbers, book numbers and collection numbers to documents. .

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.

Evaluation Criteria (Total 100 Marks)

Continuous Assessment (50 Marks)

- Attendance (10)
- Conduct of Practical (30)
- Interaction (10)

End Term Assessment (50 Marks)

- Performance (30)
- Viva (20)

Course Code: LIS.510
Course Title: Information Literacy

L	T	P	Cr
3	0	0	3

Learning Outcomes

After the Completion of course, the students will be able to:

- Conceptualize Information literacy and lifelong learning
- Classify different types of Information literacy
- Explore the association between Information literacy and library centers.
- Analyze the types of library users and the need for user education
- Describe the policies and best practices of Information literacy

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 Libraries 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. Michael C. Alewine & Mark Canada (2017). *Introduction to Information Literacy for students*. John Wiley & Sons.
4. ALA. (1989). *Presidential Committee on Information Literacy*, American Library Association. (1989).
5. 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

Learning Outcomes

After Successful Completion of the course, the students will be able to:

- Evaluate various types of information sources
- Justify the need for reference sources in library and information centres.
- Categorize various forms of electronic sources
- Critically analyze information sources pertaining to science and technology.

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*. Encyclopaedia of Library and Information Science, New York, pp 61-64.
2. Borowick, J. N. (1996). *Technical Communication and its Applications (2nd Ed)*. Prentice Hall.
3. Chowdhury, G. G. & Chowdhury, S (2001). *Searching CD-ROM and Online*. Facet Publishing
4. Eleanor, Mitchell & Walters, Sheila A. (1995). *Document Delivery Services: Issues and Answers*. Learned Information Inc.
5. Guha, B. (1983). *Documentation and Information – Services, Techniques and Systems*. 2nd ed. World Press.

6. Hutchins, John. (1998). *Translation Technology and Translator*. Machine Translation
7. James E. Bobick & G. L. Berard (2011). *Science and Technology Resources: A Guide for Information Professionals and Researchers*. Libraries Unlimited Inc.
8. McGrath, Mike. (2004). *Interlending and Document Supply: A Review of Recent Literature (XLVII)*. *Interlending and Document Supply*. Vol. 32(1), pp. 50-54.
9. 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*.
10. Rowley, J. (1999). *The Electronic Library (4th ed)*. London: Library Association Publishing.
11. 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.
12. Singer, Carol A. (2012). *Fundamentals of Managing Reference Collections*. Facet publishing .
13. 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.

L	T	P	Cr
2	0	0	2

Course Code: LIS.512

Course Title: Scholarly Communication and Information Literacy Skills

Learning Outcomes

After completing the course, the students will be able to:

- Illustrate the need for information literacy
- Classify different types and formats of information sources
- Develop skill for searching, retrieving and evaluating information available on the web.
- Comprehend the ethical and legal issues pertaining to information usage.
- Evaluate the features of Academic Social Networking Sites in scholarly communication.

UNIT – I: Fundamentals of Information Literacy

- Concept of Information Literacy
- Benefits of Information Literacy
- Descriptions of Data , Information and Knowledge
- Need for Information Literacy

UNIT – II: Types and formats of information sources

- Printed sources and electronic sources
- Primary, secondary, and tertiary sources
- Published and unpublished sources
- Free and commercial sources
- General and scholarly sources

UNIT –III: Methods for selection, evaluation and retrieval of information

- Knowledge organization in Library
- Tools for searching information: Library catalogues, Databases, Search Engines, Subject Gateways and Directories.
- Searching Techniques: Boolean, Wildcard, Truncation, Phrase and Keyword searching.
- Evaluation of Information Resources – Peer Reviewed Literature.

UNIT –IV: Academic Social Networking Sites and Databases

- Citation and Indexing Databases: Web of Science and Scopus
- Reference Management Systems : Mendeley
- Academic SNS: Research Gate, Academia, ORCID
- Plagiarism: Concept and Types

Suggested Websites

1. Library - Wesleyan University. (2017). *Information Literacy*. Retrieved from <http://www.wesleyan.edu/libr/inforyou/infolitdefined.html>

2. Källund, A.-S. (2017). Searching Information: Search techniques. Retrieved from [https:// uva.libguides.com/searching_techniques](https://uva.libguides.com/searching_techniques).
3. Penn State University Libraries. (2017). Evaluating Information. Retrieved from [https:// libraries.psu.edu/services/research-help/evaluating information](https://libraries.psu.edu/services/research-help/evaluating_information).
4. San Diego State University. (2015). Evaluating Information, 1–3. Retrieved from [https:// library.sdsu.edu/research-services/research-help/evaluating information](https://library.sdsu.edu/research-services/research-help/evaluating_information).
5. University of Reading. (n.d.). Search techniques. Retrieved from [https:// www.reading.ac.uk/library/finding-info/guides/databases/libsearching-databases-search-techniques.aspx](https://www.reading.ac.uk/library/finding-info/guides/databases/libsearching-databases-search-techniques.aspx).

IQAC

SEMESTER – II

L	T	P	Cr
4	0	0	4

Course Code: LIS.508

Course Title: Foundations of Computer & Information Technology in Libraries

Learning Outcomes

After the Completion of course, the students will be able to:

- Describe the primary features of computers
- Critically compare the types of computer networks, internet protocols and multimedia technologies.
- Examine the functions and applications of database management systems.
- Analyze various search strategies for location information on the web.
- Conceptualize Internet of things and web servers.

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. Bazzell, M. (2016). *Open source intelligence techniques: resources for searching and analyzing online information*. CreateSpace Independent Publishing Platform.
2. Blokdyk, G. (2019). *Apache Web Server A Complete Guide - 2020 Edition*. 5STARCOOKS
3. Comer, D. E. (2018). *The Internet book: everything you need to know about computer networking and how the Internet works*. Chapman and Hall/CRC.
4. Davie, B. S., & Peterson, L. L. (2019). *Computer networks*. Morgan Kaufmann.
5. Elmasri, R., & Navathe, S. (2017). *Fundamentals of database systems (Vol. 7)*. Pearson.
6. Hammons, R. L., & Kovac, R. J. (2019). *Fundamentals of Internet of Things for Non-engineers*. Auerbach Publications.
7. Hartpence, B. (2011). *Packet guide to core network protocols*. O'Reilly Media, Inc.
8. Hills, H. (2019). *Power Searching the Internet: The Librarian's Quick Guide*. ABC-CLIO
9. Lee, T. (2019). *Windows Server 2019 Automation with PowerShell Cookbook: Powerful ways to automate and manage Windows administrative tasks*. Packt Publishing Ltd.
10. Negus, C. (2019). *Linux Bible (10th Ed)*. John Wiley & Sons.
11. Panek, C. (2018). *Windows Operating System Fundamentals*. John Wiley & Sons.
12. Rajaraman, V. (2018). *Introduction to Information Technology*. PHI Learning Pvt. Ltd..
13. Rajaraman, V., & Adabala, N. (2014). *Fundamentals of computers*. PHI Learning Pvt. Ltd..
14. Sarwar, S. M., & Koretsky, R. M. (2018). *Linux: The Textbook*. CRC Press.

Course Code: LIS.509

Course Title: Foundations of Computer & Information Technology in Libraries (Practical)

L	T	P	Cr
0	0	8	4

Learning Outcomes

After the Completion of course, the students will be able to:

- Develop skill set for implementing and maintaining library servers.
- Critically analyze the process of creating databases.
- Evaluate the applications of cloud based services.

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
- Developing websites using open source blogs

Suggested Readings

1. Habraken, J. (2018). *Microsoft Office 2019 Inside Out*. Microsoft Press.
2. Lambert, J. (2017). *Windows 10 step by step*. Microsoft Press.
3. Lindsay, A. (2019). *Linux: 2019 NEW Easy User Manual to Learn the Linux Operating System and Linux Command Line*. Amazon Digital Services LLC - KDP
4. Meloni, J. C. (2008). *Sams teach yourself PHP, MySQL and Apache all in one*. Pearson Education India.
5. Mint, C. (2019). *Linux Beginners Guide: A Comprehensive and Updated Guide for Beginners to Learn Linux Operating System, Easy Installation and Configuration Including Tips and Essentials Principles*.
6. Panek, W. (2016). *MCSA Microsoft Windows 10 Study Guide: Exam 70-697*. John Wiley & Sons.
7. Pogue, D. (2019). *Windows 10 May 2019 Update: The Missing Manual: The Book That Should Have Been in the Box*. O'Reilly Media.

8. Rajan, L. (2018). *Google Cloud Platform Cookbook*. Packt Publishing Limited.
9. Siahaan, V & Sianipar, R. (2019). *MS Access And SQL Server Crash Course: A Step by Step, Project-Based Introduction to Java GUI Programming*. Sparta Publishing.

Evaluation Criteria (Total 100 Marks)

Continuous Assessment (50 Marks)

- Attendance (10)
- Conduct of Practical (30)
- Interaction (10)

End Term Assessment (50 Marks)

- Performance (30)
- Viva (10)
- Record Book (10)

IQAC

Course Code: LIS.522

Course Title: Knowledge Organization – Cataloguing and Metadata

L	T	P	Cr
4	0	0	4

Learning Outcomes

After the Completion of course, the students will be able to:

- Evaluate the need for cataloguing of documents in the library
- Critically compare different forms of catalogue
- Analyze the different entries rendered in catalogues
- Justify the need and purpose of union catalogues
- Explore the modern practices and recent trends in cataloguing

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, Alphabetic-Classed Catalogue, Alphabetic-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* (3rd ed.). 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* (5th ed.). 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 Publications.
7. Register, R., & McIlroy, T. (2016). *The Metadata Handbook: A Book Publisher's Guide to Creating and Distributing Metadata for Print and Ebooks*. DataCurate.
8. Sears, M. E., & In Westby, B. M. (2018). *Sears List of subject headings* (22nd ed.). New York: H.W. Wilson.
9. Smiraglia, R. P., Riva, P., & Zumer, M. (2013). *The FRBR Family of Conceptual Models*. Routledge, London.
10. Welsh, A. & Batley, S. (2012). *Practical cataloguing: AACR, RDA and MARC 21*. London: Facet Publishing.

Course Code: LIS.524

Course Title: Knowledge Organisation - Cataloguing and Metadata (Practical)

L	T	P	Cr
0	0	8	4

Learning Outcomes

After the Completion of course, the students will be able to:

- Develop skill set for cataloguing various types of documents using AACR 2 and CCC.
- Experiment the process involved in classify cataloguing.

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 (3rd ed.)*. 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. Studwell, W. E., & Carter, R. C. (2013). *Library of Congress Subject Headings: philosophy, practice, and prospects*. Routledge.
7. Welsh, A., & Batley, S. (2012). *Practical cataloguing: AACR, RDA and MARC 21*. London: Facet Publishing.

Evaluation Criteria (Total 100 Marks)

Continuous Assessment (50 Marks)

- Attendance (10)
- Conduct of Practical (30)
- Interaction (10)

End Term Assessment (50 Marks)

- Performance (30)
- Viva (20)

Course Code: LIS.525

Course Title: Knowledge Management

L	T	P	Cr
3	0	0	3

Learning Outcomes

After Successful Completion of the course, the students will be able to:

- Conceptualize knowledge management and knowledge economy
- Determine the various strategies deployed in knowledge management
- Examine the tools used in knowledge management systems.
- Justify the importance of Knowledge management in libraries and information centres

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 Matters*. Springer.
11. Mohiuddin, M., Halilem, N., Kobir, A., & Yuliang, C. (Eds.). (2017). *Knowledge Management Strategies and Applications*.
12. Nazim, M., & Mukherjee, B. (2016). *Knowledge management in libraries: concepts, tools and approaches*. Chandos Publishing.
13. Rao, M. (2012). *Knowledge management tools and techniques*. Routledge.

Course Code: LIS.526

Course Title: Preservation and Conservation of Library Material

L	T	P	Cr
3	0	0	3

Learning Outcomes

After the Completion of course, the students will be able to:

- Summarize the need for preserving and conserving library materials.
- Distinguish the various types of hazards occur to library materials.
- Apply control measures for safeguarding library materials.
- Critically differentiate the types of binding used for library materials.
- Discover the process of restoring library materials to original form.
- Analyze the process of digitization.

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. Hendersen, Kathryn Luther and Henderson, William T. (ed) (1991). *Conserving and Preserving Library Materials*. Urbana Champaign: University of Illinois.
9. India. National Archives of India, (1988). *Repair and Preservation of Records*. New Delhi: National Archives of India.
10. Johnson, Arthur W. (1988). *The Practical Guide to Book Repair and Conservation*. London: Thames and Hudson.
11. 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.
12. National Archives of India. (1988). *Repair and Preservation of Records*. New Delhi.

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

L	T	P	Cr
2	0	0	2

Course Code: LIS.512

Course Title: Scholarly Communication and Information Literacy Skills

Learning Outcomes

After completing the course, the students will be able to:

- Illustrate the need for information literacy
- Classify different types and formats of information sources
- Develop skill for searching, retrieving and evaluating information available on the web.
- Comprehend the ethical and legal issues pertaining to information usage.
- Evaluate the features of Academic Social Networking Sites in scholarly communication.

UNIT – I: Fundamentals of Information Literacy

- Concept of Information Literacy
- Benefits of Information Literacy
- Descriptions of Data , Information and Knowledge
- Need for Information Literacy

UNIT – II: Types and formats of information sources

- Printed sources and electronic sources
- Primary, secondary, and tertiary sources
- Published and unpublished sources
- Free and commercial sources
- General and scholarly sources

UNIT –III: Methods for selection, evaluation and retrieval of information

- Knowledge organization in Library
- Tools for searching information: Library catalogues, Databases, Search Engines, Subject Gateways and Directories.
- Searching Techniques: Boolean, Wildcard, Truncation, Phrase and Keyword searching.
- Evaluation of Information Resources – Peer Reviewed Literature.

UNIT –IV: Academic Social Networking Sites and Databases

- Citation and Indexing Databases: Web of Science and Scopus
- Reference Management Systems : Mendeley
- Academic SNS: Research Gate, Academia, ORCID
- Plagiarism: Concept and Types

Suggested Websites

1. Library - Wesleyan University. (2017). *Information Literacy*. Retrieved from <http://www.wesleyan.edu/libr/inforyou/infolitdefined.html>
2. Källund, A.-S. (2017). Searching Information: Search techniques. Retrieved from https://uva.libguides.com/searching_techniques.
3. Penn State University Libraries. (2017). Evaluating Information. Retrieved from https://libraries.psu.edu/services/research-help/evaluating_information.
4. San Diego State University. (2015). Evaluating Information, 1–3. Retrieved from https://library.sdsu.edu/research-services/research-help/evaluating_information.
5. University of Reading. (n.d.). Search techniques. Retrieved from <https://www.reading.ac.uk/library/finding-info/guides/databases/libsearching-databases-search-techniques.aspx>.

Course Code: LIS.542

Course Title: Seminar

L	T	P	Cr
0	0	0	1

Each student will present two seminars in a semester which will be evaluated by the three internal faculty members.

Evaluation Criteria: Total 50 Marks

Continuous Assessment: (50Marks)

- Attendance (10)
- Selection of Topic (25)
- Interaction (15)

End- Term Assessment: (50Marks)

- Presentation (30)
- Interaction/response (10)
- Report (10)

Course Code: LIS.591

Course Title: Internship Programme

L	T	P	Cr
4	0	0	4

Learning Outcomes

After the Completion of course, the students will be able to:

- Critically analyze the in-house operations of the libraries and information centres.
- Discover the functions of the library in different settings.
- Examine the duties carried out by library personal.
- Practice the technologies used for managing routine operations of the library and also for rendering services to the users.

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.

Evaluation Criteria -

Continuous Assessment: [50 Marks]

- Attendance during Internship (10)
- Level of Knowledge gained through internship (20) - Oral or written test
- Feedback from the host institution (10)

End- Term Assessment; [50 Marks]

- Report of Internship (20)
- Presentation (20)
- Viva (30)

SEMESTER – III

Course Code: LIS.551

Course Title: Information Storage and Retrieval

L	T	P	Cr
4	0	0	4

Learning Outcomes

After the Completion of course, the students will be able to:

- Analyze the types of indexing systems and their techniques.
- Critically examine the usefulness of vocabulary control in information retrieval.
- Evaluate the various search strategies used for retrieving information.
- Assess the techniques for evaluating information retrieval systems.

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. Bertino, E., Ooi, B. C., Sacks-Davis, R., Tan, K. L., Zobel, J., Shidlovsky, B., & Andronico, D. (2012). *Indexing techniques for advanced database systems (Vol. 8)*. Springer Science & Business Media.
4. Cleveland, D. & Cleveland, A. (2013) *Introduction to indexing and Abstracting. (4th ed.)*. Englewood: Libraries Unlimited.
5. Fransson, J. (2011). *Efficient Information searching on the web: a handbook in the art of searching for information*. Sweden: Fransson.
6. Harpring, P. (2010). *Introduction to controlled vocabularies: terminology for art, architecture, and other cultural works*. Getty Publications.
7. Kamila, K., & Das, B. (2012). *Monograph of Library & Information Science*. Knowledge Publishing House.
8. Kowalski, G.J. & Maybury, M.T. (2002). *Information Storage and Retrieval System: theory and implementation (2nd ed.)*. New York: Kluwer.
9. Manning, C. D., Raghavan, P., & Schütze, H. (2008). *Evaluation in information retrieval*. Introduction to information retrieval, 151-175.

Course Code: LIS.553

Course Title: Library Automation and Digital Library

L	T	P	Cr
4	0	0	4

Learning Outcomes

After the Completion of course, the students will be able to:

- Critically analyze the need and steps involved in automating libraries.
- Discover the bibliographical standards and tools used for library automation.
- Examine the process of digitization and the usefulness of digital preservation.
- Analyze the significance of institutional repositories in libraries and information centres.

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 –IV: 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., & Battenfield, 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 5S Approach*. 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. Pandian, M. P. (2010). *RFID for libraries: a practical guide*. Elsevier.
17. Purcell, Aaron. (2016). *Digital Library Programs for Libraries and Archives: Developing, Managing, and Sustaining Unique Digital Collections*. ALA
18. Rao, Ravichandran I. K. (1990). *Library automation*. New Delhi: Wiley Eastern.
19. Reynolds, Dennis. 1985. *Library automation: Issues and applications*. New York: Bowker.
20. Rice-Lively, Mary Luhn, & Chen, Hsin-Liang. 2006. *Scenarios and information design; A user-oriented practical guide*. Oxford: Chandos Publishing.
21. Rowley, J.E. 1993. 2nd ed. *Computer for libraries*. London: Clive Bingley.
22. Satyanarayana, N. R. 1995. *A manual of computerization of libraries*. New Delhi: Viswa Prakashan.
23. Satyanarayana, N. R. 2014. *A manual of library automation and networking*. Lucknow: Ess Ess Pub.
24. 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

Learning Outcomes

After the Completion of course, the students will be able to:

- Conceptualize research, research methods and research design.
- Critically examine the process of data collection, data analysis and usage of statistical techniques and software packages for research.
- Develop skills in preparing research proposal, citation styles and avoiding plagiarism.
- Evaluate the indicators used for assessing research impact.

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.
- Statistics- Data and Variables, Describe Distribution with numbers.
- Measures of central Tendency and variability
- Correlation, Regression and Cross Tabulation
- Normal Probability curve, skewness and Kurtosis
- 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;
- 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. Das, A. K. (2015). *Research evaluation metrics* (Vol. 4). UNESCO Publishing.
3. Frye, C. (2018). *Microsoft Excel 2019 step by step*. Microsoft Press.
4. Glänzel, W., Moed, H. F., Schmoch, U., & Thelwall, M. (Eds.). (2019). *Springer Handbook of Science and Technology Indicators*. Springer Nature.
5. Goode, William J and Hatt, Paul K.(2017). *Methods in Social Research*. Asia law House.

6. Goon, A M. (2016). *Fundamental of Statistics*. Calcutta: World Press
7. Gopal, M. H: (1992). *An Introduction to Research Procedure in Social Sciences*. New Delhi, Vikas, Pub. House
8. George, D., & Mallery, P. (2016). *IBM SPSS statistics 23 step by step: A simple guide and reference*. Routledge.
9. Krishnaswami, O.R. (2013). *Methodology of Research in Social Sciences*. New Delhi : Himalaya
10. Kumar, R. (2019). *Research methodology: A step-by-step guide for beginners*. Sage Publications Limited.
11. Larson-Hall, J. (2015). *A guide to doing statistics in second language research using SPSS and R*. Routledge.
12. Leo, Egghe and Rousseau, Ronald. (2001). *Elementary Statistics for Effective Library and Information Service Management*. London: Aslib
13. Marurice, B. Line. (1989). *Library Surveys: an introduction to the use, planning procedure and presentation of surveys (2nd ed)*. London : Bingley
14. Mary Lee, Bundi. (1983). *Reader in Research Methods for Librarianship USA*: Greenwood Press.
15. Ngulube, P. (Ed.). (2019). *Handbook of Research on Connecting Research Methods for Information Science Research*. IGI Global.
16. Powell, Ronad, R. (2004). *Basic research methods for librarians*. Norwood: Ablex
17. Powell, Ronald R. and Connaway, Lynn Silipigni. (2010). *Basic Research methods for Librarians (4th ed)*. Westport: Libraries unlimited.
18. Terrell, S. R. (2012). *Statistics translated: A step-by-step guide to analyzing and interpreting data*. Guilford Press.
19. Verzani, J. (2018). *Using R for introductory statistics*. Chapman and Hall/CRC.

Course Code: LIS.555

Course Title: Library Automation and Digital Library (Practical)

L	T	P	Cr
0	0	4	2

Learning Outcomes

After the Completion of course, the students will be able to:

- Design a fully-fledged automation system for various functions of the library.
- Create an institutional repository for capturing the intellectual output of the organization.

I. Library Automation Practice

- Koha
- NewGenLib
- Other available software

II. Digital Library Software

- D-Space
- E-Print
- Greenstone

Evaluation Criteria: Total Marks (50)

Continuous Assessment: [25 Marks]

- Practical Record: (10)
- Lab Performance (15)

End- Term Assessment: [25 Marks]

- Conduct of practical (15)
- Viva (10)

Suggested Readings

1. Mishra, V. (2016). *Basics of Library Automation, Koha Library Management Software and Data Migration: Challenges with Case Studies*. Ess Ess Publications.
2. Poornima, G & Girish, R. (n.d). *Creating and Managing Institutional Repository Using DSpace: A Case Study Approach*. Educreation Publishing.
3. Sharma, A. (2019). *Koha for Beginners*. Willford Press
4. Sirohi, S., & Gupta, A. (2010). *Koha 3 Library Management System*. Packt Publishing Ltd.
5. Witten, I. H., Bainbridge, D., & Nichols, D. M. (2009). *How to build a digital library*. Morgan Kaufmann.
6. Zhang, A., & Gourley, D. (2014). *Creating digital collections: a practical guide*. Elsevier.

L	T	P	Cr
3	0	0	3

Course Code: LIS.556

Course Title: Engineering and Technological Library and Information System

Learning Outcomes

After the Completion of course, the students will be able to:

- Summarize the roles of libraries in technical institutions.
- Critically examine the collections procured by the libraries in technical institutions.
- Analyze the organizational structure and the services offered by the libraries in technical institutions.

- Ascertain the financial and human resource management practices adopted by libraries in technical institutions.

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

Suggested Readings

1. Bhatt, R. K. (1995). *History and development of libraries in India*. Mittal Publications.
2. Johnson, Peggy.(2018) *Fundamentals of collection development and management*. American Library Association.
3. Edwards, E. G. (2005). *Developing Library & Information Centre Collections*. Westport: Libraries Unlimited.
4. Krishan, Kumar. (1997). *Library organisation*. New Delhi: South Asia Books .
5. Gurdev, Singh. (2013).*Information Sources, Services and Systems*. Prentice Hall India Learning Private Limited.
6. Association of College and Research Libraries (ACRL). (2018). *Information Literacy*.
7. Roberts, Stephen. (2013). *Financial and cost management for libraries and information services*. Walter de Gruyter.
8. Ian, B & Holden, Len. (1997). *Human Resource Management: A contemporary perspectives*. Financial Times/ Prentice Hall.

Course Code: LIS.557

Course Title: Technical Writing

L	T	P	Cr
3	0	0	3

Learning Outcomes

After the Completion of course, the students will be able to:

- Infer the concepts involved in the communication process
- Analyze the role of languages in the process of communication.
- Summarize the structure and functions of technical communication.
- Illustrate the editing, editorial process and editorial tools for technical writing.

Unit -1 Communication Process

13 hours

- 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 (8th Ed)*. 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.
8. Wilcox, D.L. and Nolte, L. W. (1997). *Public Relations Writing and Media Techniques*. New York: Harper and Row Publishers.
9. 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.
10. Taneja, R.D. (1990). *Audience Analysis and Adaptation: In Fourth Training Course in Technical Communication*. New Delhi: SIS.
11. Vallins, G.H. (1988). *Good English*. Bombay: Rupa.
12. Weisman, H. M. (1992). *Basic Technical Writing. (6th Ed)*. Columbus: Charles Orenill Publishing.

SEMESTER – IV

Course Code: LIS.552

Course Title: Management of Libraries and Information Centres

L	T	P	Cr
4	0	0	4

Learning Outcomes

After the Completion of course, the students will be able to:

- Analyze the different schools of management thought
- Ascertain the process of managing resources in the library
- Explore the concepts of human resource management
- Illustrate the need for marketing library products and services.
- Critically examine the process of planning and managing financial aspects of the library.

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* (2nd 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. 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.571

Course Title: ICT and Networking Technology and Library Networks

L	T	P	Cr
4	0	0	4

Learning Outcomes

After the Completion of course, the students will be able to:

- Examine the process of telecommunication and wireless communication.
- Analyze the various security measures used for safeguarding information
- Explore the fundamentals of different programming and scripting languages
- Combine the functions of semantic technologies, ontology, big data and Artificial Intelligence with library operations.

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. et.al. (2000) *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, Databases, Web Services and .NET)*. New Delhi: Wiley Publishing.
3. Bhumika S. Zalavadia (2016) *Static and Dynamic Webpage Development with HTML, CSS, JavaScript, jQuery, PHP, MySQL and AJAX*. Penram International Publishing (India) Pvt.Ltd
4. Blood, Rebecca. (2009). *The Weblog Handbook: Practical Advice on Creating and Maintaining Your Blog*. Basic Books.
5. Bray, T., Hollander, D. and Layman, A.(2006) *Namespaces in XML (2nd Ed)*. Accessed at <http://www.w3.org/REC-xml-names/>
6. Bray, T.(2006). *Extensible Markup Language (XML) 1.0 (2nd ed)*. W3C Recommendation, <http://www.w3.org/TR/REC-xml>
7. Darnell, R. and others. (2008). *HTML 4 Unleashed: The Comprehensive Solution*. New Delhi: BPB Publication
8. Effingham, N. (2013). *An introduction to ontology*. John Wiley & Sons.
9. Erl, T., Khattak, W., & Buhler, P. (2016). *Big data fundamentals: concepts, drivers & techniques*. Prentice Hall Press.
10. Hitzler, P., Krotzsch, M., & Rudolph, S. (2009). *Foundations of semantic web technologies*. Chapman and Hall/CRC.
11. Hjelm, J. and Stark, P. (2002). *XSLT: The Ultimate Guide to Transforming Web Data*. New York: John Wiley.
12. Iglesias, E. (Ed.). (2013). *Robots in Academic Libraries: Advancements in Library Automation: Advancements in Library Automation*. IGI Global.
13. Mercer, D. (2001). *XML: A Beginner's Guide*. New York: McGraw Hill (Osborne).
14. Thomas, C. (2018). *Ontology in Information Science*.
15. Weiss, A. (2018). *Big data shocks: an introduction to big data for librarians and information professionals*. Rowman & Littlefield.
16. Willinsky, John. (2009). *Access Principle: Case for Open Access to Research and Scholarship*. Cambridge: MIT Press, Digital Libraries and Electronic Publishing.

Course Code: LIS.572

Course Title: Emerging Trends in LIS

L	T	P	Cr
2	0	0	2

Learning Outcomes

After the Completion of course, the students will be able to:

- Outline mobile based services for the libraries and information Centre.
- Apply web 2.0 and 3.0 technologies for rendering library services.
- Justify the implications social networking tools in libraries.
- Explore the process of managing and organizing contents effectively.
- Analyze the applications and tools of Research Information Management system.

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. et.al. (2000)*Extensible Stylesheet Language (XSL) Version 1.0*, W3C Recommendation accessed at <http://www.w3.org/TR/xsl>.
2. Benz, B. and Durant, J.R.(2003). *XML 1.1 Programming Bible (Covers J2EE, Java, Databases, 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. Hjelm, J. and Stark, P. (2002). *XSLT: The Ultimate Guide to Transforming Web Data*. New York: John Wiley.
5. Jones, K. M., & Farrington, P. A. (2011). *Using WordPress as a library content management system*. American Library Association.
6. Kadushin, C. (2012). *Understanding social networks: Theories, concepts, and findings*. OUP USA.
7. Ray, J. M. (Ed.). (2014). *Research data management: Practical strategies for information professionals*. Purdue University Press.
8. 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

Learning Outcomes

After the Completion of course, the students will be able to:

- Analyze the functions of libraries in academic institutions.
- Develop skills for designing collection development policies in academic libraries.
- Interpret the role of human and financial resources in academic libraries.
- Summarize the overall organization and administration of special libraries.

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- II 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 –IV 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*. Ess Ess Publications.
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

Learning Outcomes

After the Completion of course, the students will be able to:

- Integrate the features of ICT for library operations.
- Create a fully-fledged library automation system.
- Develop a digital repository for storing digital collections for future use.

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; 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

1. Ravindra, P. (2019). *CBSE UGC-NET/SET: Library & Information Science (Paper II & III) Guide*. Popular Master Guide
2. Khandelwal, K.et.al. (2019). *NTA UGC NET/JRF/SET Library and Information Science (Paper-II)*. Arihant.

Course Code: LIS.575

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

L	T	P	Cr
0	2	0	2

Learning Outcomes

After the Completion of course, the students will be able to:

- Demonstrate the process of Information life cycle and communication.
- Support fair use of information resources
- Compare different types and format of information sources
- Develop web based information services for the library users

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 - IV

- 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. Ravindra, P. (2019). *CBSE UGC-NET/SET: Library & Information Science (Paper II & III) Guide*. Popular Master Guide
2. Khandelwal, K.et.al. (2019). *NTA UGC NET/JRF/SET Library and Information Science (Paper-II)*. Arihant.

Course Code: LIS.580

Course Title: Agriculture Information Source and Systems

L	T	P	Cr
3	0	0	3

Learning Outcomes

After the Completion of course, the students will be able to:

- Ascertain the role and functions of libraries in Agricultural institutions.
- Critically examine the collections acquired by the libraries in Agricultural institutions.

- Analyze the organizational structure and nature of services offered by the libraries in Agricultural institutions.
- Summarize the financial and human resource management policies adopted by the libraries in Agricultural institutions

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.(1989). *Information resources in agricultural research in 40 years of agricultural research in India*. ICAR, New Delhi.
2. Chotey, Lal (1998). *Agricultural libraries and information systems: a handbook for users*. R K Techno Science Agency, New Delhi.
3. Daymath, Y and Ruttan v,w.(1979). *Agricultural development: an international perspective*. John Hopkins, Baltimore.

4. Deshmukh, P, P (1990). *Standardization of library and information services with special reference to scientific and agricultural libraries*. ABC, New Delhi.
5. KUMAR, P,S,G (2008). *Agricultural librarianship: MLISc elective paper*. B.R. Publication, New Delhi.
6. Sharma, R,D (1989). *The agricultural information network for India*. Society for Information Science, New Delhi.
7. Subbaiha, R.(1988). *Agricultural librarianship in India: an overview*. Metropolitan, New Delhi.
8. Swaminathan, M,S (1989). *Report of the working group on agricultural research and education for the formulation of the eighth plan*. Planning Commission, ICAR, New Delhi.

Course Code: LIS.581

Course Title: Social Science Information Sources and Systems

L	T	P	Cr
3	0	0	3

Learning Outcomes

After Completion of the course, the students will be able to:

- Examine the Structure and Development of Social Sciences.
- Critically analyze the various information sources related to social sciences.
- Assess the functions of social science information institutions
- Evaluate the information systems associate with social science.

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). *Innovations in social sciences information and research support*. London: Association of Librarians and Information Professionals in the Social Sciences.
4. Binwal, J.C. (Ed.). (1990). *Social science information: problems and prospects*. New Delhi: Vikas Pub.
5. Birdsall, W. F. (1994). *Myth of electronic library: librarianship and social change in America*. Westport: Greenwood.
6. Bulick, S. (1982). *Structure and subject interaction: towards a sociology of knowledge in the social sciences*. New York: Marcel Dekker.
7. Harmon-Jones, E. & Winkelman, P. (2006). *Fundamentals of social science*. New York: Guilford.
8. 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
9. Research Centre on the Social Implications of Industrialization in Southern Asia. (1956). *Research information bulletin: social science projects in Southern Asia*. Calcutta: Research Centre on the Social Implications of Industrialization in Southern Asia.
10. British Library. (2006). *Social science search: the complete research service*. London: British Library.
11. Tyagi, K.G. & Johry, N. (Eds.). (2001). *Directory of social science libraries and information centres in India*. New Delhi: NASSDOC.

12. UNESCO, Social & Human Sciences Documentation Centre. (1988). *Selective inventory of social science information and documentation services (3rd ed.)*. Berg: UNESCO.
13. Vyas, S.D. (1992). *Social science information in India: error towards bibliographical control*. New Delhi: Concept.
14. Rama Reddy, E. (1985). *Social science information: some Indian sources*. New Delhi: Affiliated East-west.

Course Code: LIS.582

Course Title: Public Library and Community based information System

L	T	P	Cr
3	0	0	3

Learning Outcomes

After the Completion of the course, the students will be able to:

- Critically assess the nature, organization and governance of public libraries in India.
- Examine the need for library legislations and polices for public libraries.
- Analyze the organizational structure of public libraries.
- Determine the resource sharing and automation procedure in public library system.

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. Gardner, F M. (1978). *Public Library Legislation: A Comparative Study*. UNESCO.
6. Garforth, C. (2001). *Agricultural knowledge and information systems in Hagaz, Eritrea*. SD Dimensions. FAO
7. Gates, J K. (1990). *Introduction to Librarianship*. Neal-Schuman.
8. IFLA.(2010). *IFLA Guidelines for Public Libraries*. The Hague: IFLA
9. IFLA. (2001). *The Public Library Service: IFLA/UNESCO Guidelines for development*.
10. John Carlo Bertot, Charles R. McClure and Paul T. Jaeger (2010) *Public Libraries and the Internet: Roles, Perspectives, and Implications*, Libraries Unlimited
11. Leeuwis, C. (2015). *Communication for rural innovation: rethinking agricultural extension (3rd Ed)*. Blackwell Science.
12. Martin, Lowell A. (2003). *Enrichment: A history of the Public Library in the United States in the Twentieth Century*. Scarecrow.
13. Murison, W J. (1988). *The Public Library: Its origin, purpose and significance*. Clive Bingley.

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

Learning Outcomes

After the Completion of the course, the students will be able to:

- Conceptualize the nature and characteristics of business information.
- Determine the information sources and products related to business.
- Critically analyze the role of institutions and networks that disseminate business information
- Summarize the process for organizing business information for end user support

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

Learning Outcomes

After the Completion of course, the students will be able to:

- Examine the sources of information related to health sciences.
- Ascertain the role of Health Science Information Institutions.
- Illustrate the functions of various health science information systems and network.

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

Learning Outcomes

After the Completion of course, the students will be able to:

- Conceptualization of Information Analysis, Consolidation and Repackaging.
- Evaluate the nature and types of Information products.
- Analyze the process of content analysis and abstracting
- Assess the significance of Marketing Information products.

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)*. Englewood: Libraries Unlimited.
3. Megan (2015). *Digital content creation*. Rosen Young Adult
4. Gupta, B.M. (Ed.). (1988-2000). *Handbook of libraries, archives and information centres in India*. (Vols 16.) New Delhi South Asia Books.
5. Koltay, T. (2010). *Abstracts and abstracting: a genre and set of skills for the 21st century*. Oxford, Chandos
6. Saracevic, T. & Wood, J.S. (1981). *Consolidation of information: A handbook of evaluation, restructuring and repackaging of scientific and technical information*. Paris: UNESCO.
7. Seetharama, S. (1997). *Information consolidation and repackaging*. New Delhi: Ess Ess Pub.
8. 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	0	1

Each student to present two seminar in a semester which will be evaluated by the three internal faculty members.

Evaluation Criteria: Total 50 Marks

Continuous Assessment: [50Marks]

- Attendance (10)
- Selection of Topic (25)
- Interaction (15)

End- Term Assessment: [50 Marks]

- Presentation (30)
- Interaction/response (10)
- Report (10)

Course Code: LIS.599
Course Title: – Project Work/Dissertation

L	T	P	Cr
0	0	12	6

Learning Outcomes

After the completion of course the students will be able to:

- Conduct research independently on library related problems.
- Develop analytical and logical thinking in the process of conducting research.
- Apply the implications of library science research in generating new knowledge

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.

Evaluation Criteria: Total Marks 150

Continuous Assessment: [75 Marks]

- Attendance (15)
- Interaction (15)
- Internal Assessment by the Supervisor (45)

End- Term Assessment: [75 Marks]

- Project Report (25)
- Presentation (35)
- Viva (15)