

CENTRAL UNIVERSITY OF PUNJAB



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

**Department of Library and Information
Sciences**

Batch 2026

Vision of Central University of Punjab

The University envisions transforming the minds to serve humanity through skills and innovation driven teaching and research; values and community outreach.

Mission of Central University of Punjab

- Offer a wide range of instructional and research facilities for inter-, multi- and trans-disciplinary approaches to impart holistic learning;
- Promote skills and innovation in teaching-learning, evaluation, research and consultancy;
- Create an ignited workforce responsive to local, regional, national and global needs in tune with the requirements of academics, industry, business and administration; and
- Address the issues and concerns of the community.

Vision of Department of Library and Information Sciences, Central University of Punjab

- Developing skills required for management of Data, Information & Knowledge in Libraries and Information Centres, by applying the principles of librarianship and professional ethics;
- Developing and enhancing skill-sets in Information and Communication Technologies (ICT) required for the Information and Knowledge Management processes.

Mission of Department of Library and Information Sciences, Central University of Punjab

- To work on local and global thrust areas in the field of Library and Information Science.
- To train and equip students with the knowledge, skills and values required to work in Information and Knowledge Centres.

GRADUATE ATTRIBUTES

Graduates shall have the skills for organising, processing, and retrieving information, as well as managing libraries and information centres. Further, the graduates shall be able to assess users' information needs in all types of libraries and information centres. They shall also be capable of imparting appropriate information services in libraries. Graduates shall contribute to the knowledge economy of the country by providing quality information services to library users. Graduates shall work in different cultural settings, and be equipped to make valuable contributions to society, locally and globally. Graduates shall have the knowledge and skill of developing and managing National, Regional and International Information Systems and Programmes.

Course Structure

SEMESTER – I

COURSE CODE	COURSE TITLE	Course Type	L	T	P	CR
MLIS.401	Foundations of Library and Information Science	Core	3	0	0	3
MLIS.402	Knowledge Organisation – Classification (Theory)	Core	3	0	0	3
MLIS.403	Information and Communication Technologies and Digital Libraries	Core	3	0	0	3
MLIS.404	Information Sources and Services	Core	3	0	0	3
MLIS.405	Knowledge Organisation – Classification (Practical)	Skill Based Course	0	0	8	4
Discipline Elective (Any one of the following)						
MLIS.425	Academic Library and Information System		3	0	0	
MLIS.426	Information Literacy in Library and Information Centres		3	0	0	

MLIS.427	Preservation and Conservation of Library Materials	Disciplinary Elective	3	0	0	3
MLIS.428	Knowledge Management System		3	0	0	
MLIS.429	Social Science Information Sources and System		3	0	0	
MLIS.430	Public Library and Information System		3	0	0	
MLIS.431	Business Library and Information System		3	0	0	
MLIS.432	Health Sciences Library and Information System		3	0	0	
MLIS.433	Law Library and Information System		3	0	0	
MLIS.434	Multilingual Information Systems for Libraries		3	0	0	
Total			15	0	4	19

SEMESTER II

COURSE CODE	COURSE TITLE	Course Type	L	T	P	CR
MLIS.451	Research Methodology	Core	3	0	0	3
MLIS.516	Knowledge Organisation – Cataloguing and Metadata (Theory)	Core	2	0	0	2
MLIS.517	Management of Libraries and Information Centres	Core	2	0	0	2
MLIS.518	Information Storage and Retrieval	Core	2	0	0	2
MLIS.519	Knowledge Organisation - Cataloguing and Metadata (Practical)	Skill Based Course	0	0	6	3

MLIS.520	Library Automation and Digital Libraries (Practical)	Skill Based Course	0	0	6	3
Inter Disciplinary Course (IDC) (Offered by DLISc only to Other Departments)						
MLIS.506	Scholarly Communication and Information Literacy Skills	IDC	2	0	0	2
MLIS.507	AI-Assisted Social Informatics		2	0	0	
MLIS.508	Foundations of Research Evaluation		2	0	0	
Value Added Course (VAC) (Offered by DLISc to Other Departments also)						
MLIS.511	R and Python Libraries for the Social Sciences and Humanities	VAC	2	0	0	2
MLIS.512	AI Literacy		2	0	0	
MLIS.513	Dr S R Ranganathan Studies		2	0	0	
MLIS.514	Bharatiya Knowledge System		2	0	0	
Ability Enhancement Course (AEC)						

MLIS.475	Communication Skills	AEC	2	0	0	2
MLIS.476	Information Analysis, Consolidation and Repackaging		2	0	0	
MLIS.477	Entrepreneurship in Library and Information Sciences		2	0	0	
		Total	15	0	12	21

**** Students can opt for any of the *Swayam Courses of 2 credits in Lieu of IDC* after approval through MOOC Co-ordinator and HoD.**

SEMESTER III

COURSE CODE	COURSE TITLE	Course Type	L	T	P	CR
MLIS.599-1	Dissertation	Skill based	0	40	0	20

		Total	0	40	0	20
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SEMESTER IV

COURSE CODE	COURSE TITLE	Course Type	L	T	P	CR
MLIS.599-2	Dissertation	Skill based	0	40	0	20
		Total	0	40	0	20

L- Lectures, T- Tutorials, P- Practical

FC- Foundation Course, CC- Core Course, EC- Elective Course, IDC- Interdisciplinary Course, PC- Practical Course, AEC - Ability Enhancement Course.

- One **non-credit hour (two contact hours) for Individualised Education Plan/tutorial to** be added for remedial teaching to cater to the learning needs of all the learners. The objective of this class is to facilitate the students to understand the concepts better, absorb and assimilate the content more effectively during extra hours.
- Every student has to take up 1 Inter-Disciplinary Course (IDC) and 1 Value Added Course (VAC) of 2 credits each (Total 04 credits) from other disciplines in any two semesters of the program.
- IDC and VAC may be offered through MOOC if facilities are not available in the university.

- Students can opt for any of the **Swayam Courses of 2 credits in Lieu of IDC** after approval through MOOC Co-ordinator and HoD.
- At the end of 2nd Semester, a student can opt for exit with '**PG Diploma in Library and Information Sciences**', which should be equivalent to one year Bachelor of Library and Information Science (B. Lib. I. Sc.). It is in line with the **Multiple Entry and Multiple Exit (MEES)** Scheme.

Evaluation Criteria for Various Courses

Core, Discipline Elective, and Compulsory Foundation Courses			IDC, VAC, Entrepreneurship, Innovation and Skill Development Courses (<2 credits) or any other theory course of <2 credits		
	Mark s	Evaluation	Marks	Evaluation	
Internal Assessment	25	Various methods	-	-	
Mid-semester test (MST)	25	Descriptive	50	Descriptive (up to 100%) Objective (up to 30%)	
End-semester exam (ESE)	50	Descriptive (up to 100%) Objective (up to 30%)	50	Descriptive (up to 100%) Objective (up to 30%)	
Dissertation Proposal (Third Semester)			Dissertation (Fourth Semester)		
	Mark s	Evaluation		Marks	Evaluation

Supervisor	50	Dissertation proposal and presentation	Supervisor/ co supervisor(s)	50	Continuous assessment (regularity in work, mid-term evaluation) dissertation report, presentation, final viva voce
HoD and senior most faculty of the department	50	Dissertation proposal and presentation	External expert	50	Report of dissertation (25), presentation (10), novelty/originality (5) and final viva-voce (10).

- ❖ End semester exam (50 marks) (70% subjective type and 30% objective type).
 - The objective type will include one-word answers, fill-in the blank, sentence completion, true/false, MCQs', matching, analogies, rating and checklists.
 - The subjective type will include a very short answer (1-2 lines), short answer (one paragraph), essay type with restricted response, and essay type with extended response.

As per NEP2020 to give flexibility to teachers, the number of questions and distribution of marks shall be decided by the department. Further, the departments/teachers to conduct internal assessment for different courses using any two or more of the given methods:

- ❖ Surprise Tests, in-depth interview, unstructured interview, Jigsaw method, Think-Pair Share, Students Teams Achievement Division (STAD), Rubrics, portfolios, case based evaluation, video based evaluation, Kahoot, Padlet, Directed paraphrasing, Approximate analogies, one sentence summary, Pro and con grid, student generated questions, case analysis, simulated problem solving, media assisted evaluation, Application cards, Minute paper, open book techniques, classroom assignments, homework assignments, term paper.

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

SEMESTER – I

Course Code: MLIS.401

Course Name: Foundations of Library & Information Science

Total Hours: 45 Hours

L	T	P	CR	CH
3	0	0	3	3

Course Learning Outcomes

After the completion of the course, student will be able to:

- CLO1: Have working knowledge of different types of libraries and the knowledge of the laws of library science and their implications with reference to modern library services.
- CLO2: Evaluate and understand the importance of professional associations and organisations for the development of libraries.
- CLO3: Evaluate and understand the need of library legislation, Intellectual Property Rights (IPR) in changing web-based environments.
- CLO4: Analyse the essentialities of the professional library associations across the globe.

Unit/Hours	Content	Mapping with CLOs
Unit I/ 13 Hours	Foundation of Libraries: History, origin, and development; Committees and Commissions on Libraries in India. Library as a Social Institution. Types of Libraries; Academic, Public, Special, National: Concept, Functions and Services. National Library of India. Role of Library and Information Centres in society. Five Laws of Library Science and their implications. Reflection: Compare the different types of libraries.	CLO 1

Unit/Hours	Content	Mapping with CLOs
Unit II/ 11 Hours	Role of Library and Information Science Associations and Organisations: Professional Associations: ALA, CILIP, SLA, ILA, IASLIC, IATLIS, ASIS&T. Role of National and International Organisations in Promotion and Development of Libraries: UGC, UNESCO, RRRLF and IFLA. Reflection: Compare the different professional associations and national international organisations.	CLO 2
Unit III/ 11 Hours	Library Legislation and Acts: Need, Purpose, Objectives. Library Legislation in India: Structure and Salient Features. Press and Registration of Books Act. Delivery of Books (Public Libraries) Act. Right to Information Act. IT Act: Salient Features. Artificial Intelligence: Ethics and Policies. Reflection: Compare the key features of legislation and policies related to libraries.	CLO 3
Unit IV/ 10 Hours	Library and Information Science: Education and Profession: Information Science. Information Life Cycle. Information Society and Knowledge Society. DIKW Hierarchical Model. Communication – Concept, Types, Theories, Models, Channels, and Barriers. Library and Information Science Education in India. Professional Skills, Competencies, and Ethics. Role of Library and Information Professionals towards Sustainable Development.	CLO 4

	Reflection: Discuss the changing role of library and information science professionals.	
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1. Kanakbala A. Jani, Kiran A. Jani. (2015). *Public Libraries Acts in India: With Library Related Other Acts*. Standard Publishers (India).
2. Khanna, J. K. (1994). *Library and society*. ESS Publications, New Delhi.
3. Kumar, K. (1997). *Library organisation*. South Asia Books, New Delhi.
4. Lynden, F. C., & Chapman, E. A. (Eds.). (2002). *Advances in librarianship*. Academic Press.
5. Naib, S. (2013). *The Right to Information in India*. Oxford University Press.
6. Nasirudheen, T. (2018). *Library Movement and Development in India: A State Wise Scan*. Ess Ess Publications, New Delhi
7. Pandey, N & Dharni, K. (2015). *Intellectual Property Rights*. PHI Learning Private Limited.
8. Patel, J., Kumar, K., & Krishan, K. (2001). *Libraries and librarianship in India*. Greenwood Publishing Group.
9. Ranganathan, S.R. (2006). *Five laws of library science*. Sarada Ranganathan Endowment for Library Science, Bangalore.
10. Rubin, R. E. (2017). *Foundations of library and information science*. American Library Association.
11. Singh, S. P., & Kumar, K. (2005). *Special libraries in the electronic environment*. Bookwell.
12. Sobel, K. (2012). *Information Basics for College Students*. ABC-CLIO.
13. Taher, M. (2001). *Libraries in India's National Developmental Perspective: A Saga of Fifty Years Since Independence*. Concept Publishing Company.
14. Bookwell. Martínez-Ávila, D., Almeida, P., & Raghavan, S. (Eds.). (2024). *S. R. Ranganathan: Classic and contemporary views on his life and work*.
15. Satija, M. P., Chandel, A. S., & Singh, K. P. (Eds.). (2024). *S. R. Ranganathan: Some select Indian studies on his life and work*.

Web Resources

1. <https://en.unesco.org/>

2. <https://www.ifla.org/>

3. <http://rrrlf.nic.in/>

Course Code: MLIS.402

Course Title: Knowledge Organisation – Classification (Theory)

Total Hours: 45 Hours

Course Learning Outcomes

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

- CLO1: Conceptualise knowledge organisation and library classification.
- CLO2: Understand the implementation of enumerative schemes of classification.
- CLO3: Understand the implementation of faceted and analytico-synthetic schemes of classifications
- CLO4: Explore recent trends in organising web-based resources.

Unit/Hours	Content	Mapping with CLOs
Unit I/ 08 Hours	Introduction to Knowledge Organisation: Universe of Knowledge: Nature and attributes. Modes of Formation of Subjects. Types of Subjects: Basic, Compound, Complex. Knowledge Organisation - Classification – Concept, Purpose and Functions. Species of Library Classification: Faceted and Enumerative. Descriptive and Dynamic Theory of Classification. Reflection: Comprehension of knowledge organisation and the theory of library classification.	CLO 1

L	T	P	CR	CH
3	0	0	3	3

Unit II/ 08 Hours	Dewey Decimal Classification (DDC): Historical Development, Salient Features, Structure and Layout, DDC Summaries, Notes and Relative Index, Organisation of Basic Classes, and Hierarchical Structure. Scope and Coverage of DDC. Features of Notational System: Simplicity, Mnemonics, Hospitality, Chain-structure, Flexibility, and Manual. Reflection: Discussion on the theoretical and practical implications of the concepts of DDC.	CLO 2
Unit III/ 07 Hours	Colon Classification (CC) and Universal Decimal Classification (UDC): Colon Classification (CC) - Salient features and Components. Facet Analysis and Sequence - Fundamental Categories (PMEST) and Principles. Concept of Chain and Arrays. Common Isolates (ACI and PCI). Three planes of Work: Idea, Verbal, Notational. Systems and Specials. Notational System - Devices, Mnemonics, Rounds and Levels, Phase Relations. Call Number. Universal Decimal Classification (UDC): Salient features and Components. Nature and Scope, Structure, Notational System, Arrangement, and Tables in UDC. Common and Special Auxiliary Tables: Scope and Examples. Common Auxiliary Signs: Scope and Types. Master Reference File (UDC MRF): Basic Concept. Reflection: Discussion on the theoretical and practical implications of the concepts of CC and UDC.	CLO 3

Unit IV/ 07 Hours	Organisation of Web Resources: Semantic Web: Concept, need, purpose, and advantages. Ontologies: Brief Introduction. Web based Tools: Web Dewey, UDC Online and OCLC Classify. Folksonomy: Basic Concept, Tagging, and Social Bookmarking. Reflection: Analysis of the current trends in organisation of web resources and the future of library classification.	CLO 4
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Transaction Mode: Lectures, PPT, Collective thinking, YouTube, Discussion

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.
9. Satija, M. P., & Kyrios, A. (2023). *A handbook of history, theory and practice of the Dewey Decimal Classification*.
10. Satija, M. P., & Jhand, S. S. (2023). *Colon classification: Origin, development, and future prospects*.
11. Satija, M. P. (2018). *Colon classification: A student companion*

Course Code: MLIS.403

Course Title: ICT for Library Automation and Digital Libraries

L	T	P	CR	CH
3	0	0	3	3

Total Hours: 45 Hours

Course Learning Outcomes

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

- CLO1: Develop knowledge base of computer technologies and programming languages.
- CLO2: Analyse types of computer networks and security.
- CLO3: Develop foundational knowledge of tools and techniques for automation of modern libraries.
- CLO4: Understand the implementation and maintenance of Content Management Systems.

Unit/ Hours	Contents	Mapping with CLOs
Unit I/ 12 Hours	Computer Technology and Programming Languages: Computer Hardware and Software - Concept, Functions, and Types. Operating Systems - Functions of Different Operating Systems. Features of Window & Linux. Application Software for Desktop Publishing. Features of Office Suites. Servers: Library servers and their maintenance. Programming Languages: Object-Oriented, Procedural. Scripting and Web Languages. Vibe coding. Reflection: Understand the applications and relevance of Computer Technology and Programming Languages in LIS Profession	CLO 1

Unit/ Hours	Contents	Mapping with CLOs
Unit II/ 10 Hours	Data Communication and Computer Networks Wired and Wireless Communication. Computer Networks: Topologies, Types of Networks – LAN, MAN, WAN. Internet and WWW, Search Engines. Internet Protocols and Standards – HTTP, HTTPS, FTP, SMTP, TCP/IP, URI, URL. Multimedia, Video conferencing, Virtual Reality. Augmented Technologies. Network and Cyber Security: Data Security, Firewalls, Cryptographic Techniques, Anti-virus software, Anti-spyware, Intrusion Detection System. Reflection: Differentiate between various types of computer networks and security.	CLO 2
Unit III/ 12 Hours	Library Automation: 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 and Institutional Repositories: Genesis, Characteristics, Types, Architecture; Standards, Protocols, and Formats. Open Access Initiatives: ROAR, DOAR, SHERPA-ROMEO/JULIET. Creative Commons. Reflection: Outline intricacies of Library Automation, Digitization and Digital Libraries.	CLO 3

Unit/ Hours	Contents	Mapping with CLOs
Unit IV/ 11 Hours	Content Management Systems (CMS): Architecture, Data Integration, CMS Software (Selection, Implementation, Types and Evaluation). Features of Wordpress, JOOMLA and DRUPAL. Emerging Trends: Application of Artificial Intelligence, Expert Systems and Robotics in Libraries. Cloud Computing. Ontology – Tools; Linked Data, Big Data, Data Mining, Data Harvesting Reflection: Appraise applications of CMS and emerging technological trends.	CLO 4

Transaction Mode: Lectures, PPT, Collective thinking, YouTube, Discussion.

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.
10. Purcell, Aaron. (2016). *Digital Library Programs for Libraries and Archives: Developing, Managing, and Sustaining Unique Digital Collections*. ALA
11. Bishop, A. P., Van House, N. A., & Battenfield, B. P. (Eds.). (2003). *Digital library use: Social practice in design and evaluation*. MIT Press.

Course Code: MLIS.404

Course Title: Information Sources, Services and Systems

Total Hours: 45 Hours

Course Learning Outcomes

L	T	P	CR	CH
3	0	0	3	3

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

- CLO1: Categorise the various types of information sources.
- CLO2: Conceptualise reference service, referral service and reference interview.
- CLO3: Examine the different information services and products along with their recent trends.
- CLO4: Analyse National Information Centres and Services for different user communities.

Unit I/ 12 Hours	Information Sources: Nature, Characteristics, and Formats. Types: Documentary and Non-Documentary; Primary, Secondary and Tertiary. 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. Reflection: Compare different types of information sources.	CLO 1
Unit II/ 11 Hours	Reference Sources: Bibliographical, Biographical, Linguistic and Geographical etc..	CLO 2

	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. Evaluation of Reference Sources and Web Resources. Reflection: Appraise the various reference sources, resources and databases.	
Unit III/ 12 Hours	Types of User Communities and Services: User Education - Concept, goals and objectives, techniques, methods and evaluation. 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. Web 2.0 and 3.0: Concept, Characteristics, Components; Library 2.0, Instant Messaging, RSS Feeds, Podcasts, Vodcasts, Ask a Librarian. Reflection: Discuss the practical aspects of different user communities and needed services.	CLO 3
Unit IV/ 10 Hours	Collaborative Services: Social Networks, Academics Social Networks, Social Tagging, Social Bookmarking. Web – Scale Discovery Services: EBSCO Discovery Service (EDS), Ex Libris Primo, ProQuest Summon, OCLC WorldCat Discovery. National Information Systems and Networks: NIScPR, DESIDOC, ENVIS, INFLIBNET, IRINS, DELNET, NICNET, ERNET, NKN, BTISnet. International Information Systems and Networks: INIS, AGRIS, INSPEC, PubMed, BIOSIS, ERIC, Patent	CLO 4

	Information System (PIS), Biotechnology Information System (BIS). Library Resource Sharing and Library Consortia: National and International. Reflection: Students will be encouraged to discover collaborative Information services, systems and networks.	
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Transaction Mode: Lectures, PPT, Collective thinking, YouTube, Discussion

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*. McGraw 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.

Web Resources

1. <https://inflibnet.ac.in/>
2. <http://delnet.in/>
3. <http://www.niscair.res.in/>

Course Code: MLIS.405

Course Title: Knowledge Organisation – Classification (Practical)

L	T	P	Cr	Ch
0	0	8	4	8

Total Hours: 120 hours

Course Learning Outcomes

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

- CLO1: Develop knowledge and skills to classify different subjects of documents using Dewey Decimal Classification (DDC).
- CLO2: Develop knowledge and skills to classify different subjects of documents using Colon Classification (CC).
- CLO3: Develop knowledge and skills to classify different subjects of documents using Universal Decimal Classification (UDC).
- CLO4: Compare the differences between a faceted scheme of classification and an enumerative scheme of classification.

Unit/Hours	Content	Mapping with CLOs
Unit I/ 30 Hours	Classification according to DDC (23rd Ed.): Classification of basic subjects. Use of Notes and Relative Index. Reflection: Understand the practical implications of classifying documents using DDC.	CLO 1
Unit II/ 30 Hours	Classification of Documents according to CC (6th revised Ed.): Classification of basic subjects. Use of Devices. Rounds and Levels. Reflection: Understand the practical implications of classifying documents using CC.	CLO 2
Unit III/ 30 Hours	Classification according to DDC (23rd Ed.): Classification of compound and complex subjects. Classification of documents using Tables. Reflection: Understand the tables for classifying documents using DDC	CLO 3

Unit IV/ 30 Hours	Classification of Documents according to CC (6th revised Ed.): Classification of compound and complex subjects requiring use of ACIs and PCIs, Phase relations, devices, etc. Reflection: Understand the difference in faceted and enumerative schemes of classification practically.	CLO 4
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Transaction Mode: Lectures, PPT, Collective thinking, YouTube, Discussion.

Suggested Readings

1. Dewey, M., & Custer, B. A. (2011). *Dewey decimal classification and relative index (23rd Ed.)*. (Vol. 4). Albany: OCLC
2. Ranganathan, S.R. (2007). *Colon Classification (6th rev. ed.)*. Bangalore: Sarda Ranganathan Endowment for Library Science.
3. Satija, M. P. (2011). *A guide to the theory and practice of colon classification*. New Delhi: Ess Ess Publications.
4. Satija, M. P. (2012). *Exercises in the 23rd edition of the Dewey decimal classification*. New Delhi: EssEss Publications.
5. Satija, M. P. (2013). *The theory and practice of the Dewey Decimal Classification system (2nd ed.)*. Oxford: Chandos Pub.
6. Singh, S. (2011). *The theory and practice of the Dewey decimal classification system*. New Delhi: Isha Books.
7. Satija, M. P. (2018). *Colon classification: A student companion*.

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-Voce (20)

Course Code: MLIS.425

Course Title: Academic Library and Information System

Total Hours: 45 Hours

L	T	P	Cr	CH
3	0	0	3	3

Course Learning Outcomes

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

- **CLO1:** Understanding and Analysing the structure, objectives, and developmental role of different types of academic libraries.
- **CLO2:** Evaluation of collection development policies and acquisition models in academic libraries.
- **CLO3:** Demonstration of knowledge of financial management and human resources in academic library administration.
- **CLO4:** Design of strategic plans for services, infrastructure, and digital systems in academic libraries.

Unit/Hours	Content	Mapping with CLOs
Unit I/ 12 Hours	Academic Libraries: Structure and Policy Framework Definition, aims, and types of academic libraries (School, college, university, research institutions); Governance and funding structures (UGC, MHRD/Ministry of Education, NAAC standards); Role of academic libraries in knowledge dissemination and research; Library policies: service policies, user policies, copyright & access Reflection: Analyze the structure and regulatory environment of an Indian university library.	CLO 1

Unit II/ 11 ours	Collection Development and User-Centered Services in Academic libraries Types of academic library collections: print, e-resources, institutional repositories Collection, Collection development in School library; Development Policy (CDP): significance and components Patron-Driven Acquisition (PDA), consortia-based procurement (e-ShodhSindhu) Marketing academic library services and enhancing user engagement Reflection: Evaluate CDPs from two university libraries and identify user-centric innovations.	CLO 2
Unit III/ 11 Hours	Financial and Human Resource Management in Academic Libraries Sources of finance: grants, university budgets, research project allocations; Library budgeting: preparation, classification of expenditures, budget documents; Auditing: types, post-audit procedures, GFR rules in libraries; HRM in academic libraries: recruitment, training, job descriptions, performance appraisal Reflection: Create a sample academic library budget and staff structure.	CLO 3
Unit IV/ 11 Hours	Academic Library Infrastructure, Technology, and Future Directions Library buildings: space planning, user zones, digital labs; Digital libraries and institutional repositories (Shodhganga, IR@NITR, DSpace); Emerging ICT applications, open-source systems (Koha, VuFind), and cloud-based platforms; Resource sharing, remote access tools, and academic networking. Reflection: Design a service matrix for academic libraries.	CLO 4

Transaction Mode: Lectures, PPT, Collective thinking, YouTube, Discussion

Suggested Readings (Books, Papers, Reports and Journals)

1. Association of College and Research Libraries. (2023). *The state of academic libraries: 2023 annual survey report*. American Library Association.
<https://www.ala.org/sites/default/files/2024-10/2023%20State%20of%20Academic%20Libraries%20Report.pdf>
2. Bailin, K., Jahre, B., & Morris, J. (2018). *Planning academic library orientations*. Chandos Publishing.
3. Breeding, M. (2023). Library systems report 2023. *American Libraries Magazine*. <https://americanlibrariesmagazine.org/2023/05/01/2023-library-systems-report/>
4. Cowley, J. (1982). *Personal management in libraries*. Clive Bingley.
5. Dale, P., Beard, J., & Holland, M. (2017). *University libraries and digital learning environment*. Ashgate.
6. Etim, F. (2016). *Quality services in academic libraries*. Authorhouse.
7. Evans, G. E. (1983). *Management techniques for librarians*. Academic Press.
8. Hingwe, K. S. (1982). *Management of university libraries in India*. The World Press.
9. Journal of Academic Librarianship. (2023). *Volume 49, Issue 3*. Elsevier.
<https://www.sciencedirect.com/journal/the-journal-of-academic-librarianship/vol/49/issue/3>
10. Khan, R. H. (2015). *University library systems and services*. LAP Lambert Academic Publishing.

11. Khan, S., & Rahman, M. (2024). Trends in academic library publications for the 2014–2023 period in Scopus database. *ResearchGate*. <https://www.researchgate.net/publication/386285706>
12. Kumari, S., & Jha, R. (2023). Evaluating digital library search systems by using formal process modelling. *arXiv preprint*. <https://arxiv.org/abs/2304.11651>
13. New Review of Academic Librarianship. (2025). *Volume 31, Issue 1*. Taylor & Francis. <https://www.tandfonline.com/toc/racl20/current>
14. Ranganathan, S. R. (1989). *Library book selection*. Sarada Ranganathan Endowment.
15. Ranjan, D., & Sharma, T. (2024). The transformative potential of generative AI in academic library access services. *Journal of Information Science Theory and Practice*. <https://journals.sagepub.com/doi/10.1177/18758789251332800>
16. Singh, G. (2015). *Academic library system and services*. ESS ESS Publications.
17. Zhao, L., & Yao, H. (2024). IntellectSeeker: A personalized literature management system with probabilistic model and large language model. *arXiv preprint*. <https://arxiv.org/abs/2412.07213>
18. ACRL Research Planning and Review Committee. (2024). Top trends in academic libraries. *College & Research Libraries News*, 85(3), 122–129. <https://crln.acrl.org/index.php/crlnews/article/view/26379/34322>

Course Code: MLIS.426

Course Title: Information Literacy in Library and Information

Centres

Total Hours: 45 Hours

Course Learning Outcomes

L	T	P	Cr	CH
3	0	0	3	3

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

- CLO1: Conceptualise Information literacy and lifelong learning
- CLO2: Classify different types of Information literacy
- CLO3: Explore the association between Information literacy and library centres.
- CLO4: Analyse the types of library users and the need for user education

Unit/Hours	Content	Mapping with CLOs
Unit I/ 13 Hours	Introduction to Information Literacy: Information: Characteristics of information; Types of information; Information society, Information literacy models, standards; concept of lifelong learning. Reflection: Discuss various types of information and compare the different information literacy models.	CLO 1
Unit II/ 10 Hours	Types of Information Literacy: Digital literacy, Digital divide and information literacy, Media literacy, computer literacy, Technology Literacy. Reflection: Discuss different concepts of Information literacy in libraries.	CLO 2

Unit III/ 12 Hours	Information Literacy and Libraries: Information literacy and types of libraries, Resource literacy, Research literacy. Types of Library Users, User Education and IL instruction Design for different types of libraries. Reflection: Compare different types of information literacy in libraries.	CLO 3
Unit IV/ 10 Hours	Information Literacy Policies: International and National initiatives, Policies and guidelines IFLA, ALA, UNESCO, Information literacy skills and best practices. Reflection: Compare the information literacy policies of different organisations	CLO 4

Transaction Mode: Lectures, PPT, Collective thinking, YouTube, Discussion

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: MLIS.427

Course Title: Preservation and Conservation of Library

Materials Total Hours: 45 Hours

L	T	P	Cr	Ch
3	0	0	3	3

Course Learning Outcomes

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

- CLO1: Distinguish between the various types of library materials and the need for preserving.
- CLO2: Distinguish the various types of hazards occurring to library materials.
- CLO3: Analyse the process restoration and digitization.
- CLO4: Understand the planning process for digital preservation.

Unit/Hours	Content	Mapping with CLOs
Unit I/ 13 Hours	Library Materials: Preservation and Conservation: 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. Reflection: Discuss different types of library materials.	CLO 1
Unit II/ 10 Hours	Hazards to Library Materials and Control Measures: Environmental Factors, Biological Factors, Chemical Factors. Disaster Management Reflection: Discuss various factors of hazards to library materials and control.	CLO 2

Unit III/ 12 Hours	Restoration: Binding, Different Types of Binding for Library Documents. Binding Materials. Binding Process. Standards for Library Binding. Material Repair, Microfilming and Digitisation. Reflection: Compare the varied types of binding and their purposes.	CLO 3
Unit IV/ 10 Hours	Digital Preservation (DP): Introduction, Dilemmas and critical challenges. Fundamentals - Concepts, terminology, standards, systems, Integrity, stability, and authenticity, Digital preservation frameworks, Understanding the digital object, Strategies for digital preservation, Preservation planning. Reflection: Understanding the planning process for digital preservation.	CLO 4

Transaction Mode: Lectures, PPT, Collective thinking, YouTube, Discussion

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. Ranbir Kishore, (1962). *Preservation and Repair of Palm Leaf Manuscripts*, Ibid; Vol.14, pp. 73-78
14. Singh, R.S. (1995) *Conservation of Documents in Libraries, Archives and Museums*. New Delhi: Aditya Prakashan.
15. Suri, Jina Harisagara, (1947). *Palm Leaf Manuscripts in Jaisalmir*, Ibid, Vol.1, No.3, pp 234-35

Course Code: MLIS.428

Course Title: Knowledge Management System

Total Hours: 45 Hours

L	T	P	Cr	Ch
3	0	0	3	3

Course Learning Outcomes

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

- CLO1: Conceptualise knowledge management and knowledge economy
- CLO2: Determine the various strategies deployed in knowledge management
- CLO3: Examine the tools used in knowledge management systems.
- CLO4: Justify the importance of Knowledge management in libraries and information centres

Unit/Hours	Content	Mapping with CLOs
Unit I/ 12 Hours	Knowledge Management (KM): Concept, Characteristics, and Principles. Types of knowledge. Difference between Information Management and Knowledge Management. Reflection: Understand the relationship between different concepts of Knowledge Management.	CLO 1
Unit II/ 13 Hours	Knowledge Management Process: Capturing tacit knowledge, Knowledge codification (tools), Knowledge Mapping, Knowledge testing, Knowledge transfer. Reflection: Comprehend the tasks associated with Knowledge Management Process.	CLO 2

Unit III/ 10 Hours	Knowledge Management Systems and Tools. Knowledge management tools, Data mining. Knowledge Economy. Managing knowledge workers. Reflection: Understand the tools of knowledge management.	CLO 3
Unit IV/ 10 Hours	Knowledge Management in Library and Information Centres. Knowledge Management Portals. Knowledge creation and knowledge architecture. Knowledge Management Systems-Nonaka's model. Foundations of Indian Knowledge System. Reflection: Understand the application of knowledge management in libraries and information centres and related models.	CLO 4

Transaction Mode: Lectures, PPT, Collective thinking, YouTube, Discussion

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 Press.
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: MLIS.430

Course Title: Public Library and Information System

Total Hours: 45 Hours

L	T	P	Cr	Ch
3	0	0	3	3

Course Learning Outcomes

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

- CLO1: Critically assess the nature, organisation and governance of public libraries in India.
- CLO2 Examine the need for library legislations and policies for public libraries.
- CLO3: Analyse the organisational structure of public libraries.
- CLO4: Determine the resource sharing and automation procedure in the public library system.

Unit/Hours	Content	Mapping with CLOs
Unit I/ 13 Hours	Public Library: 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. Reflection: Discuss the public library movement in India and the organisation of public libraries	CLO 1

Unit II/ 10 Hours	Public Library Legislation in India: Study of salient features of existing library acts in India: Andhra Pradesh, Arunachal Pradesh, Bihar, Chhattisgarh, Goa, Gujarat, Haryana, Karnataka, Kerala, Maharashtra, Manipur, Mizoram, Odisha, Rajasthan, Tamilnadu, Uttar Pradesh, Uttaranchal, West Bengal. Library and Information Policies at National and International level Reflection: Discuss library legislations and policies at state, national and international levels	CLO 2
Unit III/ 12 Hours	Organisation of a Public Library: 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. Organisation of various Sections: Periodical, Technical, Reference, Circulation and Maintenance Section. Reflection: Comprehend the practical and social implications of various concepts	CLO 3

Unit IV/ 10 Hours	Resource, Sharing and Automation: 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. Reflection: Discuss resource sharing, in-house operations and information services in public libraries	CLO 4
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Transaction Mode: Lectures, PPT, Collective thinking, YouTube, Discussion

Suggested Readings

1. Barua, B P. (1992). *National Policy on Library and Information Systems and Services for India: Perspectives and Projections*. Popular.
2. American Library Association. (1967). *Minimum Standards for Public Library Systems*. Chicago. ALA.
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: MLIS.431

Course Title: Business Library and Information System

Total Hours: 45 Hours

L	T	P	Cr	Ch
3	0	0	3	3

Course Learning Outcomes

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

- CLO1: Conceptualise the nature and characteristics of business information.
- CLO2: Determine the information sources and products related to business.
- CLO3: Critically analyse the role of institutions and networks that disseminate business information
- CLO4: Summarise the process for organising business information for end user support

Unit/Hours	Content	Mapping with CLOs

Unit I/ 12Hours	Business Information: Nature and characteristics: Its role, generation and utilisation. Systems view of business information. Components of Business Information Systems: Business Libraries, Resources, centres, consultants, suppliers, financial organisations, industrial promoters, etc. Users of business information: Categories, role, functions, and needs. Reflection: Discuss the various aspects of business information.	CLO 1
Unit II/ 11 Hours	Business Information Sources and Products: Sources of Information: Directories, Digests, Market, Research Reports, Trade Literature, Technical Notes, Company Profiles, Patent, Design and TradeMarks, Standards, Databases. Information services: CAS, SDI, Technical Enquiry Service, other computerised services. Reflection: Compare business information sources and products.	CLO 2
Unit III/ 11 Hours	Business Information Institutions and Networks: Information Networks: overview of Business Information Networks. Institutional: national and international: Studies related to the activities of: NIDCS, IIFT, ITPO, CII, FICCI, UNIDO, UNCTAD. Reflection: Compare business information networks.	CLO 3

Unit IV/ 11 Hours	Organizing Business Information for End user Support: 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. Reflection: Discuss the workflow of business information for end user support.	CLO 4
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Transaction Mode: Lectures, PPT, Collective thinking, YouTube, Discussion

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 PressIncc

Course Code: MLIS.432

Course Title: Health Sciences Library and Information System

Total Hours: 45 Hours

Course Learning Outcomes

L	T	P	Cr
3	0	0	3

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

- CLO1: Understand the information need in Health Sciences
- CLO2: Examine the sources of information related to health sciences.
- CLO3: Ascertain the role of Health Science Information Institutions.
- CLO4: Illustrate the functions of various health science information systems and networks.

Unit/Hours	Content	Mapping with CLOs
Unit I/ 12 Hours	Health Science Information: 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. Reflection: Students will learn the growth and development of different health science libraries.	CLO 1
Unit II/ 11 Hours	Health Science Information Sources: Sources of Information: Documentary: Printed and non- print. (List to be provided by the concerned teacher). Reflection: Students will learn the different sources of information in health science.	CLO 2

Unit III/ 11 Hours	Health Science Information Institutions: National Medical Library. WHO. ICMR. Department of Biotechnology. Council of Ayurveda and Siddha. Council of Homoeopathy. National Institute of Health and Family Welfare. CDRI. CFRI. CFTRI. NIN. NII. NIC. Reflection: Compare the services of different types of health science information institutions.	CLO 3
Unit IV/ 11 Hours	Information Systems and Networks: HELLIS, MEDLARS, BIOSIS. Trends in Health Science Information System. Application of Hypertext, Hypermedia, Multimedia. Expert System and Artificial Intelligence. Reflection: Compare information systems and networks information services.	CLO 4

Transaction Mode: Lectures, PPT, Collective thinking, YouTube, Discussion

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*.
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.

Course Code: MLIS.433

**Course Title: Law Library and Information
System Total Hours: 45 Hours**

L	T	P	Cr	Ch
3	0	0	3	3

Course Learning Outcomes

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

- CLO1: Conceptualise the nature and characteristics of legal information.
- CLO2: Determine the information sources and products related to legal studies.
- CLO3: Critically analyse the information systems in the legal domain and networks that disseminate legal information
- CLO4: Summarise the process for legal information for end-user support

Unit/Hours	Content	Mapping with CLOs
Unit I/ 12 Hours	Legal Information: Nature and characteristics: Its role, generation and utilisation. Legal information life cycle: stages, workflow, etc. Different types of information sources: Primary, secondary and tertiary. Users of legal information: Categories, role, functions, and need. Reflection: Learn about different sources of legal information.	CLO 1

Unit II/ 11 Hours	Legal Information Sources and Services: Sources of Information: Directories, Digests, Research Reports, Trade Literature, Case laws, Company Profiles, Patent, Design and TradeMarks, Standards, Gazettes, Databases. Information services: CAS, SDI, Technical Enquiry Service, other online services. Reflection: Compare different sources and services of legal information.	CLO 2
Unit III/ 11 Hours	Legal Information Institutions and Networks: Information Networks: an overview of legal Information Networks. Institutions generating legal information : Supreme Court of India, High Courts of India, Tribunals, District Courts, Lok Adalats, etc. International organisation in legal information dissemination: WorldLII, CommonLII, LIIofIndia. Reflection: Compare the services of legal information institutions and networks.	CLO 3
Unit IV/ 11 Hours	Legal Information Management and evaluation: Database System: Online and Offline legal information databases. Legal Information System: Planning, designing, maintaining and updating; search operators, search strategies, etc. Legal information systems: LexisNexis, Westlaw, Indlaw, Manupatra, etc. Legal information literacy. Reflection: Compare the features of different legal information systems.	CLO 4

Transaction Mode: Lectures, PPT, Collective thinking, YouTube, Discussion, Demonstrations.

Suggested Readings

- Armstrong, C. J., & Large, J. A. (Eds.). (2018). *Manual of online search strategies*. Routledge.
- Armstrong, C. J., and Laurence W. Bebbington (2004). *Staying Legal: A Guide to Issues and Practice Affecting the Library, Information, and Publishing Sectors*. London: Facet
- Sankaran, K. (Ed.). (2008). *Towards Legal Literacy: An Introduction to Law in India*. Oxford University Press.
- Pandurangan, K.(2009). *E-Justice: Practical Guide for the Bench and Bar*. Delhi: Universal Law Publishing
- Pester, David. *Finding Legal Information: A Guide to Print and Electronic Sources*. Oxford, UK ; Rollinsford, NH: Chandos, 2003. Print.
- Tucker, Virginia, and Marc Lampson. *Finding the Answers to Legal Questions: A How-to-do-it Manual*. New York: Neal-Schuman, 2011. Print.
- Dane, J., & Thomas, P. A. (1987). *How to use a law library*. London: Sweet & Maxwell.

Course Code: MLIS.429

Course Title: Social Science Information Sources and System

Total Hours: 45 Hours

L	T	P	Cr	Ch
3	0	0	3	3

Course Learning Outcomes

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

- CLO1: Examine the Structure and Development of Social Sciences.
- CLO2: Critically analyse the various information sources related to social sciences.
- CLO3: Assess the functions of social science information institutions
- CLO4: Evaluate the information systems associated with social science.

Unit/Hours	Content	Mapping with CLOs

Unit I/ 13 Hours	Structure and Development of Social Sciences: Social Sciences: Definition, scope, landmarks and research trends in the disciplines of Political Science, Economics, Sociology, Psychology, History. Reflection: Discuss the research trends in social sciences.	CLO 1
Unit II/ 12 Hours	Social Science Information Sources: 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. EBSCO. ECONLIT, PsychINFO, RePEC. Reflection: Evaluate the different information sources in social science.	CLO 2
Unit III/ 10 Hours	Social Science Information Institutions: 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. Reflection: Discuss the information services of various social science information institutions.	CLO 3

Unit IV/ 10 Hours	Social Science Information System: 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. Merger of International Social Science Council (ISSC) with International Council for Science. International Committee for Social Science Information and Documentation (ICSSD). Social Science Research Network (SSRN). Reflection: Evaluate the information associations, systems and networks in social sciences.	CLO 4
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Transaction Mode: Lectures, PPT, Collective thinking, YouTube, Discussion

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: MLIS.434

Course Title: Multilingual Information Systems for Libraries

Total Hours: 45

Course Learning Outcomes:

L	T	P	Cr	Ch
3	0	0	3	3

After completion of the course, scholars shall be able to:

- CLO1: Explain the importance of multilingualism in libraries and analyze the challenges of information access across languages.
- CLO2: Identify multilingual information sources and apply strategies to offer inclusive user services.
- CLO3: Evaluate the systems and standards used to manage multilingual content in libraries.
- CLO4: Design library services and interfaces using emerging technologies for multilingual user access.

Course Contents

Unit/Hours	Content	Mapping with CLOs
Unit I (12 hours)	Foundations of Multilingualism in Information Systems Concept of multilingualism and its relevance to libraries Language diversity in India and global contexts Challenges in multilingual information retrieval (MLIR) Role of multilingual thesauri, controlled vocabularies, and classification schemes (e.g., UDC, LCSH) Reflection: Importance of multilingualism in libraries and the challenges of information access across languages.	CLO 1

Unit II (10 hours)	Multilingual Information Sources and Services Types of multilingual information sources: dictionaries, encyclopedias, subject portals Multilingual digital repositories (e.g., Europeana, NVLI) Government and institutional multilingual initiatives (e.g., Digital India, Bhashini, Sahapedia) Designing reference and user services in multilingual environments Reflection: multilingual information sources and strategies to offer inclusive user services.	CLO 2
Unit III (12 hours)	Systems and Standards for Multilingual Information Management Unicode, UTF-8, and encoding standards Multilingual metadata standards (e.g., Dublin Core, MODS, MARC21) Managing multilingual information in Open-source library management systems (Koha, DSpace, VuFind) Language tagging, transliteration, and NLP support in LIS systems Reflection: assess the systems and standards used to manage multilingual content in libraries.	CLO 4

Unit IV (11 hours)	Emerging Trends and Technologies in Multilingual Information Access Machine translation, Cross-Language Information Retrieval (CLIR), and AI/ML applications in Translation Services. Multilingual knowledge graphs and linked data Voice search and multilingual virtual assistants in libraries Designing inclusive digital libraries for diverse linguistic users Reflection: Understand the design of library services and interfaces using emerging technologies for multilingual user access.	CLO 4
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Transaction Mode

Lecture, Discussions, Presentations, Invited Lectures.

Suggested Readings

Books & Reports:

1. Lancaster, F.W. (2003). *Indexing and Abstracting in Theory and Practice*.
2. Bhattacharya, G. (2011). *Library Classification: Principles and Practice*.
3. UNESCO (2021). *Multilingualism in Cyberspace: Policy and Practice*.
4. IFLA (2012). *Multicultural Communities: Guidelines for Library Services*.

Digital Resources:

- Europeana.eu
- [National Virtual Library of India \(NVLI\)](http://NationalVirtualLibraryofIndia.org)
- [Bhashini - Indian Language A](http://Bhashini.org)

SEMESTER – II

Course Code: MLIS.451

Course Title: Research Methodology

Total Hours: 45 Hours

L	T	P	Cr	Ch
3	0	0	3	3

Course Learning Outcomes

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

- CLO1: Conceptualise research, research methods and research design.
- CLO2: Critically examine the process of data collection, data analysis and usage of statistical techniques and software packages for research.
- CLO3: Develop skills in preparing research proposals, citation styles and avoiding plagiarism.
- CLO4: Evaluate the indicators used for assessing research impact.

Unit/Hours	Content	Mapping with CLOs
Unit I/ 12 Hours	Concept of Research: 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. Review of Literature. Hypothesis. Sampling Techniques. Reflection: Explore the different types of research methods and designs.	CLO 1

Unit II/ 11 Hours	Research Methods and Statistical Techniques. Methods of Data Collection: Questionnaire, Interview, Observation, Library Records, Scales and Checklist. Statistics- Data and Variables. Correlation, Regression and Cross Tabulation. Statistical Packages – Spreadsheet, JASP. Reflection: Students will explore and analyse different methods of data collection.	CLO 2
Unit III/ 11 Hours	Research Report Writing: Research Proposal and Report Writing and Citation Tools. Reference Management Tools. Evaluation of Research Report. Publication Ethics: Definition, Introduction, Importance, and Best Practices/ Standards Setting Initiatives and Guidelines: COPE, WAME, etc. Publication Misconduct: Definition, Concept, Problems that lead to Unethical Behaviour and Vice Versa. Reflection: Students will learn the structure of research proposal and report writing including reference management tools.	CLO 3
Unit IV/ 11 Hours	Research Metrics: Metric Studies in LIS - Bibliometrics, Scientometric, Webometrics, Altmetrics. Journal Impact Factor. Institutional and Author level metrics; h-Index, g-Index, i10 Index. Research Trends in Library and Information Science. Reflection: Discuss different research metrics and their utility.	CLO 4

Transaction Mode: Lectures, PPT, Collective thinking, YouTube, Discussion

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, Ronald 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.
20. Satija, M. P., Martínez-Ávila, D., & Swain, N. K. (Eds.). (2019). *Plagiarism: An international reader*.

Course Code: MLIS.516

Course Title: Knowledge Organisation – Cataloguing and Metadata (Theory)

L	T	P	Cr	Ch
2	0	0	2	2

Total Hours: 30 Hours

Course Learning Outcomes

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

- CLO1: Critically compare different forms of catalogue
- CLO2: Analyse the different entries rendered in catalogues
- CLO3: Justify the need and purpose of union catalogues
- CLO4: Explore the modern practices and recent trends in cataloguing

Unit/Hours	Content	Mapping with CLOs
Unit I/ 08 Hours	Library Catalogue: Definition, need, objectives and functions. Physical forms of Library Catalogue: Conventional and non-conventional. Types of Catalogue: Dictionary Catalogue, Classified Catalogue, Alphabetico-Classified Catalogue	CLO 1

	Reflection: Compare different forms and types of catalogues.	
Unit II/ 08 Hours	Descriptive and Subject Cataloguing Catalogue Entries: Main entry and Added entries (According to CCC 5th ed. and AACR-2). Subject Cataloguing: Meaning, purpose, objectives and principles. Subject heading lists and their features. (Chain Procedure and Sears List of Subject Headings). Authorship: Personal and corporate - Their choice and rendering. Reflection: Understand the theoretical aspects of descriptive and subject cataloguing.	CLO 2
Unit III/ 07 Hours	Normative Principles of Cataloguing: Canons and principles of cataloguing. Cooperative and Centralised Cataloguing: Union Catalogue: Concept, purpose and examples: IndCat, WorldCat and Union Catalogues of DELNET. CIS, CIP and Pre-Natal cataloguing. Selective and Simplified Cataloguing. Authority File, Shelf List, ISBN, ISSN, ISBD(2021). Reflection: Understand the various normative principles in cataloguing and analyse the different union catalogues.	CLO 3

Unit IV/ 07 Hours	Current Trends in Resource Description Generations of OPAC: OPAC, Web OPAC, MOPAC Standards of Bibliographic Record Formats and Description – ISBD, MARC 21, CCF, RDA, FRBR, Bibframe. Standards for Bibliographic Information Interchange & Communication – ISO 2709, Z39.50 etc. Metadata Standards: Dublin Core, METS, MODES, EAD. Reflection: Understand the concept of metadata and current trends in cataloguing.	CLO 4
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Transaction Mode: Lectures, PPT, Collective thinking, YouTube, Discussion

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.
11. Satija, M. P. (2020). *Cutter-Sanborn three-figure author table supplemented with Indian names*.

Course Code: MLIS.517

Course Title: Management of Libraries and Information Centers

Total Hours: 30 Hours

Course Learning Outcomes

L	T	P	Cr	Ch
2	0	0	2	2

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

- CLO1: Analyse the different schools of management thought
- CLO2: Ascertain the process of managing resources in the library
- CLO3: Explore the concepts of human resource management
- CLO4: Critically examine the process managing financial aspects of the library.

Unit/Hours	Content	Mapping with CLOs
I/ 8 Hours	Schools of Management Thought: Classical, Neo-classical and Modern management theories. Principles of Scientific Management. Fayol's Principles. Functions of Management (POSDCORB). Reflection: Understand the social and practical aspects of school of management thought.	CLO 1
II/ 7 Hours	Library Resource Management: Library and Information Centres 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. Reflection: Understand the concept of Library resource management.	CLO 2

III/ 8 Hours	Human Resource Management: Human Resource Management – Planning, Job Analysis, Job Description, Job Evaluation, Selection, Recruitment, Motivation, Training and Development, Performance Appraisal. Project Management - SWOT, PERT/CPM. Total Quality Management (TQM), Management Information System (MIS), MBO, Change Management Reflection: Understand the concept of human resource management in libraries and information centres.	CLO 3
IV/ 7 Hours	Financial Management and Marketing of Library products and services: Financial Management in Libraries - Sources of Finance, Resource Mobilisation, Budgeting Methods; Cost Effective and Cost Benefit Analysis, Annual Reports & Statistics; Library Authority and Committee, Marketing of Library products and services. Reflection: Understand the financial management in library and information centres and marketing of library products and services	CLO 4

Transaction Mode: Lectures, PPT, Collective thinking, YouTube, Discussion

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: MLIS.518

Course Title: Information Storage and Retrieval

Total Hours: 30 Hours

Course Learning Outcomes

L	T	P	Cr	Ch
2	0	0	2	2

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

- CLO1: Analyze the types of indexing systems and their techniques.
- CLO2: Critically examine the usefulness of vocabulary control in information retrieval.
- CLO3: Evaluate the various search strategies used for retrieving information.
- CLO4: Assess the techniques for evaluating information retrieval systems.

Unit/Hours	Content	Mapping with CLOs
Unit I/ 07 Hours	Indexing Systems and Techniques: Assigned and Derived Indexing. Pre Coordinate and Post Coordinate indexing. Chain Indexing, PRECIS, POPSI. Key Word Indexing. Citation Indexing: Features of Scopus. Web of Science, Google Scholar. Reflection: Compare the different indexing systems.	CLO 1
Unit II/ 08 Hours	Vocabulary Control: Vocabulary Control: Need, Purpose, Functions, types and characteristics. Vocabulary Control Tools. Subject Headings: Library of Congress Subject Headings and Sears List of Subject Headings. Thesaurus. Reflection: Comprehend the practical implications of vocabulary control in libraries.	CLO 2

Unit III/ 08 Hours	Information Searching and Media: Search Methods and Search Strategy: Boolean Search, Heuristic Search, Proximity Search, Phrase Search, Truncation search etc. Federated Search: Concept and Features. Web-Scale Discovery System (WSDS): Concept and Features. Data Mining Reflection: Understand the search methods and search strategy.	CLO 3
Unit IV/ 07 Hours	Information Retrieval System and Abstracting System: Abstracting: Concept, characteristics, 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. Reflection: Understand and analyse various aspects of information retrieval system.	CLO 4

Transaction Mode: Lectures, PPT, Collective thinking, YouTube, Discussion

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.
10. Satija, M. P. (2019). *User's guide to the Sears list of subject headings (2nd ed.)*.

Course Code: MLIS.519

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

Total Hours: 90 Hours

Course Learning Outcomes

L	T	P	Cr	CH
0	0	6	3	6

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

- CLO1: Develop skill set for cataloguing various types of documents using AACR 2.
- CLO2: Apply AACR-2 to catalogue documents which have corporate authorship.
- CLO3: Develop skill set and develop insights for cataloguing documents using CCC
- CLO4: Hands-on learning Machine Readable Cataloguing (MARC) and online cataloguing techniques

Unit/Hours	Content	Mapping with CLOs
Unit I/ 20 Hours	Anglo American Cataloguing Rules, 2nd ed. 1988: Single authorship. Joint authorship. Collections and works produced under editorial direction. Works produced by Collaborators. Revised Works. Adapted Texts. Biographical works. Pseudonyms. Sacred scriptures and Multi-volume documents. Note: Sears List of Subject Headings will be followed for Subject Cataloguing. Reflection: Understand cataloguing various types of documents using AACR 2.	CLO 1

Unit II/ 30 Hours	AACR – 2: Corporate authorship Government bodies: Executive, Legislative, Judiciary; Institutions, Associations, Conferences Proceedings). Composite books (With and without collective title page, bound with). Computer files. Sound recordings. Motion pictures and Video recordings. Serials. Note: Sears List of Subject Headings will be followed for Subject Cataloguing. Reflection: Understand cataloguing of documents which have corporate authorship.	CLO 2
Unit III/ 20 Hours	Classified Catalogue Code, 5th ed. by Dr. S.R. Ranganathan: Single authorship. Joint authorship. Works produced by Collaborators. Adapted Texts. Pseudonyms. Multi-volume documents. Corporate authorship (Government bodies: Executive, Legislative, Judiciary; Institutions, Associations, Conference Proceedings). Composite books (ordinary and artificial). Festschrift volumes. Serials. Reflection: Understand cataloguing documents using CCC. Note: Chain Procedure will be followed for Subject Cataloguing.	CLO 3
Unit IV/ 20 Hours	Subject Cataloguing: MARC 21. LCSH (Library of Congress Subject Heading). Reflection: Understand Machine Readable Cataloguing (MARC) and online cataloguing techniques.	CLO 4

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: MLIS.520

Course Title: Application of Library Automation and Digital Libraries (Practical)

Total Hours: 90 Hours

Course Learning Outcomes

L	T	P	Cr	Ch
0	0	6	3	6

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

- CLO1: Design a fully-fledged automation system for various functions of the library.
- CLO2: Understand and practice the process of Digitization to Create a Institutional repository using Dspace

Unit/ Hours	Content	Mapping with CLOs
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Unit I/ 45 Hours	Library Automation Practice: Full Practice of Koha including these modules • Cataloguing • Authorities • Circulation & Offline circulation • Patron management • Acquisitions • Serials management • OPAC • Koha Administration • Inventory • Course Reserves • Reporting Module • Label printing & multi-format notices • Library News Publisher Introductory practice of NewGenLib, SOUL, E-granthalaya Reflection: Understand various functions of library automation software	CLO 1
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Unit II/ 15 Hours	Essentials for a Digitization Project Hardware & Software Handling: Operating flatbed/ADF scanners; using scanning softwares for image enhancement and noise reduction. Using mobile as Scanners. File Formats & OCR: Creating archival formats (TIFF) and access formats (JPEG, PDF/A); applying Optical Character Recognition (OCR) to make documents searchable. Application of Metadata Standard: Extracting and structuring bibliographic data using Dublin Core elements. Reflection: Understand and practice the process of Digitization.	CLO 2
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Unit III/ 30 Hours	Digital Library Creation & Maintenance (DSpace) System Architecture & Setup: Architectural Familiarization and Installation of Dspace; UI Customization (Introduction to the DSpace 9 backend (REST API) and modern Angular user interface) Repository Hierarchy: Building the Institutional Hierarchy (Structuring the repository by creating Communities, Sub-communities, and Collections.) Ingest & Workflow Management: End-to-End Item Submission(Manual submission of the digitized items from Part A); Implementing Workflows and Quality Control (metadata assignment, and setting up review/approval workflows.) Maintenance & Administration: Access Management and Security(Customizing the frontend interface, managing E-People (users) and Groups, and setting access policies (Open Access vs. Restricted). Batch Importing Data Discovery and OAI-PMH Harvesting Validation Reflection: Understand the design and develop a digital library or Repository.	CLO 2
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Evaluation Criteria: Total Marks

- 50 Marks

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.
7. *DSpace 9.x Documentation—DSpace 9.x Documentation—LYRASIS Wiki*. (n.d.). Retrieved 13 April 2026, from <https://wiki.lyrasis.org/display/DSDOC9x/DSpace+9.x+Documentation>
8. *DSpace Home*. (n.d.). DSpace. Retrieved 13 April 2026, from <https://dspace.org/>
9. *DSpace Repository*. (n.d.). GitHub. Retrieved 13 April 2026, from <https://github.com/DSpace>

Course Code: MLIS.506

Course Title: Scholarly Communication and Information Literacy Skills

Total Hours: 30 Hours

Course Learning Outcomes

L	T	P	Cr	Ch
2	0	0	2	2

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.
- Understand the uses of resources and research support tools for scholarly communication.

Unit/Hours	Content	Mapping with CLOs
Unit I/ 7 Hours	Fundamentals of Information Literacy: Descriptions of Data, Information and Knowledge Concept of Information Literacy. Benefits of being Information Literate. Need for Information in different disciplines. Reflection: Understand the benefits of information literacy.	CLO 1
Unit II/ 7 Hours	Types and formats of information sources: Printed sources and electronic sources. Primary, secondary, and tertiary sources. Published and unpublished sources. Open Access and Subscription based sources. General and Scholarly sources. Reflection: Comprehending the different types and format of information sources.	CLO 2

Unit III/ 8 Hours	Methods for selection, evaluation and retrieval of information. Knowledge organisation in the 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. Reflection: Comprehend the implications of the concepts.	CLO 3
Unit IV/ 8 Hours	Scholarly Resources and Research Support Tools: Scholarly Communication: Definition, Stakeholders and their Activities. Reference Management Systems: Mendeley, Zotero. Academic SNSs: ResearchGate, Academia.edu. ORCID. Plagiarism: Concept, Types and Detection Tools. Reflection: Use of various Scholarly resources and tools.	CLO 4

Transaction Mode: Lectures, PPT, Collective thinking, YouTube, Discussion.

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](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).

Course Code: LIS.507

Course Title: AI-Assisted Social Informatics

Total Hours: 30

L	T	P	Cr	Ch
2	0	0	2	2

Course Learning Outcomes: After completion of the course, scholars shall be able to:

- CLO1: Describe the foundational concepts of AI and explain its relevance in social informatics.
- CLO2: Analyse how AI influences digital discourse, social interactions, and collective behavior.
- CLO3: Evaluate ethical issues and societal consequences of AI in institutional and civic contexts.
- CLO4: Design AI-informed interventions or applications for addressing real-world societal issues.

Course Contents

Unit/Hours	Content	Mapping with CLOs
Unit I/ 6 Hours	Foundations of AI and Social Informatics: <i>Introduction to Social Informatics:</i> scope and significance, <i>Key concepts in AI:</i> machine learning, NLP, data mining, <i>Evolution of AI in social systems:</i> history and future directions, Human-technology interaction and the digital divide. Reflection: Understanding various concepts of AI and its relevance in social informatics.	CLO 1

Unit II/ 9 Hours	AI and Social Media, Networks, and Behavior: <i>AI in digital communication:</i> bots, influencers, and algorithms, Sentiment analysis and opinion mining on social platforms, <i>AI and online behavior:</i> personalization, echo chambers, misinformation, <i>Case studies:</i> TikTok, Twitter, Facebook, YouTube. Reflection: Explore and compare the AI techniques and various Data sources for social informatics.	CLO 2
Unit III/ 8 Hours	AI, Society, and Ethics: Algorithmic bias, fairness, and discrimination, Surveillance capitalism, privacy, and data ownership, AI in governance, education, justice, and employment, <i>Ethics frameworks:</i> Explainable AI, Human-in-the-loop systems. Reflection: Analyzing and Evaluating the ethical issues and societal consequences.	CLO 3
Unit IV/ 7 Hours	Designing Socially Responsive AI Solutions: Participatory AI design and inclusive tech development, <i>Tools and methods:</i> citizen science, social data analysis (e.g., Orange, NodeXL), Prototyping ethical AI apps for social challenges (e.g., education, health, civic participation), Presentations and peer-feedback. Reflection: Students will be able to design AI-informed interventions for addressing societal issues.	CLO 4

Transaction Mode

Lecture, Hand-On Lab, Recorded Lectures, YouTube, Case-based Discussions, Tool Demos, Invited Lectures.

Evaluation criteria

The Evaluation will be as per the guidelines received from the DIA office as followed for previous Interdisciplinary Courses (IDC). The course coordinator shall conduct the evaluation.

Suggested Readings

Bradley, F. (2024). 7 The policy context of artificial intelligence. In *New Horizons in Artificial Intelligence in Libraries* (pp. 71–81). De Gruyter. <https://doi.org/10.1515/9783111336435-008>

Eubanks, V. (2018). *Automating inequality: How high-tech tools profile, police, and punish the poor*. St. Martin's Press. <https://us.macmillan.com/books/9781250074317/automatinginequality>

Fernandez-Luque, L., & Imran, M. (2018). Humanitarian health computing using artificial intelligence and social media: A narrative literature review. *International Journal of Medical Informatics*, 114, 136–142. <https://doi.org/10.1016/j.ijmedinf.2018.01.015>

Fichman, P., Sanfilippo, M. R., & Rosenbaum, H. (2015). *Social informatics evolving*. Springer Nature. <https://link.springer.com/book/10.1007/978-3-031-02297-5>

Gamble, A. (2020). Artificial intelligence and mobile apps for mental healthcare: A social informatics perspective. *Aslib Journal of Information Management*, 72(4), 509–523. <https://doi.org/10.1108/AJIM-11-2019-0316>

Kelleher, J. D. (2019). *Deep learning*. MIT Press. <https://mitpress.mit.edu/9780262537551/deep-learning/>

Kling, R. (2007). What is social informatics and why does it matter? *The Information Society*, 23(4), 205–220. <https://doi.org/10.1080/01972240701441556>

Kling, R. (Ed.). (1996). *Computerization and controversy: Value conflicts and social choices* (2nd ed.). Academic Press.

Miao, F., Holmes, W., Huang, R., & Zhang, H. (2021). *AI and education: Guidance for policy-makers*. UNESCO Publishing. <https://unesdoc.unesco.org/ark:/48223/pf0000376709>

O'Neil, C. (2016). *Weapons of math destruction: How big data increases inequality and threatens democracy*. Crown Publishing Group. <https://www.penguinrandomhouse.com/books/247588/weapons-of-math-destruction-by-cathy-oneil/>

Russell, S. J., & Norvig, P. (2016). *Artificial intelligence: A modern approach* (3rd ed.). Pearson. <https://aima.cs.berkeley.edu/>

Wang, F. Y., Carley, K. M., Zeng, D., & Mao, W. (2007). Social computing: From social informatics to social intelligence. *IEEE Intelligent Systems*, 22(2), 79–83. <https://doi.org/10.1109/MIS.2007.39>

Course Code: MLIS.508

Course Title: Foundations of Research Evaluation

Total Hours: 30 Hours

L	T	P	Cr	Ch
2	0	0	2	2

Course Learning Outcomes

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

- CLO1: Understand the process of research in Sciences and Social Sciences
- CLO2: Understand the process of scholarly communication
- CLO3: Understand the various metrics involved in research evaluation.
- CLO4: Analyse the process of institutional rankings.

Unit/Hours	Content	Mapping with CLOs
Unit I/ 8 Hours	Basics of Research Evaluation: Research in Sciences and social Sciences. Research Evaluation: Ex ante and ex post. Research funding and fellowships. Research Proposal for funding agencies Reflection: Contemplate on research in sciences and social Sciences and the importance of research funding.	CLO 1
Unit II/ 7 Hours	Scholarly Communication: Concept of scholarly communication. Stakeholders in scholarly communication. Peer review process. Migration of peer-reviewed journals from print to Web-based. Open Access Publishing and its impact on journals. Creative Commons. Reflection: Discuss publishing models and impact of open access publishing	CLO 2

Unit III/ 8 Hours	Research evaluation metrics: Concept of bibliometrics. Citation analysis. Journal Level Metrics: Journal Impact Factor, Citescore, SNIPP. Author-level metrics: h-index, g-index, m-quotient index, i-10 index. Altmetrics. Reflection: Discuss and calculate the various metrics involved in research evaluation.	CLO 3
Unit IV/ 7 Hours	Ranking of Institutions: Approaches in ranking of institutions. Issues and Challenges in ranking of institutions. World University Rankings. National Institutional Ranking Framework (NIRF). Reflection: Contemplate upon the process of institutional rankings.	CLO 4

Transaction Mode: Lectures, PPT, Collective thinking, YouTube, Discussion.

Suggested Readings

- Cronin, B. (2005). *The hand of science: Academic writing and its rewards*. Scarecrow Press.
- Leydesdorff, L. (2001). *The challenge of scientometrics: The development, measurement, and self-organization of scientific communications*. Universal-Publishers.
- Rao, I. K. R. (2010). *Growth of literature and measures of scientific productivity: Scientometric models*. Ess Ess Publications.
- Smith, K. L., & Dickson, K. A. (2016). *Open access and the future of scholarly communication: policy and infrastructure* (Vol. 9). Rowman & Littlefield.
- Sooryamoorthy, R. (2020). *Scientometrics for the Humanities and Social Sciences*. Routledge.
- Sugimoto, C. (2016). *Theories of informetrics and scholarly communication*. De Gruyter.
- Thelwall, M. (2009). Introduction to webometrics: Quantitative web research for the social sciences. *Synthesis lectures on information concepts, retrieval, and services*, 1(1), 1-116.

Web-based resources

- DORA Website (n.d). <https://sfdora.org>

Course Code: MLIS.511

Course Title: R and Python Libraries for the Social Sciences and Humanities

Total Hours: 30

L	T	P	Cr	Ch
2	0	0	2	2

Course Learning Outcomes:

After completion of the course, scholars shall be able to:

- CLO1: Learn the Various Concepts of Computer Programming
- CLO2: Understand the Use of R & Python and Its Syntaxes
- CLO3: Learn about Various R and Python Packages for Data Science Applications
- CLO4: Writing Programs for Data Science Applications

Course Contents

Unit/Hours	Content	Mapping with CLOs
Unit I/ 6 Hours	Introduction to Programming Languages and Its Use: Programming Languages. Applications of Programming Languages. Reflection: Discuss the various concepts of computer programming.	CLO 1
Unit II/ 10 Hours	Concepts and Syntaxes in R & Python Programming: Installation of R, R-Studio, Syntaxes and Libraries in R. Installation of Python, IDEs for Python, Syntaxes of Python. Basic Concepts of Data Structures (DS), DS in R & Python. Basic Concepts of Simple Algorithms, Implementation in R & Python. Reflection: Compare the syntax of R and Python.	CLO 2

Unit III/ 5 Hours	Data Science Applications in Various Disciplines: Arts & Humanities: Exploring Various Libraries, Packages & Projects. Sciences: Exploring Various Libraries, Packages & Projects. Social Sciences: Exploring Various Libraries, Packages & Projects. Reflection: Analyse the applications of data science.	CLO 3
Unit IV/ 11 Hours	Developing Programs for Data Analysis: Version Control and IDEs. Program Development. Developing R-Packages. Developing Python Projects. Reflection: Develop programmes for practical programming.	CLO 4

Transaction Mode

Lecture, Hand-On Lab, Recorded Lectures, YouTube, Discussion following GitHub & Stack overflow, Invited Lectures.

Evaluation criteria

There shall be an end term evaluation of the course for 50 marks for a duration of 2 hours. (Which will include development of a program with Open Book/internet.) The course coordinator shall conduct the evaluation.

Suggested Readings

- Peng, R. D. (2016). *R programming for data science* (pp. 86-181). Victoria, BC, Canada: Leanpub.
- Tippmann, S. (2015). Programming tools: Adventures with R. *Nature*, 517(7532), 109-110.
- Matloff, N. (2011). *The art of R programming: A tour of statistical software design*. No Starch Press.
- Brooker, P. D. (2019). *Programming with Python for Social Scientists*. Sage.
- Grus, J. (2019). *Data science from scratch: first principles with python*. O'Reilly Media.
- Chambers, J. M. (2008). *Software for data analysis: programming with R* (Vol. 2). New York: Springer.
- Kaya, E., Agca, M., Adiguzel, F., & Cetin, M. (2019). Spatial data analysis with R programming for environment. *Human and ecological risk assessment: An International Journal*, 25(6), 1521-1530.
- Braun, W. J., & Murdoch, D. J. (2021). *A first course in statistical programming with R*. Cambridge University Press.
- Singh, A. K., & Allen, D. E. (2017). *R in Finance and Economics: A Beginner's Guide*.
- Fox, J., & Andersen, R. (2005). Using the R statistical computing environment to teach social statistics courses. *Department of Sociology, McMaster University*, 2-4.

- Edelman, A., Wolff, T., Montagne, D., & Bail, C. A. (2020). Computational Social Science. *Annual Review of Sociology*, 46.
- Igual, L., & Seguí, S. (2017). Introduction to data science. In *Introduction to Data Science* (pp. 1-4). Springer, Cham.

Web Resources

- <https://cran.r-project.org/>
- <https://www.rstudio.com/>
- <https://pypi.org/>
- <https://www.anaconda.com/>
- <https://github.com/>
- <https://datascience.stackexchange.com>
- <https://stackoverflow.com/questions/tagged/data-science>
- <https://www.edx.org/course/python-for-data-science-2>

Course Code: MLIS.512

Course Title: AI Literacy

Total Hours: 30

L	T	P	Cr	CH
2	0	0	2	2

Course Learning Outcomes:

After completion of the course, scholars shall be able to:

- CLO1: Explain the fundamental principles of AI and summarize its potential impacts and ethical concerns in academic research.
- CLO2: Apply AI tools for literature review and demonstrate efficient retrieval and evaluation of scholarly information.
- CLO3: Analyse research datasets using AI-supported tools and evaluate outcomes for academic rigor.
- CLO4: Create research manuscripts using AI tools while justifying ethical use in scholarly communication.

Course Contents

Unit/Hours	Content	Mapping with CLOs
Unit I/ 6 Hours	Foundations of AI and its Role in Research: <i>Overview of Artificial Intelligence:</i> Concepts and history, <i>Core AI technologies:</i> Machine learning, NLP, neural networks, Relevance of AI in modern research ecosystems, Ethical considerations and responsible AI in research. Reflection: Discuss the various concepts of AI and its Role in Research.	CLO 1
Unit II/ 9 Hours	AI for Literature Review and Information Retrieval: AI-enabled academic search tools (e.g., Semantic Scholar, Connected Papers), NLP-based summarization and question answering, AI tools for citation analysis and plagiarism detection, Limitations and biases in AI algorithms and tools. Reflection: Explore and compare the AI tools for literature review.	CLO 2

Unit III/ 8 Hours	AI for Data Handling and Research Analysis: AI in quantitative and qualitative data analysis, Use of AI tools for statistical modelling and visualization, Introduction to Python libraries (e.g., Pandas, Scikit-learn, GPT APIs), Use of Google Colab with Gemini, Automating data workflows and insights generation. Reflection: Analyzing, Evaluating the applications of data handling with AI.	CLO 3
Unit IV/ 7 Hours	AI Tools in Writing, Publishing, and Communication: AI-based writing assistants (Grammarly, ChatGPT, QuillBot, etc.), Tools for formatting, citations, and paraphrasing, AI in journal selection, peer review, and plagiarism detection, Ethical use of AI in scholarly publishing. Reflection: Creating, Evaluating research artifacts using AI tools.	CLO 4

Transaction Mode

Lecture, Hand-On Lab, Recorded Lectures, YouTube, Case-based Discussions, Tool Demos, Invited Lectures.

Evaluation criteria

The Evaluation will be as per the guidelines received from the DIA office as followed for previous Value Added Courses. The course coordinator shall conduct the evaluation.

Suggested Readings and Tools

Bolaños, F., Salatino, A., Osborne, F., & Motta, E. (2024). Artificial intelligence for literature reviews: Opportunities and challenges. *Artificial Intelligence Review*, 57(10), 259. <https://doi.org/10.1007/s10462-024-10902-3>

Chen, P., Wu, L., & Wang, L. (2023). AI fairness in data management and analytics: A review on challenges, methodologies and applications. *Applied Sciences*, 13(18), 10258. <https://doi.org/10.3390/app131810258>

- Dwivedi, R., Dave, D., Naik, H., Singhal, S., Omer, R., Patel, P., ... & Ranjan, R. (2023). Explainable AI (XAI): Core ideas, techniques, and solutions. *ACM Computing Surveys*, 55(9), 1–33. <https://doi.org/10.1145/3561048>
- Gozalo-Brizuela, R., & Garrido-Merchán, E. C. (2023). ChatGPT is not all you need: A state-of-the-art review of large generative AI models. *arXiv*. <https://doi.org/10.48550/arXiv.2301.04655>
- Groumpos, P. P. (2023, July). A critical historic overview of artificial intelligence: Issues, challenges, opportunities, and threats. *Artificial Intelligence and Applications*, 1(4), 181–197. <https://ojs.bonviewpress.com/index.php/AIA/article/view/689>
- Haenlein, M., & Kaplan, A. (2019). A brief history of artificial intelligence: On the past, present, and future of artificial intelligence. *California Management Review*, 61(4), 5–14. <https://doi.org/10.1177/0008125619864925>
- Heidt, A. (2025). AI for research: The ultimate guide to choosing the right tool. *Nature*, 640(8058), 555–557. <https://doi.org/10.1038/d41586-025-01069-0>
- Hosseini, M., Rasmussen, L. M., & Resnik, D. B. (2024). Using AI to write scholarly publications. *Accountability in Research*, 31(7), 715–723. <https://doi.org/10.1080/08989621.2023.2168535>
- Kelleher, J. D. (2019). *Deep learning*. MIT Press. <https://mitpress.mit.edu/9780262035613/deep-learning/>
- Khabib, S. (2022). Introducing artificial intelligence (AI)-based digital writing assistants for teachers in writing scientific articles. *Teaching English as a Foreign Language Journal*, 1(2), 114–124. <https://journal1.uad.ac.id/index.php/tefl/article/view/249>
- Liu, S. C., Wang, S., Lin, W., Hsiung, C. W., Hsieh, Y. C., Cheng, Y. P., ... & Zhang, J. (2023). JarviX: A LLM no code platform for tabular data analysis and optimization. *arXiv*. <https://arxiv.org/abs/2312.02213>
- Lund, B. D., Wang, T., Mannuru, N. R., Nie, B., Shimray, S., & Wang, Z. (2023). ChatGPT and a new academic reality: Artificial Intelligence- written research papers and the ethics of the large language models in scholarly publishing. *Journal of the Association for Information Science and Technology*, 74(5), 570–581. <https://doi.org/10.1002/asi.24750>

- Ma, P., Ding, R., Wang, S., Han, S., & Zhang, D. (2023). Demonstration of InsightPilot: An LLM-empowered automated data exploration system. *arXiv*. <https://arxiv.org/abs/2304.00477>
- Miao, F., Holmes, W., Huang, R., & Zhang, H. (2021). *AI and education: A guidance for policymakers*. UNESCO Publishing. <https://unesdoc.unesco.org/ark:/48223/pf0000376709>
- Passi, S., & Vorvoreanu, M. (2022). Overreliance on AI: Literature review. *Microsoft Research*. <https://www.microsoft.com/en-us/research/publication/overreliance-on-ai-literature-review/>
- Razack, H. I. A., Mathew, S. T., Saad, F. F. A., & Alqahtani, S. A. (2021). Artificial intelligence-assisted tools for redefining the communication landscape of the scholarly world. *Science Editing*, 8(2), 134–144. <https://doi.org/10.599-27/kcse.244>
- Russell, S. J., & Norvig, P. (2016). *Artificial intelligence: A modern approach* (3rd ed.). Pearson. <https://aima.cs.berkeley.edu/>

AI Tools:

- Research: Semantic Scholar, Scite.ai, Research Rabbit, SciSpace
- Writing: Grammarly, ChatGPT, Trinko, QuillBot
- Analysis: GoogleColab, Gemini, ChatGPT
- Plagiarism: Turnitin, Copyscape

Course Code: MLIS.513

Course Title: Dr S R Ranganathan Studies

Total Hours: 30

L	T	P	Cr	Ch
2	0	0	2	2

Course Learning Outcomes:

After completion of the course, scholars shall be able to:

- CLO1: Learn about Dr. S. R. Ranganathan's transformation from Mathematics to Librarianship and his contributions
- CLO2: Understand the Five Laws of Library Science and the concept of Faceted Classification through Colon Classification
- CLO3: Learn about Dr. S. R. Ranganathan's philosophy
- CLO4: Understand his application of various principles of Mathematics and Philosophy in Library Science

Course Contents

Unit/Hours	Content	Mapping with CLOs
Unit I/ 6 Hours	Ranganathan's transformation from Mathematics to Library Science: Life and Times of Ranganathan: Father of Library Movement in India. Ranganathan in International Library and Information Science; Ranganathan Age. Mind of Ranganathan: Formative influences and his research methodology Reflection: Discuss the various aspects of Dr. S. R. Ranganathan's Life and Five Laws of Library Science.	CLO 1

Unit II/ 12 Hours	Dr. S. R. Ranganathan's Contribution towards Knowledge Organisation: Facet analysis, Five Fundamental Categories, Chain indexing. Chain Procedure and Chain Indexing Brief introduction to the Colon Classification and Classified Catalogue Code. Reflection: Discuss the various contributions of Dr. S. R. Ranganathan in Knowledge Organisation	CLO 1 &2
Unit III/ 6 Hours	Dr. S. R. Ranganathan's Contribution towards Reference Service and Library Administration: Theories of reference service and documentation; Five Laws as normative principles of library and Information science; Dr. S. R. Ranganathan's Staff Formula. Reflection: Analyze the applications of Dr. S. R. Ranganathan's principles in libraries	CLO 4
Unit IV/ 7 Hours	Dr. S. R. Ranganathan's contribution towards Library Science education and Library Movement in India: Contribution to Academic Libraries and Library Science Education in India. Establishment of DRTC; Establishment of other teaching departments in universities; Dr. S. R. Ranganathan as a pioneer of Library Movement in the country; His contribution as the first President of ILA. Work for the promotion of public libraries and library legislation in India. Continued relevance in the digital age: Impact of his work on Indian and international librarianship. Reflection: Develop understanding of Dr. S. R. Ranganathan's contribution towards libraries and the profession	CLO 3

Transaction Mode

Lecture, Discussions, Presentations, Invited Lectures.

The Evaluation will be as per the guidelines received from the DIA office as followed for previous Value Added Courses. The course coordinator shall conduct the evaluation.

Suggested Readings

Primary Works by Dr. S. R. Ranganathan

1. Ranganathan, S. R. (1931). *Five laws of library science*. Madras Library Association.
<https://www.librarianshipstudies.com/2017/09/five-laws-of-library-science.html>
Ranganathan, S. R. (1933). *Colon classification* (1st ed.). Madras Library Association.
https://en.wikipedia.org/wiki/Faceted_classification
2. Ranganathan, S. R. (1934). *Classified catalogue code*. Madras Library Association.
3. Ranganathan, S. R. (1937). *Prolegomena to library classification*. Madras Library Association.
4. Ranganathan, S. R. (1963). *Documentation and its facets*. Asia Publishing House.
<https://repository.arizona.edu/bitstream/handle/10150/105426/document.partb.pdf>

Biographical and Analytical Studies

5. Indian Statistical Institute. (n.d.). *S. R. Ranganathan: A short biography*. ISI Bangalore.
<https://www.isibang.ac.in/~library/portal/Pages/SRRBIO.pdf>
6. Connaway, L. S., & Faniel, I. M. (2014). *Reordering Ranganathan: Shifting user behaviors, shifting priorities* (OCLC Research).
OCLC Online Computer Library Center.
<https://www.oclc.org/content/dam/research/publications/library/2014/oclcresearch-reordering-ranganathan-2014.pdf>

7. Wikipedia contributors. (2024). *S. R. Ranganathan*. Wikipedia.
https://en.wikipedia.org/wiki/S._R._Ranganathan

Additional Reference Lists and Digital Archives

8. LISNET. (n.d.). *List of books by S. R. Ranganathan: Father of library science in India*.
<https://lisnet.in/list-of-books-by-s-r-ranganathan-father-of-library-science-in-india/>
9. Open Library. (n.d.). *S. R. Ranganathan*.
https://openlibrary.org/authors/OL8413A/S._R._Ranganathan
10. Raghavan, S., Martinez-Ávila, D., & Almeida, P. (Eds.). (2024). *S. R. Ranganathan: Classic and contemporary views on his life and work*. Ess Publications.
11. Satija, M. P., Chandel, A. S., & Singh, K. P. (Eds.). (2024). *S. R. Ranganathan: Some select Indian studies on his life and work*. Today and Tomorrow Publishers and Printers.
12. Annals of Library and Information Studies 2024 special issue on Ranganathan
13. Annals of Library and Information Studies 2024 special issue on Ranganathan
14. Malhan, I. V., Chandel, A. S., & Satija, M. P. (2016). *Human resources management in library and information centres*. New Delhi: Satija Research Foundation.

L	T	P	CR	CH
2	0	0	2	2

Course Code: MLIS.514

Course Title: Bharatiya Knowledge System

Course type: Elective

Total Hours: 30 Hours

Course Learning Outcomes (CLOs): By the end of this course, students will be able to:

- **CLO1:** Explain the foundations, philosophy, and sources of Bharatiya Knowledge Systems in the context of Library and Information Science.
- **CLO2:** Analyse indigenous methods of knowledge organization, preservation, and transmission in traditional and community knowledge systems.
- **CLO3:** Apply documentation, archival, and digital preservation techniques for indigenous and community knowledge resources.
- **CLO4:** Evaluate the role of libraries, information centres, and emerging technologies in the management and dissemination of Bharatiya Knowledge Systems.

Units / Hours	Contents	Mapping with CLOs
Unit I 7 Hours	Introduction to Bharatiya Knowledge Systems (BKS): Scope and significance of Bharatiya Knowledge Systems (BKS). Vocabulary of BKS. Philosophical foundation of BKS: Vedas, Upanishads, Puranas, Buddhist and Jain literature. Holistic and integral worldview of Bharatiya tradition. Reflection: Students will understand the foundations and philosophy of Bharatiya Knowledge Systems.	CLO 1
Unit II 8 Hours	BKS in Arts, Education, and Ethics: Bharatiya art and architecture: paintings and sculpture. Role of oral tradition and storytelling in preserving knowledge. Knowledge systems in crafts: textiles, pottery, metallurgy. Gurukul, Pathshala, and ancient university systems (Nalanda, Takshashila). Guru-Shishya Parampara. Dharma, Artha, Kama, Moksha – Purusharthas. Role of family and society in ethical development. Role of BKS in nation-building and global harmony. Relevance of Bharatiya ethics in Modern and AI ecosystem. BKS in Sustainable Development: Environmental values in Bharatiya scriptures. Bharatiya models of sustainable living and nature worship. Traditional water management	CLO 2

	and sustainable technologies. Reflection: Reflect on the methods of education and sustainable development in Bharatiya Knowledge Systems.	
Unit III <i>8 Hours</i>	BKS in Science and Technology and Contemporary Relevance: Ancient Bharatiya Mathematicians: Aryabhata, Brahmagupta, Bhaskaracharya, Maharashi Panini. Astronomy, Vedanga Jyotisha, Surya Siddhanta. Ayurveda: Charaka, Sushruta. BKS in modern education and research. National Education Policy 2020 and BKS. Innovation and entrepreneurship based on traditional knowledge. National initiatives for preservation and promotion of Bharatiya Knowledge Systems: BKS Division, Ministry of Education. Role of UNESCO in promotion of BKS. Initiatives of Ministry of Culture and IGNCA for promotion of BKS. Reflection: Reflection on integration of BKS in Science and Technology in NEP 2020.	CLO 3
Unit IV <i>7 Hours</i>	Digital Technologies and Knowledge Management in BKS: Role of libraries in preserving regional and tribal knowledge. Digitization of indigenous knowledge manuscripts. National Mission for Manuscripts. Issues and Challenges in digitalization of Bharatiya Knowledge manuscripts and indigenous knowledge. Knowledge organization tools and Metadata standards for digitalization of BKS. Digital humanities in indigenous knowledge management. Reflection: Students shall be able to evaluate the role of libraries and emerging technologies in the management of Bharatiya Knowledge Systems.	CLO 4

Transaction Mode

Lecture, Recorded Lectures, YouTube, Seminar and Presentations, Invited Lectures.

Evaluation criteria

The Evaluation will be as per the guidelines received from the DIA office as followed for previous Value Added Courses. The course coordinator shall conduct the evaluation.

Suggested Readings:

Books:

1. *Introduction to Indian Knowledge System: Concepts and Applications* by B. Mahadevan et al.
2. *Indian Knowledge System* by Kapil Kapoor and Avadhesh Kumar Singh
3. *Traditional Knowledge System in India* by Amit Jha
4. Kapil Kapoor – Text and Interpretation: The Indian Tradition
5. Subhash Kak – The Astronomical Code of the Rigveda
6. Michel Danino – The Lost River: On the Trail of Sarasvati
7. Lokesh Chandra – Indian Heritage and Culture
8. IGNOU Study Materials on Indian Culture
9. Government of India, IKS Division – NAIKS Portal Resources

Online Courses:

1. Introduction to Indian Knowledge Systems by Bharat Vidya
2. IKS Concepts and Applications in Engineering by CESE, IIT Roorkee
3. IKS – Humanities and Social Sciences by Bhaktivedanta Research Center

Course Code: MLIS.475

Course Title: Communication Skills

Total Hours: 30 Hours

L	T	P	Cr	Ch
2	0	0	2	2

Course Learning Outcomes

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

- CLO1: Infer the concepts involved in the communication process
- CLO2: Analyse the role of languages in the process of communication.
- CLO3: Summarise the structure and functions of technical communication.
- CLO4: Illustrate the editing, editorial process and editorial tools for technical writing.

Unit/Hours	Content	Mapping with CLOs
Unit I/ 08 Hours	Communication Process: Overview of Communication Process. Characteristics Features of Technical Writing. Target Groups in Written Communication. Reader-Writer Relation. Reflection: Understand the communication processes.	CLO 1
Unit II/ 08 Hours	Linguistics: Language as a Medium for Communication of Thought. Functional English Style: Semantics, Syntax and Diction. Readability and Text. Aberrations in Technical Writing Reflection: Students will learn the functional engine style.	CLO 2

Unit III/ 07 Hours	Structure and Functions of Technical Communication 12 hours Structure: Definition, Purpose, Characteristics and Functions. Collection, Organisation and Presentation of Data. Case Studies: Preparation of Short Communication, Review Article, Technical Reports, Monographs, Dissertations and House Bulletins. Reflection: Students will learn the structure and functions of technical communication.	CLO 3
Unit IV/ 07 Hours	Technical Editing and Editorial Tools: The Editor. Editorial Process. Editorial Tools Reflection: Students will learn editorial tools.	CLO 4

Transaction Mode: Lectures, PPT, Collective thinking, YouTube, Discussion

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. WiCLOx, 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.

Course Code: MLIS.476

Course Title: Information Analysis, Consolidation, and Repackaging

Total Hours: 30 Hours

Course Learning Outcomes

L	T	P	Cr	Ch
2	0	0	2	2

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

- CLO1: Conceptualization of Information Analysis, Consolidation and Repackaging.
- CLO2: Evaluate the nature and types of Information products.
- CLO3: Analyse the process of content analysis and abstracting
- CLO4: Assess the significance of Marketing Information products.

Unit/Hours	Content	Mapping with CLOs
Unit I/ 08 Hours	Information Analysis, Consolidation and Repackaging: Concept, need and process. Guiding Principles for arrangement and presentation of ideas in a helpful sequence. Information Consolidation Products: Concepts, types, design, development and methodology. Knowledge and skills required for information analysis and consolidation. Reflection: Understand the information consolidation products.	CLO 1

Unit II/ 08 Hours	Information Products: 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. Reflection: Compare different information products	CLO 2
Unit III/ 07 Hours	Content Analysis, Abstract and Abstracting: Content Analysis: Concept types and processes. Abstract: Definition and types, Characteristics and Qualities of good abstracts. Abstracting: need, process. Computers and Abstracting. Abstracting organisations and Services. Reflection: Students will understand the content analysis and abstracting concepts.	CLO 3
Unit IV/ 07 Hours	Planning, Management and Marketing of an Information Analysis & Consolidation Unit: 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 organisation; Trends in marketing of Information Services and Information Marketing in India. Reflection: Students will comprehend the planning, management and marketing of information products.	CLO 4

Transaction Mode: Lectures, PPT, Collective thinking, YouTube, Discussion

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*. Chandos Publishing
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: MLIS.477

Course Title: Entrepreneurship in Library and Information Sciences

Total Hours: 30 Hours

L	T	P	Cr	Ch
2	0	0	2	2

Course Learning Outcomes:

On the completion of this course, students will be able

- CLO1: To develop understanding about problems and prospects in entrepreneurship.
- CLO2: To gain insights about entrepreneurial with library and information science.
- CLO3: To develop understanding about Socio-Info-entrepreneurship.
- CLO4: To develop insights into entrepreneurship and sustainability.

Unit/Hours	Content	Mapping with CLOs
Unit I/ 8 Hours	Entrepreneurship: Entrepreneurial Structure; Nature, Characteristics, functions and its role in economic development. Entrepreneurship-problems and prospects in India. Entrepreneurial Behaviour and Skills. Reflection: Understand the practical and social implications of entrepreneurship.	CLO 1
Unit II/ 7 Hours	Entrepreneurship and Start-ups: Role of Government, NGOs, Professional Associations, Industry, and Self-Help Groups. Mentorship, Incubation, and Funding opportunities for start-ups. Start-up project plan/proposal. Start-up challenges: Preliminary contracts with the vendors, suppliers, bankers, principal customers. Reflection: Understand the practical and social implications of planing and implementing start-ups.	CLO 2

Unit III/ 8 Hours	Planning, Development and Management of Information products and services, etc. Information Systems: Planning, designing, structure, workflow, evaluation. Assessment of existing information systems (open access and enterprise), different models of information systems, Case studies. Reflection: Understand the planning, evaluation and sustainability issues.	CLO 3
Unit IV/ 7 Hours	Evaluation and Sustainability of Entrepreneurship. Socio-Info Entrepreneurship: Concept, definition, implications, planning, and evaluation. Case studies. Legal Information systems as Socio-Info Entrepreneurship: Open Access: Indian kanoon, India code. Commercial: LexisNexis, Westlaw. Reflection: Discuss the impact of information systems in socio-info entrepreneurship.	CLO 4

Transaction Mode: Lectures, PPT, Collective thinking, YouTube, Discussion

Suggested Readings

1. Carlson, E., & Koch, J. (2018). Building a successful social venture: A guide for social entrepreneurs. Berrett-Koehler Publishers.
2. Eden, B. L. (Ed.). (2008). Content management systems in libraries: case studies. Scarecrow Press.
3. Krautter, M., Lock, M. B., & Scanlon, M. G. (Eds.). (2014). The entrepreneurial librarian: Essays on the infusion of private-business dynamism into professional service. McFarland.
4. Neck, H. M., Neck, C. P., & Murray, E. L. (2019). Entrepreneurship: the practice and mindset 1st Edition. Los Angeles: Sage Publications.
5. Pellen, R., & Miller, W. (2014). Innovation in science and technology libraries. Routledge.
6. Rowley, J. E. (2011). Being an information innovator. London: Facet Publishing.
7. Risk and Entrepreneurship in Libraries: Seizing Opportunities for Change: American Library Association

8. The Harvard Business Review entrepreneur's handbook: everything you need to launch and grow your new business (2018). Boston, Massachusetts : Harvard Business Review Press
9. Willinsky, John. (2006). Access Principle: Case for Open Access to Research and Scholarship. Cambridge: MIT Press, Digital Libraries and Electronic Publishing.

SEMESTER – III

Course Code: MLIS.599-1

Course Name: Dissertation Proposal

Total Hours: 40 Hours

L	T	P	Cr
0	40	0	20

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

- CL01: Conduct research independently on library and information sciences.
- CLO2: Develop analytical and logical thinking in the process of conducting research.
- CLO3: Apply the implications of library science research in generating new knowledge

The work for dissertation shall start in the beginning of the third semester by writing the research proposal for which each student will be allotted a topic. Final dissertation will be submitted at the end of fourth semester on the date to be decided by the department. Following part of the dissertation work has to be completed in third semester itself.

Unit	Topic	Subtopics
Unit I	Selection of Topic	Identifying research gaps; formulating research problem and objectives; discuss ethics to be followed in research.
Unit II	Literature Survey	Strategies for literature search (print, digital, databases); use of bibliographic tools like Scopus, Web of Science, INFLIBNET, Zotero; synthesis and critique writing.

Unit III	Research Design and Methodology	Research paradigms; review the types of research design; quantitative vs qualitative; selecting methods (survey, case study, content analysis, experimental); reliability and validity, pilot study or demonstration should be completed at this stage as per the design.
Unit IV	Proposal Preparation and Presentation	Designing of a research proposal; writing introduction, objectives, scope, limitations, and methodology; presentation of proposal for evaluation and feedback (seminar) It will be expected from students that the starting chapters should be completed at the time of presentation of the research proposal.

Group dissertation/project may be opted, with a group consisting of a maximum of four students. These students may work using a single approach or multidisciplinary approach. Students shall prepare the dissertation research proposal in a group mentioning the name of all members or individually.

- A group consisting of a maximum of four students may work together on one project.
- These students may work using a single approach or multidisciplinary approach.
- The research proposal shall be prepared including the following: Title, Statement of the problem, Literature Review, Objectives of the study, Hypotheses, Scope, Methodology of the study, Conclusion, Bibliography.
- For detail guidelines relating to research proposal, please access the university website: <http://www.cup.edu.in>

SEMESTER – IV

Course Code: MLIS.599-2

Course Name: Dissertation

Total Hours: 40 Hours

L	T	P	Cr
0	40	0	20

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

- CL01: Explain the background, significance, and theoretical framework of the chosen research problem.
- CLO2: Apply appropriate research methods and tools to collect and analyze data.
- CLO3: Critically examine data, research findings, and patterns.

Second Part of Dissertation to be completed in fourth semester.

Unit	Topic	Subtopics
Unit I	Data Collection and Preparation	Designing tools (finalising questionnaires, interview schedules); sampling techniques; field/data collection process; data validation and coding
Unit II	Data Analysis and Interpretation	Use of tools: JASP, SPSS, Excel, R; descriptive and inferential statistics; qualitative coding; thematic analysis; drawing findings
Unit III	Report Writing and Documentation	Writing structure: chapters, tables, figures; citation styles (APA, MLA); referencing tools (Zotero, Mendeley, Endnote); plagiarism check
Unit IV	Submission and Seminar – cum-Viva-Voce	Preparing the final dissertation; abstract and executive summary; submission, Seminar-cum-Viva-Voce.

Students shall be motivated to publish at least one peer-reviewed national/ international paper preferably in Scopus indexed journal before the submission of the dissertation.

Evaluation Criteria- Annexure I

Core, Discipline Elective, and Compulsory Foundation Courses			IDC, VAC, Entrepreneurship, Innovation and Skill Development Courses (<2 credits) or any other theory course of <2 credits	
	Marks	Evaluation	Marks	Evaluation
Internal Assessment	25	Various methods	-	-
Mid-semester test (MST)	25	Descriptive	50	Descriptive (upto 100%) Objective (upto 30%)
End-semester exam (ESE)	50	Descriptive (upto 100%) Objective (upto 30%)	50	Descriptive (upto 100%) Objective (upto 30%)
Dissertation Proposal (Third Semester)			Dissertation (Fourth Semester)	
	Marks	Evaluation		Marks
Supervisor	50	Dissertation proposal and presentation	Supervisor/ co-supervisor(s)	50
HoD and senior-most faculty of the department	50	Dissertation proposal and presentation	External expert	50