

ಮಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ
MANGALORE UNIVERSITY
(Accredited by NAAC Grade)

ಕ್ರಮಾಂಕ/No. : MU/ACC/CR.3/2025-26/A2

ಕುಲಸಚಿವರ ಕಛೇರಿ
ಮಂಗಳಗಂಗೋತ್ರಿ - 574 199
Office of the Registrar
Mangalagangothri - 574 199
ದಿನಾಂಕ/Date:31.07.2025

NOTIFICATION

Sub: Revised syllabus of M.Lib.I.Sc. Programme.

Ref: Academic Council approval vide agenda No.:ಎಸಿಸಿ:ಶೈ.ಮ.ಸಾ.ಸ.1:1
(2025-26) dtd 18.07.2025.

The syllabus of Master of Library and Information Science [M.Lib.I.Sc.] Programme which has been approved by the Academic Council at its meeting held on 18.07.2025 is hereby notified for implementation with effect from the academic year 2025-26 and onwards.

Copy of the Syllabus shall be downloaded from the University Website
(www.mangaloreuniversity.ac.in)


REGISTRAR

To,

1. The Registrar (Evaluation), Mangalore University.
2. The Chairman, PG BOS in Library and Information Science, Mangalore University, Mangalagangothri.
3. The Chairperson, P.G. Department of Library and Information Science, Mangalore University, Mangalagangothri.
4. The Asst. Registrar (ACC), O/o the Registrar, Mangalore University.
5. The Director, DUIMS, Mangalore University – with a request to publish in the website.
6. Guard File.

MANGALORE UNIVERSITY



DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE

Syllabus

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

(Two Years – Four Semesters)

**Under
Choice Based Credit System (CBCS)**

From the Academic Year 2025 - 2026 Onwards

Program Outcomes (PO)

- PO01 Disciplinary knowledge and mastery:** Demonstrate comprehensive knowledge and understanding of major concepts, principles, theories, and laws, related with library and information science including other areas such as types of libraries, knowledge management, information sources and services, their conservation, preservation, archiving, and ICT for various library operations;
- PO02 Critical thinking and analysis:** Capable to critically think and analyse for solving various problems pertaining to effective evaluation, organization, retrieval, and dissemination of information resources, enabling them to make informed decisions and contribute to the advancement of library and information practices;
- PO03 Effective communication:** Effectively communicate and meet the diverse information needs through library network, resource sharing, consortia approach and provide various information products, functions and services through public relation and extension activities;
- PO04 Research based practices:** Apply the research methodologies and evidence based practices by adopting appropriate research tools to investigate user needs, information related issues, evaluate library services, information systems, and contributing knowledge to the LIS field and support informed decision making;
- PO05 Digital skills:** Competent of using Internet, Web, and digital technology in managing housekeeping operations, information retrieval, standardisation, digital preservation, and adopting AI based cutting edge tools and technologies for finding ways to improve services;
- PO06 Individual and team work:** Capable to communicate, cooperate, and collaborate effectively as an individual and as a member or leader in teams at different levels of management and promote professional growth;
- PO07 Ethical awareness:** Identify the ethical and legal issues in knowledge management and apply ethical principles, moral values, and best practices to uphold the nobility of the profession;
- PO08 Professional development:** Enhance the managerial skill and competence to ensure their career progression, actively participating and contributing to professional associations/organisations and uphold the professional status in the field;

PO09 Life-long learning: Recognize the need for, have the preparation and ability to engage in independent and life-long learning, staying abreast of current trends and emerging technologies in the field of library and information science;

PO10 Continuing education or employment: Exposure to practical experience in real setting helps to pursue further academic studies in library and information science or field related to it, including Ph.D. programs and many employment opportunities in academic, research centres, government, semi- government and private sector libraries;

Programme Specific Outcome (PSO)

PSO1 Understand the basic concept of library and information science profession.

PSO2 Integrate as a part of the university efforts in democratizing access to information by training the graduates from different backgrounds to become proactive knowledge workers in the process of collecting, organizing, consolidating, repackaging and disseminating the knowledge/information for social transformation, scientific and technological growth and economic prosperity.

PSO3 Preparing the manpower to be dynamic social change agents in managing, monitoring and disseminating the information by utilizing the ICT and related technologies.

PSO4 Restructuring and reviewing LIS curriculum to cope up with changing socio-economic, cultural and technological environment.

PSO5 Create an awareness on evolution of the knowledge society and its role in social transformation.

PSO6 Analyse the complex issues of the access and use of knowledge and its productive utility in social development.

PSO7 Promote the use of new technologies in teaching and research.

PSO8 Promote leadership qualities and inculcate right values among students by encouraging ethical practice.

PSO9 Knowledge and exposure to research based practices through the application of data, information, and research literacy.

Programme Structure of M.Lib.I.Sc.

FIRST SEMESTER

Course code	Title of the course	Theory Hours/ Week	Practical Hours/ Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
Hard core								
25LSH401	Foundations of library and information science	4	-	3	30	70	100	4
25LSH402	Information sources	4	-	3	30	70	100	4
25LSH403	Knowledge organization: Classification	4	-	3	30	70	100	4
25LSH404	Information processing: Cataloguing	4	-	3	30	70	100	4
Soft core								
25LSP405	Knowledge organization: Classification (Practice)	-	4	3	30	70	100	4
25LSP406	Information and Communication Technology (Practice)	-	4	3	30	70	100	4
	Total	16	08	18	180	420	600	24

SECOND SEMESTER

Course code	Title of the course	Theory Hours/ Week	Practical Hours/ Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
Hard core								
25LSH451	Management of library and information centres	4	-	3	30	70	100	4
25LSH452	Library automation	4	-	3	30	70	100	4
25LSP453	Information processing: Cataloguing (Practice)	-	4	3	30	70	100	4
Soft core								
25LSP454	Library automation (Practice)	-	4	3	30	70	100	4
25LSS455	Conservation and preservation of information resources	4	-	3	30	70	100	4
	OR							
25LSS456	Information literacy							
Open elective								
25LSE457	Electronic information resources	3	-	3	30	70	100	3*
	Total	15	08	18	180	420	600	23

* Not included for CGPA.

THIRD SEMESTER

Course code	Title of the course	Theory Hours/ Week	Practical Hours/ Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
Hard core								
25LSH501	Information retrieval	4	-	3	30	70	100	4
25LSH502	Research methodology in LIS	4	-	3	30	70	100	4
25LSH503	Web technologies and tools	4	-	3	30	70	100	4
Soft core								
25LSP504	Web technologies and tools (Practice)	-	4	3	30	70	100	4
25LSP505	Research methodology in LIS (Practice)	-	4	3	30	70	100	4
	OR							
25LSP506	Technical writing (Practice)							
Open elective								
25LSE507	Academic writing and publishing	3	-	3	30	70	100	3*
	Total	15	08	18	180	420	600	23

* Not included for CGPA.

FOURTH SEMESTER

Course code	Title of the course	Theory Hours/ Week	Practical Hours/ Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
Hard core								
25LSH551	Information systems and services	4	-	3	30	70	100	4
25LSH552	Digital libraries	4	-	3	30	70	100	4
25LSP553	Digital libraries (Practice)	-	4	3	30	70	100	4
25LSP554	Information sources (Practice)	-	4	3	30	70	100	4
Soft core								
25LSP555	Project work and viva voce	-	4	-	30	70	100	3
25LSP556	Practical experience and study tour / Internship	-	4	--	30	70	100	3
	Total	8	16	12	180	420	600	22

Total credits of all the semesters

First semester	24
Second semester	23
Third semester	23
Fourth semester	22
Total	92

Cores	Credits	%
Hard Core	52	56.5
Soft core	34	37.0
Open Elective	06	06.5
Total	92	100.0

FIRST SEMESTER

Hard core

25LSH401: FOUNDATIONS OF LIBRARY AND INFORMATION SCIENCE

Learning Objectives (LO):

- To introduce the students to the basics of library and information science;
- To identify the types of libraries and understand the functions, activities, and services;
- To make students aware of Dr. S. R. Ranganathan's life and contributions to library and information science.
- To understand the fundamental laws, legislations, acts, and guidelines related to library science;
- To understand the importance of library associations/organizations/promoters and their role in lifelong learning;
- To educate students about growth, development of libraries as well as library professional ethics;
- To train students for a professional career in library and information services.

Course Outcome (CO):

- CO1 Acquire the knowledge of Dr. S R Ranganathan's life and contributions, as well as growth and role of different types of libraries in the development of society;
- CO2 Gain knowledge about different library legislation, acts, IPR, and copyright;
- CO3 Understand the activities, roles, and responsibilities of different professional associations in LIS;
- CO4 Knowledge of public relations and extension activities of library also upholding the ethics, skills, and competencies of LIS profession.

Unit 1	:	Historical development and five laws of library science: - Historical development of libraries, with special reference to Karnataka; - Role of libraries in social, cultural, educational and scientific technical development;	12hrs
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		- Types of libraries: their functions and services; - Information: Data, information, knowledge, and wisdom - concept, meaning, and features; Information science; - Five laws of library science: Dr. S R Ranganathan: Life and contributions; implications of five laws in library and information science; relevance of five laws in digital era.	
Unit 2	:	Library legislation: - Library legislation: Need, purpose and features; - Library legislation in India: Problems and prospects; - Public library Acts in India - with special reference to Karnataka; - Press and Registration Act, Delivery of Books and Newspaper (Public libraries) Act, 1954 and 1956; - Intellectual Property Rights, Copyright Act, and Right to Information Act.	12hrs
Unit 3	:	Librarianship, LIS education, and public relations: - Attributes of a profession; - Librarianship as a profession: Skills and competencies; - Women librarianship: Issues and challenges; - Professional ethics and qualities; - LIS education and research; - National education policy 2020; - Public relations and extension activities: Concept, definition, and scope; publicity and extension activities; role of social media in library extension services.	12hrs
Unit 4	:	Professional associations: - Objectives, functions, and role of professional associations in library development; - State library association – KALA; - National library associations - ILA, IATLIS, IASLIC; - International library associations – IFLA, ALA, LA, CILIP; - Promoters of library and information services - RRRLF, UGC, and UNESCO.	12hrs
		Total	48hrs

Mapping of course outcomes (COs) with program outcomes (POs):

CO	CO-PO Mapping									
	PO									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	✓		✓	✓				✓	✓	
CO2	✓						✓			
CO3								✓		
CO4			✓	✓			✓			

References:

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25LSH402: INFORMATION SOURCES

Learning Objectives (LO):

- To understand the concept of information sources;
- To study documentary and non-documentary sources of information;
- To understand the primary, secondary, and tertiary information sources with suitable examples;
- To familiarize students with print and electronic versions of information sources;
- To evaluate the different types of information resources;
- To understand the preservation and conservation of different information sources;
- To understand hazards to library materials and their preservation.

Course Outcome (CO):

CO1 Understand the basic concept, characteristics, and functions of information sources;

CO2 Know the categories of information sources like documentary and non-documentary;

CO3 Gain knowledge of primary, secondary and tertiary sources of information;

CO4 Clearly understand the major print and electronic resources and their criteria for evaluation;

Unit 1	:	Information sources: – Meaning, definition, importance, characteristics, functions; – Categories and types of information sources; – Criteria for evaluation of information sources; – Primary sources: Periodicals, research reports, conference proceedings, official publications, patents, standards and specifications, trade literature, and theses and dissertations.	12hrs
Unit 2	:	Secondary sources and tertiary sources: - Indexing periodicals, abstracting periodicals, bibliographies, treatises, monographs, text books, handbooks and manuals; - Reference sources: Dictionaries, encyclopedias, biographical sources, geographical sources, statistical sources; - Yearbooks, almanacs, directories, union catalogues, bibliography of bibliographies.	12hrs

Unit 3	:	Non-documentary sources of information: - Human sources: Technological gatekeepers, invisible colleges, consultants, resource persons, common persons; - Institutional sources: Government ministries, and departments, R & D organizations, learned societies, publishing houses, archives, databanks, information analysis centers, referral centers, institutional websites.	12hrs
Unit 4	:	Electronic information resources: - Concept, characteristics, and types; - E-journals, e-books, e-encyclopaedias, e-theses, e-newspapers, online dictionaries, online databases, Internet sources, list serves, subject gateways; - E-learning resources: Concept of MOOC, e-PGPathshala, e-Adhyayan, Swayam, Swayam Prabha, Virtual Labs, National Digital Library of India; - Open access resources: Concept, types, features, open access Databases: DOAJ, DOAB, Open DOAR; - Advantages and disadvantages of electronic information sources.	12hrs
Total			48hrs

Mapping of course outcomes (COs) with program outcomes (POs):

CO-PO Mapping

CO	PO									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	✓	✓	✓							
CO2	✓	✓								
CO3	✓	✓								
CO4	✓	✓	✓							

References:

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25LSH403: KNOWLEDGE ORGANIZATION: CLASSIFICATION

Learning Objectives (LO):

- To introduce the students to the library classification;
- To understand the importance of library classification in organization of knowledge;
- To highlight the importance of canons, laws, and principles in the design of classification schemes;
- To understand the formation of subjects in the universe of knowledge and be acquainted with major schemes of classification;
- To understand the fundamental categories, rounds, and levels;
- To know the different schemes of classification and their features;
- To gain the knowledge of recent trends in library classification.

Course Outcome (CO):

- CO1 Clear understanding of the theories and principles of library classification;
- CO2 Knowledge of using different schemes of classification;
- CO3 Clear understanding of Postulation approach to library classification;
- CO4 Understating of recent trends and mode of classifying different resources.

Unit 1	:	Library classification: – Definition, meaning, objectives, purpose and functions; – The general theory of classification: Descriptive and dynamic; – Theory of knowledge classification and book classification; – Types of library classification schemes: Enumerative and faceted; – Universe of knowledge: Concept, meaning, structure, and attributes; types of the subject: Simple, compound, and complex; modes of formation of subjects.	12hrs
Unit 2		Schemes of classification - History and development, features, structure, and applications of Colon Classification, Dewey Decimal Classification, and Universal Decimal Classification; - Universal knowledge as mapped in CC, DDC, and UDC.	12hrs

Unit 3	:	Postulation approach to classification: - Planes of work and canons: Idea, verbal and notational plane; - Notational system: Meaning and definition, need, functions, qualities, and types, call number, mnemonics; - Hospitality in array and chain; - Laws and principles of library classification: Basic laws and fundamental categories; facet analysis and facet sequence; phase relations and common isolates; rounds and levels, devices.	12hrs
Unit 4	:	Current trends in library classification Modern knowledge organization systems: concept, ontology, taxonomies, folksonomy, clustering, categories; Automatic classification research at OCLC; Case studies: GERHARD, SCORPIO, DESIRE, CORA, OASIS, OWL, SKOS; Knowledge organisations: ISKO, CRG, and EDUG; Recent developments in classification schemes: Web Dewey, UDC online, artificial intelligent tools.	12hrs
		Total	48hrs

Mapping of course outcomes (COs) with program outcomes (POs):

CO-PO Mapping

CO	PO									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	✓				✓					
CO2	✓									
CO3	✓									
CO4	✓				✓					

References:

- Beghtol, W. B. (2004). *Knowledge organization and classification in international information retrieval*. London: Routledge.
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25LSH404: INFORMATION PROCESSING: CATALOGUING

Learning Objectives (LO):

- To understand the concept of library cataloguing;
- To familiarize the need, purpose, functions, and forms of cataloging;
- To discuss various laws, canons, and principles of library cataloguing;
- To elucidate the different subject headings;
- To understand different catalogue codes and standards for bibliographic description;
- To understand the filing rules and procedures in library cataloging;
- To know the concept of co-operative, centralized, and union catalogue.

Course Outcome (CO):

- CO1 Clear understanding of basic concept of library cataloguing;
- CO2 Understanding the normative principles of library cataloguing;
- CO3 Gain knowledge about subject cataloguing using different subject headings;
- CO4 Know the standardization of bibliographic description and communication.

Unit 1	:	Library catalogue: – Meaning, definition, need, purpose, objectives, and functions; – History and development of cataloguing codes and practices; – Resource description standards: ISBD, AACR2R, BIBFRAME, FRBR, FRAD, and RDA; – Forms of document cataloguing: inner forms and outer forms; – Different kinds of entries: AACR and CCC; – Filing rules and procedures.	12hrs
Unit 2	:	Subject headings: – Design and construction; – Chain procedure; – Sears List of Subject Headings (SLSH); Library of Congress Subject Headings (LCSH); and Medical Subject Headings (MeSH).	12hrs

Unit 3	:	Normative principles of Cataloguing: – Historical development of normative principles; – Canons and its implications; – Laws of cataloguing and its implications; – Principles of cataloguing; – Resource sharing of bibliographic data: Meaning and importance; – Centralized cataloguing, co-operative cataloguing, cataloguing at source, CIP and union catalogues.	12hrs
Unit 4	:	Standardization of bibliographic description and trends: – Bibliographic record format and description standards: UNIMARC, CCF, MARC21; – Bibliographic information interchange and communication standards: Z39.50, ISO 2709, Z39.71; – Metadata: Meaning, definition, purpose, use and types; – Metadata standards: DCMI, MODS, METS, EAD, VRA core, Text Encoding Initiative (TEI); – Consortia approach to metadata- OAI-PMH.	12hrs
		Total	48hrs

Mapping of course outcomes (COs) with program outcomes (POs):

CO-PO Mapping

CO	PO									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	✓				✓					
CO2	✓									
CO3	✓									
CO4	✓				✓					

References:

- ALA. (2013). *RDA 2013 Revision: Resource Description & Access*. Chicago: American Library Association.
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Soft core

25LSP405: KNOWLEDGE ORGANIZATION: CLASSIFICATION (PRACTICE)

Learning Objectives (LO):

- To provide students with necessary skills and knowledge to classify the different library materials;
- To make the students proficient in using the different classification schemes, focusing on DDC and UDC;
- To construct class numbers for documents with simple, compound, and complex subjects;
- To synthesize class numbers by using standard subdivisions;
- To synthesize class numbers by using common and special auxiliaries;
- To use notes like “scope”, “inclusion”, “class here” “optional provision” etc.;
- To use different tables of DDC and UDC;

Course Outcome (CO):

- CO1 Apply theoretical knowledge of classification schemes and gain skills to organize documents using specific classification schemes into practice;
- CO2 Practical knowledge of using DDC and UDC at workplace for constructing classification numbers for different documents;
- CO3 Develop an understanding of arrangement, shelving, and organisation of the different library materials;
- CO4 Overall practical knowledge of classifying document representing simple, compound and complex subjects.

Classification of documents according to the latest edition of DDC and UDC.

(Each student shall compulsorily maintain the practical record and submit the same before the commencement of theory examination)

Part-I: Classification of documents by latest available edition of DDC			
Unit 1	:	- Introduction to the use of DDC: preliminaries and structure; - Classification of documents representing simple subjects.	16hrs

Unit 2	:	- Classification of documents representing compound and complex subject using Table 1 to Table 6.	15hrs
Part-II: Classification of documents by latest available edition of UDC			
Unit 3	:	- Structure of UDC.	16hrs
Unit 4	:	- Use of Common Auxiliaries. - Use of Special Auxiliaries	15hrs
		TOTAL	62hrs

Mapping of course outcomes (COs) with program outcomes (POs):

CO-PO Mapping

CO	PO								
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO1	✓	✓							
CO2			✓		✓				
CO3	✓	✓							
CO4	✓	✓							

25LSP406: INFORMATION AND COMMUNICATION TECHNOLOGY (PRACTICE)

Learning Objectives (LO):

- To impart practical training in the use of different information technology tools within the library;
- To give practical training in the use of various hardware peripherals;
- To gain the knowledge of using system software like operating systems, database management systems, etc.;
- To learn how to operate different types of operating systems;
- To develop practical skills in using different application software like word processing, spreadsheet, presentation tools;
- To gain the knowledge of different types of databases and database searching;
- Overall knowledge of hardware as well as software tools used in their day to day work.

Course Outcome (CO):

- CO1 Acquire the knowledge of working with computer hardware, and its peripherals;
- CO2 Gain knowledge of both system software and application software, along with different operating systems;
- CO3 Gain knowledge of the word processing and PowerPoint presentation tools;
- CO4 Knowledge of spreadsheet tools used for analysis and graphical representation of data.

(Each student shall compulsorily maintain the practical record and submit the same before the commencement of theory examination)

Unit 1	:	Computer hardware components; Software: Operating systems – Microsoft Windows, Unix, Linux.	20 hrs
Unit 2	:	Word processing;	20 hrs
Unit 3	:	Spreadsheet;	12 hrs
Unit 4	:	Presentation tools	10 hrs
		Total	62 hrs

Mapping of course outcomes (COs) with program outcomes (POs):

CO-PO Mapping

CO	PO									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	✓				✓					
CO2	✓									
CO3	✓									
CO4	✓				✓					

SECOND SEMESTER

Hard core

25LSH451: MANAGEMENT OF LIBRARY AND INFORMATION CENTRES

Learning Objectives (LO):

- To introduce students with the concepts and principles of library management;
- To understand the application of management theories and its applicability's to libraries;
- To understand management of various housekeeping operations in libraries;
- To analyze and evaluate trends in library management such as SWOT, PERT / CPM;
- To develop strategies for human resource management and leadership qualities;
- To apply principles of budgeting, financial management and resource allocation to effectively manage library operations and services;
- To develop and implement effective planning of library and information centres.

Course Outcome (CO):

- CO1 Familiarizing students with concepts and principles of library management;
- CO2 Gain the knowledge of organizational structure, collection development, and functionalities of different units of the library;
- CO3 Comprehend the concept of information systems and project management;
- CO4 Understand the human resource management, managerial skills to manage the library effectively.

Unit 1	:	Management concept: - Meaning, definitions and role; - Functions and principles of management; - Schools of thought in management; - Scientific management: Application to library and information centres; - Levels of management; - Organizational structures.	12 hrs
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Unit 2	:	Different functional units of library and information centre: – Acquisitions section: Functions and procedures; – Technical section: Functions and procedures; – Circulation section: Functions, methods of charging and discharging systems; – Periodical section: Functions and activities; – Reference and customer care services.	12 hrs
Unit 3	:	Collection development: – Book selection policies and principles for print and electronic resources, problems of collection development; – Online Bookstores: Identification, advantages, online book shops Vs. traditional book shops; – Collection management: Stock verification, rectification, weeding of resources; – Financial and records management: Importance, sources of finance, mobilisation of financial resources; – Budgeting: methods and techniques, budgetary control; - Project management, SWOT, PERT / CPM; - Management of Information Systems (MIS): Concept and use; – Knowledge management.	12 hrs
Unit 4	:	Human resource management: – Job analysis and description, job evaluation, inter-personal relations, staff selection and recruitment; – Motivation, delegation, decision making; education, training and development; – Performance appraisal, leadership qualities, gender pay gap; – Library buildings and equipment, performance evaluation of Library and information centres, Total Quality Management (TQM); – Library committee, library rules and regulations, library statistics, library records, annual reports.	12 hrs
		Total	48hrs

Mapping of course outcomes (COs) with program outcomes (POs):

CO-PO Mapping

CO	PO								
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO1	✓				✓	✓		✓	
CO2	✓								
CO3	✓					✓			
CO4						✓		✓	

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25LSH452: LIBRARY AUTOMATION

Learning Objectives (LO):

- To prepare the students to get the basic knowledge of library automation;
- To impart knowledge and skills in using different library automation software;
- To understand the infrastructure used for setup of library automation;
- To familiar with the implementation of library automation software in different areas library operations;
- To know the different applications used in various housekeeping operations of the library;
- To study the important standards implemented in library automation software.
- To know the different types of library automation packages like open source, free and propriety based.

Course Outcome (CO):

- CO1 Able to understand infrastructure, planning, and process of library automation;
- CO2 Gain the knowledge of various automated in-house library operations, standards and specifications along with advanced applications of library automation.
- CO3 Knowledge of technology used for automation of different library operations;
- CO4 Understanding of various library automation software packages like SOUL, Libsys, KOHA, NewGenLib, and e-Granthalaya.

Unit 1	:	Library automation: – Meaning, definition, history, need, types, and importance; – Areas of library automation; – Advantages and disadvantages; – Strategies for library automation; – Infrastructure requirements for library automation: Hardware, software, skilled manpower, training, cost, physical equipment, furniture, maintenance.	12 hrs
Unit 2	:	Automation of housekeeping operations: – Acquisitions, cataloguing, circulation, serials control, OPAC/Web OPAC;	12 hrs

		– Application of barcode, QR code, Radio-Frequency Identification (RFID), and Near-Field Communication (NFC) technology, smartcard technology, artificial intelligence, blockchain technology.	
Unit 3	:	Standards of library automation: – Standards and specifications: MARCXML, NACO, SRU/SW, SRU/SRW, NCIP (NISO), SIP2, SIP/NCIP, OAI-PMH.	12 hrs
Unit 4	:	Library automation software packages: – Proprietary software: SOUL, LIBSYS; – Open source software: KOHA, NewGenLib; – Free software: E-granthalaya; – Criteria for evaluation of library automation software.	12 hrs
		Total	48hrs

Mapping of course outcomes (COs) with program outcomes (POs):

CO-PO Mapping

CO	PO								
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO1	✓								
CO2	✓				✓				
CO3	✓				✓				
CO4	✓				✓				

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25LSP453: INFORMATION PROCESSING: CATALOGUING (PRACTICE)

Learning Objectives (LO):

- To prepare catalogue entries for books and non-book materials using Anglo American Cataloguing Rules;
- To derive subject headings to all entries Sears List of Subject Heading;
- To catalogue single personal authorship, joint authorship, works of more than three authors;
- To catalogue collaborative works, series, multivolume works, serials, and uniform titles;
- To catalogue corporate authorship like government publications, conference/seminar proceedings, workshops, and other corporate bodies;
- To catalogue non-book materials like cartographic materials, microforms and manuscripts;
- To catalogue sound recordings, video recordings, and electronic resources.

Course Outcome (CO):

- CO1 Applying theoretical knowledge of cataloguing into hands-on practice;
- CO2 Clear understanding of standards like Anglo American Cataloguing Rules and Sears List of Subject Heading;
- CO3 Understanding the structure of catalogue card, various areas of bibliographical descriptions and different punctuations for cataloguing of documents;
- CO4 Knowledgeable and capable of cataloguing different documents at their workplace.

Cataloguing of Documents according to latest edition of AACR/RDA

(Each student shall compulsorily maintain the practical record and submit the same before the commencement of theory examination)

Unit 1	:	Preliminaries of Anglo American Cataloguing Rules / RDA and use of Sears List of Subject Headings.	15 hrs.
Unit 2	:	Single personal author and shared responsibility with editorial direction, series and multi volumes.	15 hrs.

Unit 3	:	Corporate bodies, serials and uniform titles	12 hrs.
Unit 4	:	Non book materials: Cartographic materials, microforms and manuscripts, sound recordings, video recordings and electronic resources.	20 hrs.
		Total	62hrs

Mapping of course outcomes (COs) with program outcomes (POs):

CO-PO Mapping

CO	PO								
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO1	✓	✓							
CO2	✓	✓							
CO3	✓	✓							
CO4	✓	✓							

Soft core

25LSP454: LIBRARY AUTOMATION (PRACTICE)

Learning Objectives (LO):

- To impart practical training in the use of library automation software;
- To familiarize students with open source, free and proprietary library automation software;
- To gain the knowledge of installation and setting up of global parameters;
- To provide hands on training specific modules of popular library automation software;
- To know the process of report management, data export and import, and data security;
- To gain the capacity of operating user interfaces OPAC/Web OPAC;
- To explore the emerging trends and issues in library automation and impact of modern technologies in library services.

Course Outcome (CO):

- CO1 Gain knowledge of installation and configuration of library automation software;
- CO2 Carry out library housekeeping operations using library automation software;
- CO3 Develop practical skills in working with different modules of library automation and management tools.
- CO4 Able to import and export bibliographic information from other bibliographical databases.

(Each student shall compulsorily maintain the practical record and submit the same before the commencement of theory examination)

Unit 1	:	Installation of library automation software - Koha/NewGenLib/e-Granthalaya.	20 hrs
Unit 2	:	Basic parameters of any one software and working with administration module and system parameters.	15 hrs
Unit 3	:	Working with modules: Cataloguing, acquisitions, patron management, circulation, serial control, OPAC/Web OPAC.	15 hrs
Unit 4	:	Report management, export and import of bibliographical data, data security.	12 hrs
		Total	62hrs

Mapping of course outcomes (COs) with program outcomes (POs):

CO-PO Mapping

CO	PO									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	✓				✓					
CO2	✓				✓					
CO3	✓				✓					
CO4	✓				✓					

25LSS455: CONSERVATION AND PRESERVATION OF INFORMATION RESOURCES

Objectives:

- To familiarize students with the preservation and conservation of information sources;
- To know evolution of writing materials;
- To understand different types of library materials, their preservation;
- To study various National Archival Initiatives of different countries;
- To know digital preservation;
- To study record management concepts and issues;
- To understand hazards to library materials and their preservation.

Course Outcome (CO):

CO1 Familiarise with methods and process practiced to preserve important documents in libraries;

CO2 Knowledge of evolution of storage devices used to record and preserve knowledge through ages till modern times;

CO3 Awareness of hazards of library materials and modes used for their preservation;

CO4 Knowledge of methods, tools, legal issues related digitization and digital preservation.

Unit 1	:	Introduction to concepts of archiving, preservation and conservation: – Need and significance of archiving, preservation and conservation of information resources; – Evolution of writing materials: Clay tablets, papyrus, metallic plates, skin, parchment, vellum, palm leaves; – History, nature, use as writing materials and their preservation; – History of paper making, different types of paper and their nature.	12 hrs
Unit 2	:	Preservation and maintenance of different types of library materials: – Paper-based materials - Book and non-book materials, library binding, binding standards; – Preservation and conservation of non-print materials:	12 hrs

		microforms, audio visual records, magnetic plates, tapes and diskettes, optical media, magneto-optical discs; – Hazards to library materials: Environmental hazards, biological hazards, and human being as an enemy of library materials, disaster prevention and recovery.	
Unit 3		Digital Preservation: – Digitization: Introduction, selection of material for digitization; – Digital technologies: hardware and software, project management and costs of digitization; – Digital reformatting: Text, photos, audio, video and other formats; – Open formats vs. proprietary formats; – Digital preservation: Strategies, tools and techniques, legal issues.	12 hrs
Unit 4	:	Records management and study of national archival initiatives of different countries: – Record management: Concepts and issues involved; – Information resource management (include electronic resource management), code of ethics for archivists; – NARA of US, Australian National Initiatives, Public Archives of Canada, and National Archives of India; – Trends in preservation.	12 hrs
Total			48hrs

Mapping of course outcomes (COs) with program outcomes (POs):

CO-PO Mapping

CO	PO									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	✓				✓					
CO2	✓									
CO3	✓									
CO4	✓				✓		✓			

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25LSS456: INFORMATION LITERACY

Learning Objectives (LO):

- To know the concept and importance of information literacy;
- To understand the historical perspectives of information literacy;
- To identify different types of information literacy;
- To gain the knowledge about information literacy models;
- To know the information literacy standards;
- To have knowledge of information literacy skill and competencies;
- To know the current trends in information literacy.

Course Outcome (CO):

CO1 Able to understand the concept and importance of the information literacy;

CO2 Gain knowledge of information literacy models and standards;

CO3 Get knowledge of different information literacy programmes;

CO4 Understanding the information literacy skills, competencies, and current trends in information literacy.

Unit 1	:	Fundamental of information literacy: – Information Literacy: Meaning, definition, need, evolution of the concept, historical perspectives; – Types of information literacy: Technology literacy, media literacy, computer and digital literacy; – Levels of information literacy: Entry level, mid-level, high level, advance level, partners of information literacy; – Lifelong learning and self-learning.	12 hrs
Unit 2	:	Information literacy models, guidelines and standards: – Models of information literacy: SCONUL seven pillar, B-6, ANCIL, Empowering 8, CAUL (Australian) model, and ELLIS; – Guidelines and standards for information literacy programs: ALA, IFLA, ACRL; – Use of audio-visual aids, programmed instructions in specified disciplines, resource based instructions; – Information literacy missions, forums and task forces.	12 hrs

Unit 3	:	Information literacy programmes: – Study of information literacy programs in India and world; – Role of libraries in information literacy; – Information literacy instructions in different types of library and information centres; – Integration of information literacy in different levels of education; – Information literacy for library users and professionals; – Information literacy for research and development.	12 hrs
Unit 4	:	Information literacy skills, competencies and trends: – Literacy skills: Communication skill, problem solving skill, critical thinking, computer skill, and research skill; – Information literacy initiatives in global perspective; – Current trends in information literacy; – Information literacy competencies and challenges; – Web-based information literacy system; – Application of emerging technologies in information literacy.	12 hrs
		Total	48hrs

Mapping of course outcomes (COs) with program outcomes (POs):

CO-PO Mapping

CO	PO									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	✓									
CO2	✓									
CO3	✓		✓							
CO4	✓				✓			✓	✓	

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Open elective

25LSE457: ELECTRONIC INFORMATION RESOURCES

Learning Objectives (LO):

- To familiarize students with the meaning, definition, and characteristics of information sources;
- To know the criteria for evaluation of information resources;
- To study the different types of electronic information sources;
- To have the knowledge of scholarly electronic learning resources and information centres;
- To understand the concept of open access resources and databases;
- To gain knowledge about the national and international library consortia;
- To understand the different types of electronic information services;

Course Outcome (CO):

CO1 Understand the concept and different types of electronic information resources;

CO2 Knowledge of scholarly electronic learning resources and information centres ;

CO3 Gain knowledge of open access resources and different databases;

CO4 Understanding of both national and international library consortia;

Unit 1	:	Electronic Information sources: – Information sources: Meaning, definition, characteristic, and use; – Types of sources (primary, secondary, tertiary); – Electronic information resources: Meaning, characteristic, and importance; – Types: E-journals, e-books, e-theses, e-newspapers, blogs, and wikis, online dictionaries and encyclopedias: free and proprietary, website, institutional repositories, and other e-resources; – Benefits, limitations and evaluation of information sources.	12 hrs
Unit 2	:	Scholarly e-resources: - E-learning: Concept of MOOC, e-PGPathshala, e-Adhyayan,	12 hrs

		Swayam, Swayam Prabha, Virtual Labs, National Digital Library of India (NDLI); - Library resource centres: INFLIBNET- IndCat, Shodhganga, IRINS; DELNET- Databases; OCLC – WorldCat; - Citation indexing databases: WoS, Scopus, Google Scholar.	
Unit 3		Open access resources: - Concept, types, features; - Publishers: Taylor & Francis, Elsevier, Wiley, Springer, Sage, Emerald; - Open access databases: DOAJ, DOAB, Open DOAR.	12 hrs
Unit 4	:	Library consortia: – Meaning, definitions, objectives, types, study of various library consortia; – National: NKRC, HELINET, CeRA, e-ShodhSindhu, ONOS; – International: RLUK, ICOLC, CONCERT, CARLI.	12 hrs
		Total	48hrs

Mapping of course outcomes (COs) with program outcomes (POs):

CO-PO Mapping

CO	PO								
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO1	✓	✓							
CO2	✓		✓						
CO3	✓	✓	✓						
CO4	✓		✓						

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THIRD SEMESTER

Hard core

25LSH501: INFORMATION RETRIEVAL

Learning Objectives (LO):

- To introduce the concept of information retrieval systems;
- To familiarize with the components and process of information retrieval;
- To understand the pre and post coordinate indexing systems;
- To study the various methods and techniques of information retrieval and search strategies;
- To know the theories and methods of indexing languages;
- To study the criteria for evaluation of indexing systems;
- To familiarize students with information retrieval models and standards.

Course Outcome (CO):

CO1 Understand the components and functions of information retrieval systems;

CO2 Gain knowledge of subject representation and indexing languages and systems;

CO4 Knowledge of information retrieval models and standards;

CO4 Get the knowledge of criteria for evaluation of indexing systems.

Unit 1	:	Information retrieval system: - Definition, history, functions and components (Lancaster's diagram); - Approaches to information retrieval: System-centered and user-centered; - Kinds of IRS: OPACs, online databases, digital libraries and web-based information services and web search engines; - Data retrieval vs. information retrieval; - Search engines as IRS, search techniques.	12 hrs
Unit 2	:	Subject representation and indexing languages: - Need for indexing language; significance of citation order; an overview of historical development of indexing including but not limited to the contributions of Cutter, Kaiser,	12 hrs

		Ranganathan, Farradane and Coates; - Type of indexing systems: Pre-coordinate indexing and Post coordinate indexing; detailed study of chain indexing, PRECIS, POPSI, Uniterm, Peek-a-boo, Edge-notched cards.	
Unit 3	:	Subject indexing systems: – Title based (KWIC, KWOC and KWAC); citation based (SCI, SSCI, etc.) and full-Text (STAIRS, LEXIS-NEXIS, etc.). automatic indexing: COMPass; – Vocabulary control: Meaning, need and importance; vocabulary control tools – subject heading lists and thesauri, thesaurus construction; – Case study of controlled vocabularies/ ontologies including but not limited to ERIC, MeSH, SLISH, LCSH, and Getty.	12 hrs
Unit 4	:	Information retrieval models: – Concepts of ranking, term weight, Document Frequency (DF), Inverse Document Frequency (IDF); – Study of structural models – Boolean model and vector space model; – Need for evaluation of information retrieval systems; – Understanding the criteria for evaluation including but not limited to recall, precision, specificity and exhaustivity; – Evaluation studies: ASLIB/Cranfield, MEDLARS, TREC, SMART.	12 hrs
		Total	48hrs

Mapping of course outcomes (COs) with program outcomes (POs):

CO-PO Mapping

CO	PO									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	✓	✓								
CO2	✓		✓		✓					
CO3	✓				✓					
CO4	✓	✓								

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25LSH502: RESEARCH METHODOLOGY IN LIS

Learning Objectives (LO):

- To familiarize students with concepts and types of research;
- To learn how to formulate research objectives, hypotheses, and research design;
- To know the research tools and techniques;
- To understand the research methods and process;
- To familiarize students with the various metrics studies and their applications;
- To understand data analysis and interpretation;
- To develop the skills of report writing.

Course Outcome (CO):

CO1 Gain the knowledge of research methodology, research design, and research instruments for data collection;

CO2 Knowing the fundamentals of various metric studies and their applications;

CO3 Knowledge and use of statistical tools and techniques for data analysis and interpretation;

CO4 Aware of methods of presenting and reporting research findings;

Unit 1	:	Foundations of research and research design: – Concept, meaning, definition, need and steps in research; – Types of research; – Ethical aspects of research, barriers to research; – Areas of research in LIS; – Research design: Definition, types, and their characteristics; – Identification and formulation of the problem; – Literature search and review; – Hypotheses: Formulation, types and testing; – Preparation of research proposal.	12 hrs
Unit 2	:	Research methods, tools, and techniques: – Scientific method, historical method, descriptive method, survey method, case study method, experimental method, Delphi method;	12 hrs

		– Metric studies: Bibliometrics, scientometrics, informetrics, webometrics, and altmetrics – Sampling: Concept of study population and sample, types and techniques, sample bias and errors; – Pilot study; – Data gathering tools: Questionnaire, interview, observation, schedule, library record and reports, scales and checklists;	
Unit 3	:	Data analysis and interpretation: – Variables and its types; – Parametric and non-parametric; – Descriptive statistics: Measure of central tendency, measure of dispersion, co-relation; – Inferential statistics: Chi-Square, T-test, ANOVA, Z-test, KMO test, factor analysis; – Graphical presentation of data: Bar, pie, line-graphs, histograms; – Statistical packages: SPSS, MS Excel, R, MATLAB.	12 hrs
Unit 4	:	Research reporting: – Structure, components, and guidelines of research reports; – Criteria for evaluation of research report; – Style manual: APA, Chicago, IEEE, and MLA; – Citation and reference management and relevant tools: Zotero and Mendeley; – Plagiarism: concepts, types and plagiarism detection tools.	12 hrs
		Total	48hrs

Mapping of course outcomes (COs) with program outcomes (POs):

CO-PO Mapping

CO	PO									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	✓			✓						
CO2	✓			✓						
CO3	✓			✓						
CO4	✓			✓						

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25LSH503: WEB TECHNOLOGIES AND TOOLS

Learning Objectives (LO):

- To study computer network, its types and topologies;
- To know the origin and working settings of Internet
- To introduce the concept of internet tools and services;
- To understand the applications of artificial intelligence and their domains in libraries;
- To know the standards and specification of web technology;
- To study the implications of web technologies for library and information management;
- To understand web design and host a website using different tools and standards;

Course Outcomes (CO):

- CO1 Knowledge of internet, computer networks, web technology and their applications in library and information management;
- CO2 Clearly understanding the metadata, web standards and web design using cutting edge tools and their application in libraries;
- CO3 Aware about the web content management tools like Joomla, Drupal, WordPress, and Moodle;
- CO4 Overall knowledge of web technologies and tools applicable to library and information centres;

Unit 1	:	Computer networks and Internet: – Concept, definition, and types of networks - PAN, LAN, CAN, MAN and WAN; – Network topologies: Line, bus, ring, star, tree, mesh; – Network models and architecture: OSI, TCP/IP; – Network protocols: SMTP, HTTP, FTP; – Internet: Meaning, origin, Internet service providers; – Internet tools and services: WWW, email, FTP, search engine, list forum, PING, websites, browser, blogs, semantic web, cloud computing; – Internet-based library and information services.	12 hrs
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Unit 2	:	Web technology: – Web: concept, web pages, websites, Web 1.0, Web 2.0, and Web 3.0; – Concepts and application of RSS feeds, metadata, blogs, social bookmarking, social networking, semantic webs; – Web standards and applications: IETF, W3C, DOM, IANA, ISOC, WHATWG; – Other standards: RDF, RIP, SPARQL, Unicode Standard, URI, WOL, SWRL.	12 hrs
Unit 3	:	Artificial intelligence in libraries: – Artificial intelligence: Concept, origin, characteristics, advantages and disadvantages; – Domains of artificial intelligence: Machine learning, deep learning, big data, blockchain, robotics, Internet of Things, Natural Language Processing; – Applications of artificial intelligence in libraries.	12 hrs
Unit 4	:	Web design and content management system: – Website: Meaning, types, process, and elements – Markup languages: HTML, SGML, XHTML, DHTML; – Web servers: Apache, Internet Information Services (IIS), Nginx; – Scripting languages: Client-side scripting - CSS, VB script and Java script; server-side scripting - ASP and JSP; – Web content management: Concept, types, benefits; – CMS terminology – LAMP, WAMP and MAMP; – Open source content management tools: Joomla, Drupal, WordPress, and Moodle.	12 hrs
		Total	48hrs

Mapping of course outcomes (COs) with program outcomes (POs):

CO-PO Mapping

CO	PO									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	✓				✓					
CO2	✓				✓					
CO3	✓				✓					
CO4	✓				✓				✓	

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Soft core

25LSP504: WEB TECHNOLOGIES AND TOOLS (PRACTICE)

Learning Objectives (LO):

- To introduce the concept of computer network and network protocols;
- To understand the Internet tools, services and techniques;
- To gain the practical skill of searching databases using different search techniques;
- To understand the web technologies and markup languages like HTML, XML, DHTML, XHTML;
- To impart practical training in design and hosting of web pages;
- To provide hands on training in content management using any web content management tools;
- To make them familiar with cutting edge tools;
- To familiarize students with plagiarism detection tools.

Course Outcomes (CO):

CO1 Familiarizing students with Internet tools, services and online databases;

CO2 Knowledge of web design and web hosting tools like HTML and WordPress along with the practical skill of web content management systems like Drupal / Joomla;

CO3 Practical knowledge of different cutting edge tools;

CO4 Overall knowledge of application of web tools and services of library and information centres.

(Each student shall compulsorily maintain the practical record and submit the same before the commencement of theory examination)

Unit 1	:	Networking , Internet tools and services, online database searching: Web directory, Web OPACs, WorldCat, and IndCat.	12 hrs
Unit 2	:	Web design and Web hosting: HTML/WordPress and free web hosting sites .	20 hrs
Unit 3	:	Web Content Management Systems (CMS): Drupal / Joomla	20 hrs
Unit 4	:	Cutting edge tools and LIS services: Virtual reference service, Translation, language and grammar checking tools; Plagiarism detection tools.	10 hrs
		Total	62hrs

Mapping of course outcomes (COs) with program outcomes (POs):

CO-PO Mapping

CO	PO									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	✓				✓					
CO2	✓				✓					
CO3	✓				✓					
CO4	✓				✓				✓	

25LSP505: RESEARCH METHODOLOGY IN LIS (PRACTICE)

Learning Objectives (LO):

- To provide the basic knowledge of research in the field of library and information science;
- To familiarize students with the identification and formation of the research problems;
- To identify the relevant literature and different methods of literature review;
- To state the research objectives and hypotheses;
- To familiarise the variables and scaling techniques through the construct of structured questionnaire;
- To get acquaintance with the statistical tools and its application in data analysis;
- To develop the practical skills of writing and referencing using the conventions of APA style and reference management tools like Mendeley, Zotero;

Course Outcomes (CO):

CO1 Understand the formulation of research problems, research objectives, and hypotheses;

CO2 Capable to search, synthesize, and review the relevant literature and identify the gaps;

CO3 Practical knowledge of various data collection tools and construction of questionnaire;

CO4 Familiar with writing, citing, and referencing using style manual and acquaintance with SPSS/PSPP, Mendeley/Zotero.

(Each student shall compulsorily maintain the practical record and submit the same before the commencement of theory examination)

Unit 1	:	Identification and selection of research problem; Review of literature; Formulation of research objectives, hypotheses.	20 hrs
Unit 2	:	Design of a questionnaire.	10 hrs
Unit 3	:	Acquaintance and hands-on experience with SPSS/PSPP.	20 hrs
Unit 4	:	Report writing; Reference management tools: Mendeley / Zotero.	12 hrs
Total			62hrs

Mapping of course outcomes (COs) with program outcomes (POs):

CO-PO Mapping

CO	PO									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1				✓						
CO2				✓						✓
CO3				✓						✓
CO4				✓						

25LSP506: TECHNICAL WRITING (PRACTICE)

Learning Objectives (LO):

- To understand the concept, functions and components of technical writing;
- To understand the technical writing process;
- To know the structure and different types of technical papers;
- To develop the technical writing skill;
- To gain the knowledge of communication and presentation;
- To know the ethics to be followed in technical writing;
- To know the best possible style that can be adopted in writing;

Course Outcome (CO):

- CO1 Get the practical idea of structuring different technical papers;
- CO2 Understand the design and formatting of technical papers;
- CO3 Get the skills of using digital tools for technical writing;
- CO4 Gain the skill of presentation and communication of technical report.

Unit 1	:	Structuring the technical document.	14 hrs
Unit 2	:	Document design and formatting.	16 hrs
Unit 3	:	Digital tools for technical writing.	16 hrs
Unit 4	:	Writing reports and presentation.	16 hrs
		Total	62hrs

Mapping of course outcomes (COs) with program outcomes (POs):

CO-PO Mapping

CO	PO									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1				✓	✓					
CO2				✓	✓					
CO3				✓	✓					
CO4				✓	✓					

Open elective

25LSE507: ACADEMIC WRITING AND PUBLISHING

Learning Objectives (LO):

- To identify the key features of academic writing, including formal tone, structure, and objectivity;
- To demonstrate the ability to plan, draft, and revise academic texts;
- To edit and proofread written work for grammar, punctuation, coherence, and adherence to academic style guidelines;
- To understand the structure and organisation of academic papers;
- To train the students in design and formatting of academic paper;
- To gain the knowledge of academic and publication ethics;
- To apply appropriate citation and referencing techniques using recognized academic styles.

Course Outcomes (CO):

- CO1 Introduce the principles and conventions of academic writing, including structure, tone, style, and formality appropriate to scholarly communication;
- CO2 Encourage revision and editing as key stages of the writing process, focusing on grammar, coherence, clarity, and formatting;
- CO3 Raise awareness about academic honesty and plagiarism, and equip students with tools to avoid unethical practices in research and writing;
- CO4 Identify the structure and formatting of academic papers following APA, MLA, CMOS, IEEE, and develop skills in using tools for academic writing.

Unit 1	:	Introduction to academic writing: - Concept, purpose, importance, types, key elements, and audience in academic writing; - Formality, objectivity, tone, and structure; - Good academic and research practices; - Academic writing process: Planning, drafting, editing, and	12 hrs
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		proofreading, final submissions; - Language and writing skills: Grammar, semantics, diction, syntax, sentence structure, readability; - Aberration in technical writing.	
Unit 2	:	Structuring academic texts: - Types of academic papers: Research articles, review papers, case studies, research reports, project reports, theses and dissertations; - Structure and organisation of manuscripts: Title, abstract, keywords, introduction, literature review, methodology, results, discussion, conclusion, and references.	12 hrs
Unit 3	:	Designing and formatting: - Elements of page design, basic design guidelines, developing a style sheet; - Using visual aids: Tables, line graphs, bar graphs, pie charts, and illustrations; - Defining, describing, and providing set of instructions including footnotes and end notes, summarizing.	12 hrs
Unit 4	:	Academic and publication ethics: - Concept, definition, and importance; - Publication misconduct: Falsification Fabrication and Plagiarism (FFP), redundant publication; - Committee for ethical guidelines: COPE, WAME, ICMR; - Predatory publishers and journals; - Citation and referencing: APA, Chicago, MLA, IEEE; - Referencing tools: Zotero, Mendeley, JabRef.	12 hrs
		Total	48hrs

Mapping of course outcomes (COs) with program outcomes (POs):

CO-PO Mapping

CO	PO									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1				✓						
CO2				✓						
CO3				✓						
CO4				✓						

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FOURTH SEMESTER

Hard Core

25LSH551: INFORMATION SYSTEMS AND SERVICES

Learning Objectives (LO):

- To familiarize students with the meaning, definition, use and implications of information systems;
- To understand the structure and components of information systems;
- To study the various information institutions;
- To study the activities of national documentation centres;
- To understand resource sharing, networks and library consortium;
- To know the different types of information services;
- To learn the different information systems and databases.

Course Outcomes (CO):

CO1 Able to understand the components and different types of information systems;

CO2 Understand the different types of information services, good qualities possessed by the reference librarian;

CO3 Gain the knowledge of resource sharing, networking, and library consortium of national and international level;

CO4 Knowledge of different documentation centres, information systems and databases involved in provision of information services.

Unit 1	:	Information systems: – Concepts, meaning, objectives, functions, and components; – Information institutions: Libraries, documentation centres, data centres, clearing houses, referral centres, information centres, translation centres, and open archives.	12 hrs
Unit 2	:	Information services: - Reference service: Meaning, definitions, need, purpose, theories, and types; - Reference process: Steps in providing reference services,	12 hrs

		qualities of a reference librarian; – Alerting services: Current awareness service, selective dissemination of information; – Document delivery service, translation service, referral service, Inter-library loan, reprographic service, bibliographic service, indexing and abstracting service, online library services.	
Unit 3	:	Library networking, resource sharing, and consortia: – Library networks: Meaning, definitions, the study of various library and information networks – National: INFLIBNET, DELNET; International – CALIS, JANET, OCLC; – Resources sharing: Meaning, definitions, objectives, advantages, and disadvantages; – Library consortia: Meaning, definitions, objectives, types, study of various library consortia; – National: NKRC, HELINET, CeRA, ICMR, E-ShodhSindhu, ONOS; – International: RLUK, ICOLC, EIFL, SANLIC, CARLI, etc.	12 hrs
Unit 4	:	Information systems and national documentation centres: – INIS, BIOSIS, INSPEC, ERIC, AGRIS, MEDLINE, and ENVIS; – NIScPR, DESIDOC, NASSDOC, and NIMSME.	12 hrs

Mapping of course outcomes (COs) with program outcomes (POs):

CO-PO Mapping

CO	PO									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1				✓						
CO2	✓		✓	✓						
CO3			✓							
CO4	✓			✓						

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25LSH552: DIGITAL LIBRARIES

Learning Objectives (LO):

- To provide an understanding of digital libraries, including their meaning, purpose, planning, and implementation;
- To understand the infrastructure and communication tools and techniques required and used for digitisation in specific type of libraries;
- To elaborate on process of digital contents and organization of library materials;
- To understand digital collection development, metadata standards, digitization practices, and digital preservation;
- To examine current trends, challenges, and future directions in digital libraries;
- To familiarize students with open sources digital library software;
- To study the differentiate between terms like digital library, virtual library, hybrid library and traditional library;

Course Outcomes (CO):

- CO1 Explain the fundamental concepts of digital libraries and its design, implementation and infrastructure required to develop digital library;
- CO2 Familiar with metadata and other standards to create digital libraries and open sources software available for creating digital repositories;
- CO3 Critically assess emerging trends such as AI, blockchain, and mobile platforms in digital library development;
- CO4 Evaluate the legal, ethical and policy issues in managing/accessing digital contents.

Unit 1	:	Digital library: - Meaning, definition, objectives, functions, scope; - Infrastructure required for setting up a digital library: Selection of hardware and software, skilled manpower and training, cost, physical equipment, digital materials; - Major digital library initiatives; - Advantages and disadvantages of digital library.	12 hrs
Unit 2	:	Design and organization of digital library: - Digital collections: Selection criteria and policies, collection	12 hrs

		building strategies; - Digital content creation: Electronic documents, file formats, access management, and digital objects; - Architecture, interoperability, user interfaces; - Digitisation process; - Digital storage: Archiving and preserving digital collections; - Concept, types, and features of digital library software; - Open-source digital library software: GSDL, DSpace, EPrints, and Omeka.	
Unit 3	:	Digital library standards: - Metadata standards: Dublin Core, MARC21, MODS, and METS; - Interoperability protocols: OAI-PMH, OAI-ORE, SRU/SRW, Z39.50; - Digital object identifiers and persistent identifiers: DOI, ARK, URN; - Standards for digital preservation: OAIS, PREMIS, VRA, and ISO 16363; - File format standards: Text - RDF, XML, TEI, JSON; Images - TIFF, JPEG2000; Audio/Video- WAV, MP4; Web content accessibility guidelines.	12 hrs
Unit 4	:	Current trends and challenges of digital library: - AI and machine learning in digital Library; - Digital library and semantic web; - Implementation of deep learning, Internet of things, cloud computing, and other application in digital library; - Intellectual property right, copyright, licensing, and fair use in digital libraries, digital rights and access management, legal issues, and creative commons; - Data privacy and access restrictions, data security - Backup and restore, storage, database and file privileges.	12 hrs
		Total	48hrs

Mapping of course outcomes (COs) with program outcomes (POs):

CO-PO Mapping

CO	PO									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	✓				✓					
CO2	✓				✓					
CO3					✓				✓	
CO4							✓			

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Soft Core

25LSP553 DIGITAL LIBRARIESY (PRACTICE)

Learning Objectives (LO):

- To impart practical skills for creating and managing digital libraries;
- To provide hands-on experience in installing and configuring digital library software;
- To modify digital library user interfaces and customize content layout, themes, and navigation to improve user experience;
- To create and modify the collections, sub collections and its different levels;
- To create, edit, and manage metadata using standards to ensure consistency and interoperability;
- To digitize documents and media files using scanners and OCR tools, and upload them to a digital library platform with appropriate metadata;
- To provide overall training in digitization, metadata creation, and interface customization.

Course Outcomes (CO):

- CO1 Install, configure and overall setting of open-source platforms for creating digital libraries and generate structured metadata;
- CO2 Upload digital items into repositories and organize them within appropriate collections, applying subject classification and keywords;
- CO3 Configure user roles, content licensing, and access restrictions to manage content visibility and user access;
- CO4 Design, build, and present a functional digital library project, incorporating all major components and processes learned.

Unit 1	:	Installation of digital library software: GSDL / DSpace/ EPrints / Omeka; Hands on practice of digital library creation: GSDL / DSpace/ EPrints / Omeka.	22 hrs
Unit 2	:	Building collection in digital library software: GSDL / DSpace/ EPrints / Omeka.	20

Unit 3	:	Modifying user interface: Customizing digital library user interfaces.	10 hrs
Unit 4	:	Creating metadata and searching, indexing.	10 hrs
		Total	62hrs

Mapping of course outcomes (COs) with program outcomes (POs):

CO-PO Mapping

CO	PO									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1					✓					
CO2					✓					
CO3					✓		✓			
CO4					✓				✓	

25LSP554: INFORMATION SOURCES (PRACTICE)

Learning Objectives (LO):

- To enable the students to examine a realistic information problem in practice;
- To develop skills to carry out information searches using various database;
- To get acquainted with a variety of information sources;
- To learn how to evaluate information sources based on criteria for evaluation;
- To get practical experience in preparation of newspaper clippings;
- To gain the practical experience of abstracting and indexing of information resources;
- To get practical experience in compilation of bibliographies;

Course Outcome (CO):

CO1 Gain knowledge of searching and identifying different sources of information;

CO2 Understand the criteria for evaluation of information sources and websites;

CO3 Get practical experience of abstracting and indexing and newspaper clippings;

CO4 Overall practical knowledge of handling different information sources.

Acquaintance with various sources of information and evaluation of information sources.

(Each student shall compulsorily maintain the practical record and submit the same before the commencement of theory examination)

Unit 1	:	Searching and identifying the authentic information sources.	12 hrs
Unit 2	:	Evaluation of information sources: Print, electronic and websites.	20 hrs
Unit 3	:	Abstracting and indexing of electronic information resources.	20 hrs
Unit 4	:	Preparation of newspaper clippings.	10 hrs
		Total	62hrs

Mapping of course outcomes (COs) with program outcomes (POs):

CO-PO Mapping

CO	PO									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	✓	✓	✓							
CO2			✓	✓						
CO3	✓									
CO4	✓	✓	✓							

25LSP555: PROJECT WORK AND VIVA VOCE

Learning Objectives (LO):

- To determine mode and methods for primary do familiarize students with formulating of research questions and statement of problem;
- To understand scientific method of literature research;
- To design suitable research methods, determine sample size and design appropriate research instrument;
- To determine mode and methods for primary data collection from the target population;
- To know creation of database responses from respondents and decide about tools and techniques for data analysis;
- To understand methods of interpretation of results of data analysis in a meaningful manner;
- To develop writing skills for presenting research findings through submission of dissertation, which will be evaluated for award of degree.

Course Outcome (CO):

- CO1 Apply theoretical knowledge of research methodology into practice to formulate research problem, hypotheses;
- CO2 Conduct literature search and review scientifically;
- CO3 Design suitable research methodology including sample size and research instrument to collect data;
- CO4 Apply suitable statistical tools and techniques for data analysis and interpretation and reporting research findings.

The students are required to select a topic for the project work in the beginning of the 3rd semester in consultation with respective assigned guide and work two hours per week and prepare the synopsis during the 3rd semester of the programme. The final project report has to be submitted to the department/University before the commencement of the 4th semester examination. The project report will be evaluated jointly by the external and internal examiners for 50 marks followed by a Viva Voce examination for 20 marks. **62hrs.**

Mapping of course outcomes (COs) with program outcomes (POs):

CO-PO Mapping

CO	PO									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1				✓						
CO2				✓						
CO3				✓						
CO4				✓						✓

25LSP556: PRACTICAL EXPERIENCE AND STUDY TOUR / INTERNSHIP

Learning Objectives (LO):

- Any library work experience serves the purpose of both – the student as well as the library. It is supposed to add value to both the parties. The objectives of internship and library tours are:
- To increase the knowledge and skills of recent graduates;
- To upgrade their skills in a specific area of information service;
- To train them in order to boost their efficiency;
- To train them to adapt to the existing working conditions.

Course Outcome (CO):

CO1 Gain practical experience of working in real libraries;

CO2 Validate or compare their classroom learning in real library activities;

CO3 Gain knowledge of activities performed in different types of libraries like a university, professional, research, and public libraries;

CO4 Enable to critically analyse library policies, functions, activities, services, and processes of different libraries.

a) Work experience: The M.Lib.I.Sc. students shall work 6 (six) hours per week in a library identified by the department and submit the work experience report before the commencement of theory examinations.	62hrs
b) Study tour: There shall be a library tour, which is compulsory, and the student has to submit a tour report. Each student shall prepare a study tour report under the guidance of the teacher and submit the same before the commencement of the theory examinations. 70 Marks	
OR	
c) Internship: Students are required to undergo internship in different libraries selected by the department. The duration of the internship will be one month. Internship will be arranged after semester end examination (completion of all theory and practical exam). Each student shall prepare an internship report and submit the same within the stipulated time. 70 Marks	

Mapping of course outcomes (COs) with program outcomes (POs):

CO-PO Mapping

CO	PO									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1								✓		✓
CO2				✓				✓		
CO3	✓									✓
CO4		✓	✓				✓			

Distribution of internal assessment marks

For all theory papers:

Attendance 76% - 85% - 2 Marks 86%-95% - 3 Marks 96% - 100% - 5 Marks	05 Marks
Two internal tests	15 Marks
Two assignments	05 Marks
One seminar	05 Marks

For all practical papers:

Attendance 76% - 85% - 2 Marks 86%-95% - 3 Marks 96% - 100% - 5 Marks	05 Marks
Two internal tests	15 Marks
Practical records	10 Marks

25LSP555: Dissertation and Viva voce:

Attendance 76% - 85% - 4 Marks 86%-95% - 6 Marks 96% - 100% - 10 Marks	10Marks
Topic selection, review of literature, methodology used	20 Marks

25LSP556: Practical experience and study tour / Internship

Attendance 76% - 85% - 4 Marks 86%-95% - 6 Marks 96% - 100% - 10 Marks	10Marks
Work experience and study tour dairy also overall performance	20 Marks
