SYLLABUS
2 Years Integrated B.Lib.I.Sc – M.Lib.I.Sc Course

FIRST SEMESTER

Paper Code	Paper Title	Credits	Total Marks
MLISC81DC00105	Foundations of Library and Information Science	5	100
MLISC81DC00205	Library Classification (Theory)	5	100
MLISC81DC00305	Library Cataloging (Theory)	5	100
MLISC81DC00405	Library Classification and Cataloging (Practical) DDC (Latest edition) and Cataloging of Monographs and Serials using AACR-2R	5	100

SECOND SEMESTER

Paper Code	Paper Title	Credits	Total Marks
MLISC82DC00105	Management and Organization of Libraries and Information Centers	5	100
MLISC82DC00205	Information Communication Technologies (Theory)	5	100
MLISC82DC00305	Information Sources and Services	5	100
MLISC82DC00405	Library Classification and Cataloging (Practical) CC (6th ed.) and Cataloging of Non Book Materials using AACR-2R	5	100

THIRD SEMESTER

Paper Code	Paper Title	Credits	Total Marks
MLISC91DC00105	Information, Communication and Society	5	100
MLISC91DC00205	Information Analysis, Consolidation, Repackaging and Retrieval	5	100
MLISC91DC00305	Information Communication Technologies Advanced (Theory)	5	100
MLISC91DC00405	Electronic Resource Management	5	100

FOURTH SEMESTER

Paper Code	Paper Title	Credits	Total Marks
MLISC92DC00105	Information Communication Technologies Advanced (Practice)	5	100
MLISC92DC00205	Research Methodology	5	100
	Elective Paper *(Candidate can choose any one from the below mentioned paper)*		
	Academic Library and Information System	4	100
	Public Library and Information System	4	100
	Marketing of Library and Information Products and Services	4	100
MLISC92DE00406	**Project Assessment**		
	Internal Assessment:-		
	Research Design Seminar	1	25
	Progress Seminar	1	25
	Semester and Assessment:-		
	Dissertation	1	25
	Final Presentation	2	50
	Viva-Voce	1	25

FIRST SEMESTER
MLIS- 01: Foundations of Library and Information Science

Unit – I: Libraries as Social Institutions

- Social and Historical Foundation of Library
- Different Types of Libraries – Characteristics, Objectives, Structure, and Functions
- Development of Libraries with Special Reference to India
- Library and Information Science Education in India
- Role of Library in Formal and Informal Education
- Laws of Library Science and its Implications

Unit – II: Library Legislation and Library Profession

- Library Legislation – Need, Structure, and Functions
- Library Legislations in India and Salient Features of State Library Acts
- Intellectual Property Rights: Plagiarism, Copyright Act, IT Act
- Delivery of Books (Public Libraries) Act
- Press and Registration of Books Act

Unit – III: Professional Associations and Promoters of Library and Information Science

- Professional Associations: Objectives, Functions, and Activities
- National Associations – ILA, IASLIC
- International Associations – ALA, CILIP, IFLA
- National Level Promoters – Raja Rammohun Roy Library Foundation (RRRLF), UGC
- International Level Promoters – UNESCO

Unit – IV: Library Outreach Activities

- Library Resource Sharing
- Library Publicity and Extension Activities
- User Education
- Librarianship as a Profession
- Professional Ethics

Unit – V: Emerging Trends in Library and Information Science

- Library Automation and Integrated Library Management Systems (ILMS)
- Digital Libraries and Institutional Repositories
- Open Access Movement and Scholarly Communication
- Role of Artificial Intelligence, Big Data, and Cloud Computing in Libraries
- Library as Learning and Innovation Spaces (Makerspaces, Virtual Libraries)
- Research Data Management and Digital Preservation

Suggested Readings:

1. Bawden, D., & Robinson, L. *Introduction to Information Science*. 2nd ed., Neal-Schuman, 2022.
2. Chowdhury, G. G. *Introduction to Digital Libraries*. Facet Publishing, 2010.
3. Gardner, Frank M. *Public Library Legislation: A Comparative Study*. Paris: UNESCO, 1971.
4. Harrison, Colin and Beenham, Rosemary. *The Basics of Librarianship*. 3rd ed. London: Clive Bingley, 1990.
5. Jefferson, G. *Libraries and Society*. London: James Clarks, 1969.
6. Khanna, J. K. *Library and Society*. Kurukshetra: Research Publications, 1987.
7. Kochtanek, Thomas R., and Matthews, Joseph R. *Library Information Systems: From Library Automation to Distributed Information Access Solutions*. 2nd ed., Libraries Unlimited, 2020.
8. Krishan Kumar. *Library Organization*. New Delhi: Vikas Publishing, 1993.
9. Ranganathan, S. R. *Five Laws of Library Science*. 5th ed. Bangalore: Sarada Ranganathan Endowment for Library Science, 2006.
10. Singh, J. *Library and Information Science: A Practical Approach*. Ess Ess Publications, 2021.
11. Venkatappaiah, V. and Madhusudan, M. *Public Library Legislation in the New Millennium: New Model Public Library Acts for the Union, States, and Union Territories*. Delhi: Bookwell, 2006.

MLIS-02: Library Classification (Theory)

Unit – I: Structure of Knowledge

- Universe of Subjects: Definitions and Purpose
- Modes of Formation of Subjects
- Basic Concepts in Classification Theory
- Mapping of Subjects According to:
    - Colon Classification (Main Classes)
    - Dewey Decimal Classification (2nd Level Classes)
- Role of Epistemology and Ontology in Classification

Unit – II: Library Classification

- Library Classification: Definition, Need and Purpose
- Types of Library Classification Schemes: Enumerative, Faceted, Analytico-Synthetic
- Standard Classification Schemes and Their Features:
    - Colon Classification (CC)
    - Dewey Decimal Classification (DDC)
    - Universal Decimal Classification (UDC)
- Postulational Approach in Colon Classification:
    - Postulates and Facet Analysis
    - Fundamental Categories
    - Phase Relations and Common Isolates
    - Devices (AACDD, etc.)
    - Principles of Helpful Sequence and Facet Sequence
- Notation and Call Number Structure
- Current Trends in Classification

Unit – III: Tools and Techniques in Classification

- Call Number: Structure, Syntax, and Semantics
- Indexing and Classification: Relationship and Integration
- Use of Tables (DDC Table 1 to Table 6)
- Relative Index and Chain Procedure
- Mnemonics in Classification Systems
- Subject Heading Lists and Thesauri (LCSH, Sears)

Unit – IV: Practical Applications of Library Classification

- Classification of Books Using DDC and CC (Practical Work Examples)
- Use of Classification in Library Management Software (Koha, SLIM)
- OPAC Display of Class Numbers
- Impact of Classification on Shelf Arrangement and Browsing

Unit – V: Emerging Trends and Technologies in Classification

- Machine-Assisted Classification

- Role of AI and Natural Language Processing (NLP) in Subject Classification
- Semantic Web and Ontologies (e.g., OWL, SKOS)
- Linked Data and Metadata Standards (e.g., BIBFRAME, Dublin Core)
- Folksonomy and Social Tagging vs. Traditional Classification
- Future of Knowledge Organization in Digital Environments

Suggested Readings:

1. Ranganathan, S. R. *Colon Classification*. 6th ed. Bangalore: Sarada Ranganathan Endowment for Library Science, 2006.
2. Dewey, Melvil. *Dewey Decimal Classification and Relative Index*. 23rd ed. Dublin: OCLC, 2011.
3. Satija, M. P. *The Theory and Practice of the Dewey Decimal Classification System*. Chandos Publishing, 2007.
4. Foskett, A. C. *The Subject Approach to Information*. 5th ed. London: Library Association, 1996.
5. Broughton, Vanda. *Essential Classification*. 2nd ed. London: Facet Publishing, 2015.
6. Mai, Jens-Erik. *Classification in a Social World: Bias and Trust*. London: Emerald Publishing, 2010.
7. Taylor, Arlene G., and Joudrey, Daniel N. *The Organization of Information*. 4th ed. Libraries Unlimited, 2017.
8. Rowley, Jennifer, and Hartley, Richard. *Organizing Knowledge: An Introduction to Managing Access to Information*. 4th ed. Routledge, 2017.
9. Svenonius, Elaine. *The Intellectual Foundation of Information Organization*. MIT Press, 2000.
10. Greenberg, Jane, and Scherle, Ryan. *Metadata and Digital Resources: The Role of Classification in the Semantic Web*. Journal of Digital Information, 2014.
11. Hider, Philip. *Information Resource Description: Creating and Managing Metadata*. 2nd ed., ALA Neal-Schuman, 2018.

MLIS-03: Library Cataloging (Theory)

Unit – I: Introduction to Library Cataloging

- Concept, Purpose, and Functions of a Library Catalogue
- Difference between Cataloging and Classification
- Physical Forms of Catalogue: Card, Book, OPAC, and WebOPAC
- Types of Catalogue: Dictionary, Classified, Alphabetical, Chronological
- History and Evolution of Cataloguing Practices
- Objectives and Five Laws of Library Science in Cataloging Context

Unit – II: Catalogue Codes and Principles

- **Catalogue Codes**:
  - AACR (Anglo-American Cataloguing Rules)
  - AACR2 and Its Structure
  - RDA (Resource Description and Access): Objectives and Salient Features
- **Principles of Cataloguing**:
  - Canons and Laws by S. R. Ranganathan
  - Paris Principles and IFLA's Statement of International Cataloguing Principles (ICP)
  - Principles of ISBD (International Standard Bibliographic Description)

Unit – III: Cataloguing of Books and Non-Book Materials

- Main Entry and Added Entries
- Choice and Rendering of Headings
- Cataloguing of Single, Joint, Pseudonymous, and Anonymous Authors
- Cataloguing of Serials, Edited Works, Government Publications
- Cataloguing of Non-book Materials: Maps, Audio-Visuals, E-Resources
- Shared Cataloguing and Union Catalogues

Unit – IV: Subject Cataloguing and Vocabulary Control

- Subject Cataloguing: Meaning and Need
- Difference Between Alphabetical and Classified Subject Catalogues
- Library of Congress Subject Headings (LCSH)
- Sears List of Subject Headings
- Chain Procedure and Other Methods
- Controlled Vocabularies vs. Folksonomy
- Thesauri, Taxonomies, and Ontologies in Subject Access

Unit – V: Recent Trends and Technology in Cataloguing

- MARC (Machine Readable Cataloguing): Structure and Fields
- Metadata Standards: Dublin Core, MODS, METS, BIBFRAME
- OPAC, WebOPAC, and Discovery Layers
- Integrated Library Management Systems (ILMS) and Cataloguing Modules
- Cataloguing in Digital and Institutional Repositories

- AI in Metadata Generation and Auto-cataloguing Tools

Suggested Readings:

1. Anglo-American Cataloguing Rules (AACR2) – 2nd ed. Chicago: ALA, 2002.
2. IFLA. *Statement of International Cataloguing Principles (ICP)*. IFLA, 2016.
3. Ranganathan, S. R. *Classified Catalogue Code with Additional Rules for Dictionary Catalogue Code*. Bangalore: Sarada Ranganathan Endowment, 1998.
4. Svenonius, Elaine. *The Intellectual Foundation of Information Organization*. MIT Press, 2000.
5. Taylor, Arlene G., and Joudrey, Daniel N. *The Organization of Information*. 4th ed., Libraries Unlimited, 2017.
6. Hider, Philip**.** *Information Resource Description: Creating and Managing Metadata*. 2nd ed., ALA Neal-Schuman, 2018.
7. Chan, Lois Mai. *Cataloging and Classification: An Introduction*. 3rd ed., Scarecrow Press, 2007.
8. Rowley, Jennifer, and Hartley, Richard. *Organizing Knowledge: An Introduction to Managing Access to Information*. 4th ed., Routledge, 2017.
9. IFLA. *Functional Requirements for Bibliographic Records (FRBR)* and its successors: FRAD, FRSAD.
10. Baca, Murtha (Ed.). *Introduction to Metadata*. Getty Publications, 2016.

MLIS-04: Library Classification and Cataloging (Practical)

DDC (Latest edition) and Cataloging of Monographs and Serials using AACR-2R

Part A: Library Classification (Practical using DDC – Latest Edition)

Unit I: Overview of DDC

- Structure of DDC (22nd/23rd/Latest Edition): Notational System, Summaries, Schedules, Tables
- Use of Relative Index and Manual
- Steps in Classification using DDC

Unit II: Classification Practice – Simple and Compound Subjects

- Assigning Class Numbers for:
    - Single-topic documents
    - Subjects with subdivisions (place, time, form)
    - Interdisciplinary subjects
- Use of Auxiliary Tables (Tables 1 to 6)

Unit III: Complex Topics and Phase Relations

- Assigning Class Numbers for:
    - Composite Subjects (e.g., Bibliography of History)
    - Phase Relations (Bias, Comparison, Influence, etc.)
- Exercises on Applying Synthesized Numbers

Unit IV: Classification of Non-Book Materials

- Practice in assigning DDC numbers to:
    - E-books and multimedia
    - Maps and reports
    - Government documents

Tools Required:

- DDC (Latest Edition)
- Classification Practice Workbooks / Worksheets

Part B: Library Cataloguing (Practical using AACR-2R)

Unit V: Cataloguing of Monographs (Single Author)

- Main Entry, Added Entry, Title Page Verso Information
- Physical Description, Notes Area
- Rendering Author, Title, Publisher, and Imprint Information
- Preparing Complete Catalog Card using AACR-2R

Unit VI: Cataloguing of Multi-Author and Edited Works

- Joint Authors, Corporate Authors, Conferences
- Edited Volumes, Festschrifts
- Compilations and Government Publications

Unit VII: Cataloguing of Serials

- Single vs. Multi-volume Serials
- Change in Title and Frequency
- Serial Identification and Treatment in AACR-2R
- Linking Fields and Notes for Continuations

Unit VIII: Use of Cataloguing Tools

- Use of Subject Headings: LCSH/Sears
- Use of ISBD elements
- MARC Format – brief introduction

Tools Required:

- AACR-2R
- Sample title pages (print/digital)
- Catalog cards or software templates
- Access to OPAC module (if using ILMS like Koha)

Suggested Practical Workbooks & References

1. Sinha, Suresh C. *Practical Cataloguing: AACR-2*. Agrawal Publications, Latest Ed.
2. Sharma, C. K. *Practical Library Classification*. Ess Ess Publications.
3. Krishan Kumar. *Cataloguing Practice (With AACR-2)*. Vikas Publishing.
4. Ranganathan, S. R. *Classified Catalogue Code*. Sarada Ranganathan Endowment.
5. Mitchell, Joan S. *Dewey Decimal Classification and Relative Index*. OCLC, Latest Edition.
6. Chan, Lois Mai. *Cataloging and Classification: An Introduction*.
7. Koha Manuals / ILMS Documentation for cataloguing module interface.

SECOND SEMESTER
MLIS- 05: Management and Organization of Libraries and Information Centers

Unit 1: Principles and Practices of Management

- Concept, Definitions and Scope of Management
- Functions of Management – Planning, Organizing, Staffing, Directing, Controlling
- Classical and Modern Theories of Management
- Scientific Management and its Application in Libraries
- Change Management – Strategies for Managing Change in LIS Environment
- Total Quality Management (TQM) – Concept, Components, Application in Libraries
- Disaster Management in Libraries – Preparedness, Risk Assessment, Recovery Plans

Unit 2: Planning and Human Resource Management

- Planning – Purpose, Types and Process in Libraries
- Organizational Structure of Libraries; Role of Library Committees
- System Analysis – Concept, Library as a System, Performance Evaluation Methods
- Library Building Planning – Functional Layout, Space Standards
- Manpower Planning – Ranganathan's Formula, Job Analysis and Description
- Recruitment and Training – Induction, Orientation, In-service Training
- Human Resource Development (HRD) – Motivation, Appraisal, Team Building

Unit 3: Library Financial Management

- Budgeting – Concepts, Types, Objectives
- Sources of Library Finance – Government, Private, Grants, Donations
- Techniques of Budgeting – Line-item, Formula, Performance and PPBS
- Budgetary Control and Audit
- Financial Reporting – Income and Expenditure Statements, Audits

Unit 4: Library Housekeeping Operations

- Overview of Library Sections:
    - Acquisition/Resource Development
    - Technical Processing (Classification, Cataloguing)
    - Circulation and Lending
    - Serials Management
    - Maintenance, Conservation & Preservation
- Collection Development Policy – Print & Electronic
- Document Selection Tools – Bibliographies, Reviews, Vendor Catalogues
- Stock Verification Methods – Physical Count, RFID, Accession Register
- Weeding out Policies – Criteria, Procedures, Records
- Library Rules and User Behavior Policy
- Reports and Statistics – Types, Contents, Annual Reports, Usage Stats

Unit 5: ICT, Innovation and Performance Evaluation

- Role of ICT in Library Management – ILMS, RFID, Cloud Solutions
- Library Automation – Koha, e-Granthalaya
- Performance Indicators – ISO Standards, KPIs for Libraries
- User Satisfaction Surveys and Feedback Mechanisms
- Marketing of Library Services – Tools and Techniques
- Innovation in Library Services – Chatbots, Mobile Apps, Gamification
- Green Libraries – Sustainable Practices in Management

Suggested Readings:

1. **Krishan Kumar**. *Library Management in Electronic Environment*. Har-Anand Publications, 2007.
2. **Mittal, R. L.** *Library Administration: Theory and Practice*. 5th Ed. Ess Ess Publications, 2007.
3. **Stueart, R. D., & Moran, B. B.** *Library and Information Center Management*. 8th Ed. Libraries Unlimited, 2013.
4. **Koontz, Harold & Heinz Weihrich.** *Essentials of Management*. Tata McGraw Hill, Latest Ed.
5. **Chowdhury, G.G.** *Sustainability of Scholarly Information*. Facet Publishing, 2014.
6. **Sharma, J.S. & Grover, D.R.** *Library and Information Science: Theory, Practice and Application*.
7. **Satija, M.P.** *The Theory and Practice of Library Classification*. Ess Ess Publications, Latest Ed.
8. **Brophy, P.** *The Library in the 21st Century: New Services for the Information Age*. Facet Publishing, 2007.
9. **Singh, M.** *Library and Information Management: Theory and Practice*. IBT Publications.
10. **Swan, Alma**. *The Culture of Open Access and Library Management*. SPARC Europe, 2020.

MLIS-06: Information Communication Technologies (Theory)

Unit 1: Computer Hardware and Software Concepts

- Information Technology (IT) – Definition, Need, Scope, and Objectives
- Generations and Classifications of Computers
- Components of Computers – CPU, Motherboard, RAM, ROM
- Input, Output & Storage Devices – Scanners, Printers, HDD, SSD, etc.
- Software – System Software vs. Application Software
- Operating Systems – Features and Comparison: MS-DOS, Windows, Linux, MacOS

Unit 2: Library Automation and Application Software

- Library Automation – Concept, Objectives, Advantages
- Automating Library Functions – Acquisition, Cataloguing, Circulation, OPAC, Serial Control
- Library Management Software – Features and Comparison:
    - Koha, SOUL 3.0, e-Granthalaya.
- Use of General Application Software –
    - MS Word (Reports, Letters),
    - MS Excel (Library Statistics, Accession Register),
    - MS PowerPoint (User Orientation, Presentations)
- Introduction to Open Source Tools and Cloud Solutions

Unit 3: Communication Technologies and Web Tools

- Telecommunication Technologies – Definition, Modes (Simplex, Half Duplex, Full Duplex)
- Transmission Media – Guided (Twisted Pair, Coaxial, Fiber Optic), Unguided (Wi-Fi, Satellite)
- Communication Tools –
    - E-mail, Instant Messaging, Voice Mail
    - Video Conferencing (Zoom, Google Meet)
    - Web Portals for Library Services
- Web 2.0 Tools in Libraries – Blogs, Wikis, Social Media (Facebook, X, Instagram), YouTube Channels
- Digital Literacy and Digital Citizenship

Unit 4: Networking, Internet and Library Networks

- Computer Networks – Concept, Types (LAN, MAN, WAN, VPN) and Topologies (Bus, Star, Ring)
- Network Devices – Modem, Switch, Router, Firewall
- Internet and Web – History, Structure, Services (Email, FTP, WWW)
- Library Networks –
    - INFLIBNET (UGC-INFONET, Shodhganga)
    - DELNET
    - NKN (National Knowledge Network)
- Search Engines and Meta Search Engines – Google, DuckDuckGo, Yippy
- Internet Safety, Malware, Digital Hygiene Practices

Unit 5: Emerging Technologies in Libraries

- Cloud Computing – Concept and Application in Libraries (G-Suite, Microsoft 365, Cloud OPACs)

- RFID, QR codes and Barcode – Use in Circulation, Inventory
- Institutional Repositories (DSpace, EPrints)
- Mobile Applications in Libraries
- Digital Libraries – Concept, Architecture, Examples (NDLI, Europeana, DLI, Project Gutenberg)
- AI and Chatbots in Library Services
- Green Computing and Sustainable IT Practices

Suggested Readings:

1. Rajaraman, V. *Fundamentals of Computers*. 6th ed. PHI Learning, 2020.
2. Bharihoke, Deepak. *Fundamentals of IT*. 3rd ed. Excel Books, 2020.
3. Negus, Christopher. *Linux Bible*. 10th ed. Wiley, 2018.
4. Chowdhury, G. G. & Sudatta. *Organizing Information: From the Shelf to the Web*. Facet Publishing, 2011.
5. Chowdhury, G. G. *Introduction to Modern Information Retrieval*. 4th ed. Facet, 2010.
6. Kochtanek, Thomas & Matthews, Joseph. *Library Information Systems: From Library Automation to Distributed Information Access Solutions*. Libraries Unlimited, 2002.
7. Singh, R. *Computer Applications in Library*. Ess Ess Publications, 2016.
8. Pandian, M. Paul. *Digital Libraries and Information Access*. IGI Global, 2021.
9. IFLA. *Guidelines on ICT for Library Services and Users*. IFLA Publications, 2015.
10. Cox, Joyce et al. *Microsoft Office 365 Step by Step*. Microsoft Press, Latest Edition.

MLIS-07: Information Sources and Services

Unit 1: Information Sources

- Definition, Nature, and Characteristics of Information Sources
- Types of Sources:
  - Documentary: Primary, Secondary, and Tertiary Sources
  - Non-documentary: Human and Institutional Sources
- Criteria for Evaluation of Information Sources: Accuracy, Authority, Timeliness, Coverage, and Relevance
- Formats of Information Sources: Print, Electronic, Multimedia

Unit 2: Information Services

- Concept and Definition of Information Services
- Need, Purpose, and Evolution of Information Services
- Types of Information Services:
  - Traditional Services:
    - Reference Services (Short-range and Long-range)
    - Bibliographic and Referral Services
    - Indexing and Abstracting Services
    - Translation Services
  - Modern and ICT-based Services:
    - Document Delivery & Electronic Document Delivery
    - Current Awareness Services (CAS)
    - Selective Dissemination of Information (SDI)
    - Alerting Services (Table of Contents, Newsletters, RSS)
    - Virtual Reference Services, Ask-a-Librarian, Chatbots

Unit 3: Information Users and User Studies

- Types of Users: Academic, Research, Professional, General Public, Children, Differently Abled
- User Needs and Information Seeking Behaviour
  - Models of Information Seeking Behaviour (Wilson, Ellis, Dervin, etc.)
- Methods of Assessing Information Needs: Surveys, Interviews, Observation, Transaction Logs
- User Education and Orientation Programs
- Information Literacy – Definitions, Standards (e.g., ACRL Framework), Digital Literacy

Unit 4: Internet and Electronic Resources

- Internet as a Source of Information
- Open Access Resources:
  - Subject Gateways, Virtual Libraries, Institutional Repositories, e-Journals
  - DOAJ, OATD, arXiv, bioRxiv, NDLI
- Subscribed Databases & Resources:
  - Bibliographic Databases: Medline, AGRIS
  - Citation Databases: Web of Science, Scopus, Dimensions
  - Full-text Sources: JSTOR, EBSCO, ProQuest
- Search Engines vs. Discovery Tools (Google Scholar, WorldCat, BASE, CORE)
- Consortia-based Access – INFLIBNET, eShodhSindhu, and One Nation One Subscription (ONOS)

Unit 5: Trends and Emerging Issues in Information Services

- Digital Reference Services – Email, Chat, Video Consultations
- Mobile Library Services
- Library Portals and Subject Directories
- Semantic Search and AI in Information Services
- Plagiarism Detection Tools (Turnitin, URKUND, Grammarly)
- Ethical and Legal Aspects in Information Service Delivery
- Trends in Personalization & Recommender Systems in Libraries

Suggested Readings:

1. Cassell, Kay Ann & Hiremath, Uma. *Reference and Information Services: An Introduction*. 5th ed., ALA Neal-Schuman, 2023.
2. Krishan Kumar. *Reference Service*. 6th ed. New Delhi: Vikas Publishing, 2019.
3. Katz, William A. *Introduction to Reference Work*. 2 Vols. 8th ed. New York: McGraw-Hill, 2002.
4. Chowdhury, G. G. & Chowdhury, Sudatta. *Information Sources and Searching on the World Wide Web*. London: Facet, 2001.
5. Ranganathan, S. R. *Reference Service*. 2nd ed. Bangalore: Sarada Ranganathan Endowment, 1989.
6. Pawan Kumar Gupta & Usha Pawan. *Sandarbh Sewa: Saidhantik Avam Kriyatmak*. Jaipur: RBSA, 2008.
7. Seetharama, S. *Information Consolidation and Repackaging: Framework, Methodology, Planning*. New Delhi: Ess Ess Publications, 1997.
8. ALA. *Guidelines for Implementing and Maintaining Virtual Reference Services*. American Library Association, 2021.
9. Tenopir, Carol & King, Donald W. *Communication Patterns of Engineers*. Wiley-IEEE Press, 2004.
10. IFLA. *Digital Reference Guidelines*. The Hague: International Federation of Library Associations, 2019.

MLIS-08: Library Classification and Cataloging (Practical)

CC (6th ed.) and Cataloging of Non Book Materials using AACR-2R

Unit 1: Practical Classification Using Colon Classification (CC - 6th Edition)

- Overview of Colon Classification Structure and Schedules
- Classification of Simple Subjects (Single Facet)
- Classification of Compound Subjects (Multiple Facets)
- Application of Canon of Characteristics, Facet Formula, and Notation
- Use of Colon Classification Schedules for Main and Common Isolates
- Exercises on Books with Subject, Form, Space, and Time facets

Unit 2: Advanced Classification with CC (6th Edition)

- Classification of Complex Subjects involving Phase Relations (e.g., Bias, Comparison, Tool, etc.)
- Use of Devices (e.g., Alphabetical Device, Sector Device) in classification
- Practical exercises with documents from diverse disciplines:
    - Humanities
    - Social Sciences
    - Sciences and Technology
- Writing of complete Call Numbers including Book Numbers and Collection Number

Unit 3: Cataloging of Non-Book Materials (AACR-2R) – Part I

- Overview of AACR-2R Rules for Non-Book Materials
- Cataloging of Cartographic Materials: Maps, Atlases, Globes
- Cataloging of Sound Recordings: Audio Cassettes, CDs
- Cataloging of Video Recordings: DVDs, Blu-rays, VHS

Unit 4: Cataloging of Non-Book Materials (AACR-2R) – Part II

- Cataloging of Electronic Resources: CD-ROMs, Online Databases, E-books
- Creation of bibliographic records using ISBD (International Standard Bibliographic Description)
- Construction of Main Entry, Added Entry, and Subject Heading

Unit 5: Tools, Standards, and Software for Classification and Cataloging

- Introduction to Library Management Software (e.g., Koha, SOUL, e-Granthalaya) for practical cataloging
- Use of Authority Files and Subject Headings Lists (e.g., LCSH, SLSH)
- Introduction to MARC 21 Format and simple MARC tags
- Best practices in Labeling, Spine Notation Writing, and Shelf List Maintenance
- Preparing a Catalog Card (Main Entry, Added Entry, and Series Entry) manually and via software

Suggested Readings:

1. Ranganathan, S. R. *Colon Classification*. 6th ed. Bangalore: Sarada Ranganathan Endowment for Library Science, 1960.

2. Girja Kumar & Krishan Kumar. ***Theory of Classification***. New Delhi: Vikas Publishing, 2000.
3. Krishan Kumar. ***Cataloguing Practice***. 6th ed. New Delhi: Vikas Publishing, 2020.
4. Chan, Lois Mai. ***Cataloging and Classification: An Introduction***. 4th ed. Lanham: Rowman & Littlefield, 2016.
5. Anglo-American Cataloguing Rules (AACR-2R)**.** 2nd rev. ed. Ottawa: Canadian Library Association, 2002.
6. Gupta, S. C. ***Practical Cataloguing: AACR-II***. New Delhi: Ess Ess Publications, 2006.
7. Bohdan S. Wynar. ***Introduction to Cataloging and Classification***. 10th ed. Libraries Unlimited, 2006.
8. Patel, Jashu & Krishan Kumar. ***Colon Classification: A Practical Approach***. New Delhi: Ess Ess, 2001.

THIRD SEMESTER
MLIS- 09: Information, Communication and Society

Unit 1: Information – Concept, Nature, and Evolution

- Definition, Characteristics, and Nature of Information
- Types of Information: Explicit vs Tacit, Structured vs Unstructured
- Value and Use of Information in research, governance, and everyday life
- Distinction between Data, Information, and Knowledge
- Concept, Scope, and Types of Knowledge
- Modes and Forms of Information: Oral, Print, Digital, Multimedia
- Generation and Flow of Information in the Digital Age

Unit 2: Information Society and Knowledge Economy

- Information Society: Meaning, Definitions (UNESCO, Bell, Castells), and Characteristics
- Knowledge Society: Differences, Drivers, and Benefits
- National and International Information Infrastructure: NIC, NKN, INFOLAC, World Summit on the Information Society (WSIS)
- Social, Economic, and Ethical Implications of Information
- Policy Frameworks: Right to Information Act (RTI), Information Ethics, Censorship, Data Protection, Open Government Data (OGD)
- Role of National Knowledge Commission & Digital India Initiatives

Unit 3: Communication: Theory and Models

- Concept, Nature, Scope, and Importance of Communication
- Types: Intrapersonal, Interpersonal, Group, Mass, Cross-cultural Communication
- Components: Sender, Message, Medium, Receiver, Feedback
- Communication Models:
    - Shannon and Weaver
    - Lasswell
    - Wilbur Schramm
    - Berlo's SMCR
- Channels of Communication in Libraries and Information Centers: Oral, Written, Visual, Digital
- Communication Barriers and Strategies to Overcome Them

Unit 4: Economics of Information and Knowledge Management

- Information as an Economic Resource: Characteristics and Valuation
- Information as a Commodity: Pricing, Licensing, and Access
- Economics of Information Production and Distribution
- Marketing of Information Products and Services in Libraries
- Knowledge Management: Concepts, Life Cycle, Strategies
- KM Tools and Techniques: Communities of Practice, Portals, Content Management Systems, Taxonomies

Unit 5: Information Policies and Emerging Trends

- Information Policy**:** Need, Scope, Components
- National Information Policy: India and other countries
- Open Access Movement**,** Creative Commons**,** Open Science
- Intellectual Property Rights and Libraries
- Emerging Trends:
  - Big Data and Libraries
  - Artificial Intelligence and Information Systems
  - Digital Inclusion and Information Equity
- Sustainable Development Goals (SDGs) and the Role of Libraries

Suggested Readings:

1. Feather, John. *The Information Society: A Study of Continuity and Change*. 5th ed. London: Facet Publishing, 2008.
2. Martin, William J. *The Information Society*. London: Aslib, 1988.
3. Castells, Manuel**.** *The Rise of the Network Society*. Wiley-Blackwell, 2010.
4. Rao, Madan Mohan. *Leading with Knowledge: Knowledge Management Practices in Global Infotech Companies*. New Delhi: McGraw-Hill, 2003.
5. Rowley, Jennifer**.** *Information Marketing*. Aldershot: Ashgate, 2001.
6. Bates**, Marcia J.** *Understanding Information: From the Big Bang to the Big Data*. Information Today Inc., 2016.
7. UNESCO. *World Summit on the Information Society Reports*. Paris: UNESCO, Latest editions.
8. Vickery, Brian C. & Vickery, Alina. *Information Science in Theory and Practice*. London: Butterworths, 1987.
9. Sharma, P. S. K., ed. *Electronic Information Environment and Library Services*. New Delhi: ILA, 2003.
10. Bell, Daniel. "The Social Framework of the Information Society." In *The Computer Age: A Twenty-Year View*, MIT Press, 1974.

MLIS-10: Information Analysis, Consolidation, Repackaging and Retrieval

Unit 1: Information Products – Design and Development

- Information Products**:** Concept, Definition, Nature, and Lifecycle
- Types of Information Products:
    - Newsletters
    - In-house Bulletins
    - Trade/Industry Bulletins
    - Technical Digests
    - Product Catalogs
    - Fact Sheets, InfoBriefs
- Design & Customization for target users (layout, language, visuals)
- Use of ICT Tools in Publishing and Dissemination
- Evaluation and Impact Assessment of Information Products

Unit 2: Information Systems – National and International Perspectives

- Information Systems**:** Definition, Objectives, Functions
- National Systems and Centres:
    - NIScPR (formerly NISCAIR)
    - NASSDOC
    - DESIDOC
    - NIC and ENVIS
- International Systems:
    - INIS (International Nuclear Information System)
    - AGRIS (Agricultural Information System)
    - DEVSIS**,** UNISIST**,** FAO
- Services Offered: Databases, Document Delivery, SDI, Alert Services
- Products: Yearbooks, Reports, State-of-the-Art Reports, Meta-databases

Unit 3: Information Consolidation and Repackaging

- Content Analysis**:** Methods, Metadata Assignment
- Information Consolidation**:** Summarization, Categorization, Evaluation
- Repackaging Techniques**:**
    - Abstracting
    - Annotating
    - Infographics
    - Web presentations (e.g., blogs, wiki pages)
- Electronic Content Creation**:**
    - HTML, XML, CSS
    - Tools for content repackaging: Canva, Adobe, Typora
- Standards and Guidelines**:** W3C, Dublin Core, MARC21 (as metadata standards)

Unit 4: Indexing, Vocabulary Control, and Knowledge Organization

- Indexing: Concepts, Need, Types (Manual, Automatic, Computer-Assisted)
- Indexing Languages: Controlled vs Natural Language
- Vocabulary Control:
  - Authority Files
  - Subject Headings (e.g., LCSH, MeSH)
  - Thesauri (e.g., UNESCO Thesaurus, ERIC Thesaurus)
- Pre-Coordinate and Post-Coordinate Indexing

Unit 5: Information Retrieval (IR) Systems and Strategies

- IR Systems: Concepts, Need, Objectives, Evolution
- Types: Boolean, Vector Space, Probabilistic, Semantic, AI-based
- IR Models:
  - Classical Models (Boolean, Vector, Probabilistic)
  - Modern Trends (Fuzzy Logic, AI/ML-enhanced IR, LLM-powered systems)
- Evaluation of IR Systems: Precision, Recall, F-measure, Relevance
- Search Strategies and Techniques:
  - Keyword vs Controlled Vocabulary Searching
  - Advanced Searching, Query Expansion, Filters, Facets
- Modern IR Tools: Scopus, Web of Science, Google Scholar, BASE, CORE

Suggested Readings:

1. Seetharama, S. *Information Consolidation and Repackaging*. New Delhi: Ess Ess Publications, 1997.
2. Bhattacharya, G. & Gopinath, M. A. *Information Analysis and Consolidation: Principles, Procedures and Products*. DRTC, 1981.
3. Saracevic, T. & Wood, J. S. *Consolidation of Information: Handbook of Evaluation, Repackaging and Dissemination*. UNESCO, 1981.
4. Chowdhury, G. G. *Introduction to Modern Information Retrieval*. 4th ed. London: Facet Publishing, 2023.
5. Rowley, J. & Hartley, R. *Organizing Knowledge: An Introduction to Managing Access to Information*. 4th ed. Routledge, 2017.
6. Hjørland, B. *Information: A Historical Companion*. Princeton University Press, 2021.
7. Aitchison, J., Gilchrist, A. & Bawden, D. *Thesaurus Construction and Use: A Practical Manual*. 5th ed. London: Facet Publishing, 2020.
8. Singh, J. *Information Sources, Systems and Services*. New Delhi: PHI Learning, 2012.
9. UNESCO. *Handbook for Information Systems and Services*. Paris: UNESCO, 2000.
10. Lancaster, F. W. *Indexing and Abstracting in Theory and Practice*. 3rd ed. University of Illinois, 2003.

MLIS – 11: Information Communication Technologies Advanced (Theory)

Unit 1: Library Automation – Planning, Implementation and Security

- Library Automation: Concept, Need, Benefits, and Historical Overview
- Planning and Implementation:
  - Workflow analysis, Requirement study, Feasibility reports
  - Budgeting, Resource allocation, Staff training
  - Vendor selection, Pilot testing
- Automation of In-house Operations:
  - Acquisition, Cataloguing, Circulation, Serials Control
  - OPAC (features, multilingual access, mobile-friendly OPACs)
  - Reporting & Analytics for library management
- Library Management Software:
  - Proprietary: SOUL, LibSys, SLIM
  - Freeware: CDS/ISIS, WINISIS
  - Open Source: KOHA, Evergreen, NewGenLib
- Library Security Systems:
  - RFID, Smart Cards, CCTV Surveillance, Biometrics, Access Control
  - Integration with LMS for automated issue/return

Unit 2: Database Management

- DBMS: Concept, Architecture, Types (Hierarchical, Network, Relational, NoSQL)
- RDBMS: Features, Relational Models, Normalization
- Evaluation of Database Systems: scalability, speed, cost, interoperability

Unit 3: Internet Technology, Networking & Web Tools

- Data Communication: Principles, Mediums (wired/wireless), Bandwidth
- Internet Technologies:
  - Internet Connectivity: Dial-up, ISDN, Leased Line, Broadband, Wi-Fi, 5G
  - Protocols: OSI Model, TCP/IP, FTP, HTTP, HTTPS, SMTP
- Web Browsers: Chrome, Firefox, Edge – Tools, Features, Extensions
- Search Engines: Google, Bing, DuckDuckGo – Techniques for advanced searching
- Library 2.0 and Social Media Tools:
  - RSS Feeds, Blogs, Wikis, Podcasts, YouTube
  - Library presence on Facebook, Instagram, LinkedIn, WhatsApp
- Cybersecurity for Libraries:
  - Antivirus, Firewalls, SSL, VPNs, Data Encryption, Privacy Policies

Unit 4: Digital Libraries – Systems, Tools & Preservation

- Digital Library: Concept, Objectives, Characteristics
- Digital Library Architecture:
  - Planning, Workflow, Scanning & Digitization, Metadata, Access & Delivery
- Software for Digital Libraries:
  - Greenstone, DSpace, EPrints, Omeka, TIND

- o Metadata Standards: Dublin Core, MODS, METS
- Hardware for Digital Libraries**:**
  - o Scanners, OCR Tools, Digital Cameras, Barcode & RFID readers
- Digital Preservation**:**
  - o Formats (PDF/A, TIFF), Strategies (Migration, Emulation, Bit-level storage)
  - o LOCKSS, CLOCKSS, Internet Archive
- Emerging Concepts**:**
  - o Data Warehousing, Data Mining in libraries
  - o AI/ML for classification, search & user recommendation
  - o Expert Systems for reference services
  - o Cloud Storage for library servers (Google Cloud, AWS, Azure)
  - o Blockchain for authenticating digital content
  - o IoT in libraries: Smart shelves, environmental control, people counters

Unit 5: Future Trends and Integration in Library IT Ecosystems

- Integrated Library Systems (ILS)**:** Modules, Workflow, APIs
- Discovery Services: EBSCO Discovery, Primo, VuFind
- Interoperability Standards: Z39.50, MARCXML, OAI-PMH, SRU/SRW
- Mobile Technologies in Libraries: Apps, QR Codes, Push Notifications
- Library-as-a-Service (LaaS)
- Knowledge Portals & Federated Search
- AI in Library Services**:** Chatbots, Virtual Reference Assistants, Predictive analytics
- Sustainable IT Practices in libraries – Green computing, e-waste management

Suggested Readings:

1. Chowdhury, G. G. & Chowdhury, Sudatta. *Organizing Information: From the Shelf to the Web.* London: Facet, 2007.
2. Haravu, L. J. *Library Automation: Design, Principles and Practice.* New Delhi: Allied, 2004.
3. Forouzan, B. A. *Data Communications and Networking.* 5th ed. New Delhi: McGraw Hill, 2017.
4. Patterson, Dan W. *Introduction to Artificial Intelligence and Expert Systems.* PHI, 2000.
5. Tanenbaum, A. S. *Computer Networks.* PHI, 2010.
6. Leon, Alexis & Leon, Mathews. *Fundamentals of Information Technology.* Leon TechWorld, 2000.
7. Cooke, Alison. *Finding Quality Information on the Internet.* 2nd ed. London: Facet, 2008.
8. Stallings, William. *Data and Computer Communications.* Pearson, 2021.
9. Garg, R. G. & Singh, B. D. *Digital Libraries: Principles and Practice.* New Delhi: Kanishka, 2022.
10. Pandian, M. Paul. *Digital Libraries.* New Delhi: Ane Books, 2010.

MLIS-12: Electronic Resource Management

Unit 1: Electronic Resources – Concepts, Types and Trends

- Definition, Nature, and Scope of Electronic Resources (e-Resources)
- Characteristics of e-Resources: Portability, Searchability, Interactivity, Accessibility, Multi-format, Real-time Updates
- Advantages and Limitations: Accessibility vs Licensing Barriers, Cost Efficiency vs Technological Challenges
- Types of e-Resources:
  - e-Journals, e-Books, Databases, Reference Sources, Multimedia, Web-based Resources, Research Data, Preprints
- Electronic Publishing:
  - Evolution, Workflow, Models (Open Access, Hybrid, Subscription-based)
  - DOI, Digital Object Lifecycle, Metadata in e-publishing
- Emerging Formats: Podcasts, Audiobooks, MOOCs, Interactive Digital Content (AR/VR)
- Case Studies: Directory of Open Access Journals (DOAJ), arXiv, Project MUSE

Unit 2: Developing Collection of e-Resources

- Policies for Collection Building: Selection Criteria, Relevance, Authority, Format, Licensing Terms
- Steps in e-Resource Collection Building:
  - Policy Formulation, Budgeting, Evaluation, Trial Access, Negotiation, Subscription, Renewal, Usage Review
- Licensing Models:
  - Site License, Concurrent User License, Perpetual Access, Pay-Per-View
  - Understanding License Clauses: Access Rights, Archival Rights, Usage Restrictions
- Guidelines and Model Licenses: LIBLICENSE, ONIX-PL, Creative Commons
- Open Educational Resources (OERs):
  - Concept, Creation, Discovery Platforms (MERLOT, NROER, OASIS), OER Commons
- Consortia for e-Resources:
  - Concept, Advantages (Cost Sharing, Wider Access), Challenges
  - Major National Consortia in India:
    - INFLIBNET (e-ShodhSindhu), UGC-INFONET, N-LIST, CeRA
    - One Nation One Subscription (ONOS) – Concept, Vision, Status, Implementation Strategy
  - International Consortia: EIFL, ICOLC

Unit 3: Access Management and Delivery of e-Resources

- Delivery Mechanisms:
  - Web Portals, Discovery Tools, Federated Search, A-Z Lists, Integrated Library Systems
- User-Centered Access Design:
  - Subject-based, Alphabetical, Publisher-based, Database-wise navigation
- Access Management Techniques:
  - IP Authentication, Proxy Servers, Shibboleth, SAML, OpenAthens, LDAP
- Remote Access Tools
- Preservation & Archiving of e-Resources:
  - LOCKSS, CLOCKSS, Portico
- Digital Rights Management (DRM) and Anti-Piracy Measures

- Copyright & Licensing in Digital Environment:
    - Fair Use, Creative Commons, Copyright Infringement, DMCA, IPR Challenges
- User Education & Training:
    - Digital Literacy Workshops, InfoLit Modules, Tutorials, User Manuals
- e-Resource Publicity Strategies:
    - Email Alerts, Newsletters, Library Website, Social Media Campaigns, Pop-Ups

Unit 4: E-Resource Usage Analysis and Evaluation

- Need for Evaluation: Budget Justification, Strategic Planning, Collection Optimization
- Data Collection Methods: Log Files, User Feedback, Surveys, Web Analytics
- Standards and Guidelines:
    - COUNTER Code of Practice (Release 5), **SUSHI Protocol**
    - Usage Metrics: JR1, BR1, PR1 Reports
- Tools for Usage Analysis:
    - Google Analytics, COUNTER-compliant Vendor Reports, EZproxy Logs
- Interpretation & Visualization: Dashboards, Graphs, Tables
- Key Performance Indicators (KPIs): Cost per Use, ROI, User Satisfaction
- Recent Trends in e-Resource Management (ERM):
    - Integrated ERM modules in ILS
    - Vendor-neutral ERM systems
    - AI/ML for predictive usage
    - Real-time analytics dashboards

Unit 5: Future Trends and Innovations in e-Resources

- Emerging Business Models: Read-and-Publish, Publish-and-Read, APC-free Journals
- Linked Open Data (LOD) and Metadata Standards (Dublin Core, MODS, MARC21)
- Interoperability Protocols: OAI-PMH, Z39.50, SRU/SRW
- Content Syndication and Aggregators: EBSCOhost, JSTOR, ScienceDirect, SpringerLink
- Open Access Movement: Plan S, Unpaywall, DOAJ, OA mandates
- Global Policies Influencing e-Resources:
    - UNESCO's Open Science Recommendation
    - National Digital Library of India (NDLI)
    - Open Science India Initiatives
- Library Role in Scholarly Communication: Preprint Repositories, Author Support, Research Visibility
- Sustainability of e-Resources: Long-term archiving, eco-friendly hosting, carbon-neutral servers

Suggested Readings:

1. Yu, Holly & Breivold, Scott. *Electronic Resource Management in Libraries: Research and Practice.* IGI Global, 2008.
2. Conger, Joan E. *Collaborative Electronic Resource Management: From Acquisitions to Assessment.* Libraries Unlimited, 2004.
3. Curtis, Donnelyn. *E-Journals: How to do it Manual.* Facet Publishing, 2005.
4. Fecko, Mary Beth. *Electronic Resources: Access and Issues.* Bowker-Saur, 1997.
5. Lee, Stuart D. & Boyle, Frances. *Building an Electronic Resource Collection.* 2nd ed. Facet Publishing, 2004.
6. Mitchell, Anne M. & Surratt, Brian E. *Cataloging and Organizing Digital Resources.* Facet Publishing, 2005.

7. Jones, Wayne (Ed.) *E-Journal Access and Management.* Routledge, 2009.
8. Cole, Jim et al. *E-Serials Collection Management.* CRC Press, 2003.
9. Kemp, Rebecca. *E-resource Evaluation and Usage Statistics.* VDM Verlag, 2008.
10. Katz, Linda S. *Managing Digital Resources in Libraries.* Routledge, 2005.
11. INFLIBNET Publications on e-Resource Consortia and ONOS (India-specific)

FOURTH SEMESTER

MLIS- 13: Information Communication Technologies Advanced (Practice)

Unit 1: Database Design and Development

- Fundamentals of Database Design**:** Data models (Relational, Hierarchical), ER diagrams, Normalization
- MS ACCESS**:** Creation of Databases, Tables, Queries, Forms, and Reports for library applications
- Introduction to SQL**:** Basic commands for data retrieval and manipulation
- Installation and Configuration of Library Management Systems
  - *Commercial*: SOUL 3.0, e-Granthalaya
  - *Open Source*: Koha, PMB
- Data Import/Export and Interoperability in WINISIS/ SOUL/ e-Granthalaya/ Koha

Unit 2: Website Designing and Navigational Tools

- Basics of Web Development**:** HTML5, CSS3, JavaScript fundamentals
- Designing Library Websites**:** Using tools like Dreamweaver, Google Sites, WordPress
- Development of Library Web Directories, Subject Gateways, and Portals
  - Structure and taxonomy
  - Metadata standards
- Image and Graphics for Library Websites
  - Tools: Canva
  - Creating banners, icons, and promotional visuals
- Web Usability & Accessibility
  - UI/UX design basics
  - WCAG accessibility guidelines

Unit 3: Use of Internet for Better Library Services

- Library 2.0 Tools**:** Designing and maintaining Library Blogs (Blogger, WordPress), Microblogs (X, formerly Twitter)
- RSS Feeds**:** Aggregation and syndication for updates and notifications
- Digital Outreach Tools
  - Email newsletters (Mailchimp), QR codes, Mobile apps
- Audio & Video Conferencing**:** Google Meet, Zoom, Microsoft Teams
  - Use in virtual reference, library orientations, webinars
- Cloud Tools for Collaboration & Services
  - Google Drive, Trello, Padlet for document sharing and project work

Unit 4: Design and Development of Digital Library

- Digitization Workflow
  - Scanning documents, Image editing (Paint, Photoshop, GIMP)
  - OCR tools: Tesseract, ABBYY FineReader
- Metadata Creation & Management
  - Standards: Dublin Core, MODS, METS, PREMIS
  - Use of OAI-PMH for metadata harvesting
- Creating Searchable Digital Content

- o   Converting to PDF/A, Adding metadata using Acrobat Professional
- Design and Development of Digital Libraries
    - o   *Greenstone*: Installing, building collections, customizing interfaces
    - o   *DSpace*: Setting up repositories, submission workflow, communities and collections

Unit 5: Emerging ICT Tools in Libraries

- Artificial Intelligence in Libraries
    - o   Library chatbots, recommendation systems, smart search
- RFID & IoT Applications
    - o   Self-checkout, inventory control, smart shelves
- Cloud-based Library Management
    - o   SaaS: Koha Cloud, LibLime, BookSys
- Digital Security and Authentication
    - o   Firewalls, VPNs, Secure Login, CAPTCHAs, SSO
- Blockchain for Libraries
    - o   Smart contracts, digital ownership, rights management
- Digital Resource Analytics
    - o   COUNTER Reports, usage stat

Suggested Readings:

1. Ackermann, Ernest. *Learning to Use the Internet: An Introduction with Examples and Experiences*. New Delhi: BPB, 1995.
2. Aswal, R. S., ed. *CDS/ISIS for Windows: A Handbook for Librarians*. London: Ess Ess, 2003.
3. Chowdhury, G. G. & Sudatta Chowdhury. *Searching CD-ROM and Online Information Sources*. London: Library Association, 2000.
4. Phil Bradley. *Advanced Internet Searcher's Handbook*. Facet Publishing, 2004.
5. Yu, Holly & Breivold, Scott. *Electronic Resource Management in Libraries: Research and Practice*. Information Science Reference, 2008.
6. Sul H. Lee. *Electronic Resources and Collection Development*. Routledge, 2003.
7. John Walkenbach, et al. *Office 365 Bible*. New York: Wiley, 2023.
8. Christopher Negus. *Linux Bible*. New York: John Wiley, 2020 edition.
9. UNESCO. *CDS/ISIS for Windows: Reference Manual Version 1.5*. Paris: UNESCO, 2004.
10. Koha Wiki, DSpace Documentation – Available Online

MLIS-14: Research Methodology

Unit 1: Fundamentals of Research in Library and Information Science

- Research – Definition, Need, Objectives, and Scope in LIS
- Types of Research – Basic (Fundamental), Applied, Action Research, Interdisciplinary, Quantitative & Qualitative
- Research Proposal Writing – Components, Format, Evaluation Criteria, and Common Pitfalls
- Research Ethics – Academic integrity, Plagiarism, IPR, Informed Consent, and Ethical Clearance

Unit 2: Research Design and Literature Review

- Research Design – Meaning, Need, Steps, and Importance in LIS
- Types of Research Design – Exploratory, Descriptive, Diagnostic, Experimental
- Problem Identification and Formulation – Sources, Criteria for Good Research Problem
- Hypothesis and Objectives – Types of Hypotheses, Formulation of Objectives
- Literature Search and Review
  - Print, Non-Print, and Electronic Resources
  - Use of Online Databases (e.g., Scopus, Web of Science, OpenAlex, DOAJ)
  - Systematic Review & Meta-Analysis Approaches

Unit 3: Research Methods, Techniques, and Tools

- Research Methods
  - Historical, Descriptive, Survey, Case Study, Experimental, Ethnographic
- Sampling Techniques – Probability & Non-probability sampling, Sample size, Sampling errors
- Data Collection Tools
  - Questionnaire (Design and Validation), Schedule, Interview, Observation
  - Use of Library Records and Reports
- Use of ICT in Data Collection – Online forms (Google Forms, SurveyMonkey), Mobile-based surveys

Unit 4: Data Analysis, Interpretation and Visualization

- Data Processing and Analysis – Cleaning, Coding, Tabulation
- Descriptive Statistics
  - Measures of Central Tendency: Mean, Median, Mode
  - Dispersion: Range, Variance, Standard Deviation
- Inferential Statistics – Chi-square test, t-test, ANOVA, Correlation, Regression
- Statistical Software and Tools
  - SPSS, R, Jamovi, Google Sheets, Excel
- Data Visualization – Graphs, Charts, Histograms, Dashboards
- Bibliometric and Scientometric Analysis
  - Concepts, Laws (Bradford, Lotka, Zipf), Citation Analysis, H-index
  - Webometrics, Altmetrics, Informetrics
- Reference Management Software – Zotero, Mendeley, EndNote

Unit 5: Academic Writing, Publishing and Research Communication

- Academic Writing – Structure of Dissertation, Thesis, Research Papers
- Citation and Referencing Styles – APA, MLA, Chicago, IEEE, Vancouver
- Plagiarism Detection Tools – Turnitin, URKUND, Grammarly
- Publishing in LIS – Types of Publications (Journals, Conference, Reports), Peer Review Process, Open Access vs. Subscription
- UGC-CARE, DOAJ, Scopus, Web of Science Indexed Journals
- Communicating Research – Posters, Conference Presentations, Policy Briefs, Research Blogs
- Use of AI Tools – For summarization, literature assistance (e.g., Elicit, Semantic Scholar, ChatGPT with citations)

Suggested Readings:

1. Kothari, C. R. & Garg, Gaurav. *Research Methodology: Methods and Techniques*. New Age International, 2022.
2. Krishan Kumar. *Research Methods in Library and Information Science*. Vikas Publishing House, Latest Edition.
3. Gaur, Ramesh C. *Research Methods in Library and Information Science*. Ess Ess Publications, 2021.
4. Charles H. Busha & Stephen P. Harter. *Research Methods in Librarianship: Techniques and Interpretations*. Academic Press, 1980.
5. Powell, Ronald R., & Connaway, Lynn Silipigni. *Basic Research Methods for Librarians*. Libraries Unlimited, 2010.
6. Sahoo, Jyotshna & Das, B.K. *Bibliometrics and Scientometrics in LIS Research*. Ess Ess Publications, 2020.
7. Wallace, Danny P. & Van Fleet, Connie J. *Knowledge into Action: Research and Evaluation in Library and Information Science*. Libraries Unlimited, 2012.
8. Machi, Lawrence A. & McEvoy, Brenda T. *The Literature Review: Six Steps to Success*. Corwin Press, 2021.
9. Zotero & Mendeley Documentation – *Available online*
10. SPSS & R Manuals – *IBM Documentation, CRAN Tutorials*

MLIS – 15: Elective Papers

MLIS – 15 (A): Academic Library and Information System

Unit 1: Growth and Role of Academic Libraries

- Landmarks in Education since 19th Century in India
- Types and Functions of Academic Libraries
- Role of Academic Library in Formal and Informal System of Education
- UGC and its Role in the Development of Academic Libraries

Unit 2: Library Organization, Administration and Management

- Library Authority: Concept and Role
- Staffing Norms and Patterns
- Personnel Management
- Sources of Finance, Types of Budget, Methods of Financial Estimation, Budget Preparation
- Planning, Basic Elements in the Design of Academic Library Buildings
- Furniture and Library Equipment, Lighting and Fittings

Unit 3: Collection Development

- Collection Development Policy of Print and Non-print Material
- Selection Principles, Tools and Problems of Collection Development
- Library Committee and their Role in Collection Development
- Weeding Policy

Unit 4: Resource Sharing and Information Services

- Resource Sharing: Concept, Need and Purpose
- Role of INFLIBNET in Academic Libraries Development
- Resource Sharing Networks in India
- Planning and Development of Information Services

Suggested Readings:

1. American Association of School Librarians. *Standards for School Library Programmes*. Chicago: ALA, 1969.
2. American Library Association. *Personnel Organization and Procedure: A Manual Suggested for Use in College and University Libraries*. 2nd ed. Chicago: ALA, 1978.
3. Baker, David, ed. *Resource Management in Academic Libraries*. London: Library Associations, 2006.
4. Brophy, Peter. *The Academic Library*. London: Library Association, 2008.
5. Chapman, Liz. *Managing Acquisitions in Library and Information Services*. London: Library Association, 2001.
6. Gelfand, M. A. *University Libraries for Developing Countries*. Paris: UNESCO, 2001.
7. Jordan, Peter. *The Academic Library and its Users*. London: Gower, 1998.
8. Line, Maurice B., ed. *Academic Library Management*. London: Library Association, 1990.
9. Ranganathan, S. R. *School and College Libraries*. Chennai: Madras Library Association, 2008.

MLIS – 15 (B): Public Library and Information System

Unit 1: Growth and Role of Public Libraries

- History and Development of Public Libraries with Special Reference to India
- Types and Functions of Public Libraries
- Role of Public Libraries in Formal and Informal Education and Society
- Public Libraries and National Development
- Agencies and their Role in Promotion and Development of Public Libraries in India

Unit 2: Library Organization and Administration

- Administrative Organization of Library
- Staff Manual, Library Surveys, Statistics, Work Measurement and Standards
- Personnel Management in Public Libraries
- Sources of Finance, Budget Types, Financial Estimation, Budget Preparation
- Design of Public Library Buildings
- Furniture and Equipment, Lighting and Fittings

Unit 3: Collection Development

- Principles of Collection Development
- Selection Principles, Tools and Problems
- Collection Development for Print (Books, Periodicals, Grey Literature, etc.)
- Electronic Resources and Government Publications
- Weeding Policy

Unit 4: Resource Sharing and Information Services

- Resource Sharing: Concept, Need and Purpose
- Resource Sharing Networks in India
- Planning and Development of Information Services

Suggested Readings:

1. Bhatt, R. K. *History and Development of Libraries in India*. New Delhi: Mittal, 1995.
2. Ekbote, G. R. *Public Libraries System*. Hyderabad: Ekbote Brothers, 1987.
3. Hage, Christine Lind. *The Public Library Start-Up Guide*. ALA, 2004.
4. Iyengar, Sreenidhi, ed. *Library Public Relations*. New Delhi: Anmol, 1996.
5. Jain, M. K. *50 Years of Library and Information Services in India*. Delhi: Shipra, 2000.
6. Kalia, D. R. *Guidelines for Public Library Services and Systems*. Calcutta: Raja Rammohan Roy Library Foundation, 1990.
7. Liu, Lewis-Guodo, ed. *The Role and Impact of the Internet on Library and Information Services*. Greenwood, 2001.
8. Rath, Pravakar. *Public Library Finance*. New Delhi: Ess Ess, 1996.
9. Thomas, V. K. *Public Libraries in India: Development and Finance*. New Delhi: Vikas, 2005.
10. Totterdell, Anne. *An Introduction to Library and Information Work*. London: Facet, 2005.

MLIS – 15 (C): Marketing of Library and Information Products and Services

Unit 1: Fundamental Concepts

- Marketing: Need, Objectives and Philosophy
- Marketing Environment: Producer, Consumer
- Information as a Resource, Economics of Information
- E-Marketing

Unit 2: Marketing Plan and Research Strategies

- Strategic Planning
- Marketing Research
- Marketing Process
- Market Segmentation and Targeting

Unit 3: Promotion of LIS Products and Services

- LIS Products and Services as Marketable Commodity
- Pricing, Distribution Channels and Communication Strategies
- Advertising, Sales Promotion
- Public Relations

Unit 4: Management Consultancy

- Evolution, Need and Objectives of Consultancy
- Voluntary vs. Authenticated Consultancy
- Impact of Management Consultancy on Librarianship
- Role of Library Associations and LIS Schools

Suggested Readings:

1. Bakewell, K. G. *Managing User-Centred Libraries and Information Services*. Maxwell, 1997.
2. Butcher, H. *Meeting Manager's Information Needs*. ASLIB, 1998.
3. Carpenter, J., & Davies, R. *Quantification of the Overseas Consulting Market...* British Library, 1992.
4. Coote, H. & Batchelor, B. *How to Market Your Library Services Effectively*. 2nd Ed., ASLIB, 1997.

MLIS-16: PROJECT WORK/DISSERTATION & VIVA-VOCE

Project work

Project work related to the Library and Information science

Project Oriented Dissertation has 6 credits

Student need to give Research Design Seminar on Project Oriented Dissertation

Student need to give Research Progress Seminar on Project Oriented Dissertation

Pre-submission of the project work.

Project Dissertation Evaluation with internal/external examiner.