

MAHAKAUSHAL UNIVERSITY JABALPUR M.P.



Mahakaushal University , Aithakheda , Jabalpur M.P

As per model syllabus of U.G.C. New Delhi, drafted by

Central Board of Studies and Approved by Higher

Education and the Governor of M.P.



Faculty of Library Science

Syllabus & Prescribed Books

Master of Library Science

M.Lib Semester Examination

2025-26 Onword

Course Duration 1 Year

Master of Library and Information Science

Semester-II

Paper: MLIB 0201-T To MLIB 0204-P

Based on Ordinance 14(2), Scheme C-2, Option-1

MASTER OF LIBRARY AND INFORMATION SCIENCE

Title: Advanced Application of Information and Communication Technology

Code: MLIB 0201-T

Part A- Introduction			
PROGRAM: Post Graduate	Class: M. Lib. I.Sc	I Year/II Semester	Session- 2025-26
Subject- Library and Information Science			
1	Course Code	MLIB 0201-T	
2	Course Title	Advanced Application of Information and Communication Technology	
3	Course Type	Core Course	
4	Pre- requisite (if any)	To study this course, students must have a graduate degree in the Library and Information Science Discipline	
5	Course Learning Outcomes (CLO)	On completion of this course, learners will be able to: <ul style="list-style-type: none">• Understand library automation's principles, purpose, and implementation and evaluate major automation software and tools.• Demonstrate knowledge of institutional repositories, web protocols, and tools used for digital knowledge preservation.• Apply internet technologies, database systems, and security measures to support library operations and services .• Analyse and utilise emerging technologies such as artificial intelligence, the semantic web, and cloud computing in the library environment.• Understand the process of digitisation and implement digital library and content management systems effectively	
6	Credit Value	05	
7	Total Marks	Max. Marks: 40+60	Min. Passing Marks: 33

Part B-Content of the Course

Total No. of Lectures- Tutorials-Practical (in hour per week):

L.T.P

Unit	Topics	No. of Lectures
I	<ul style="list-style-type: none">• Purpose, Planning and Implementation of Library Automation• Library Automation Software: Types and Features• Automation of Housekeeping Operations	15
II	<ul style="list-style-type: none">• Institutional Repository: Need, Purpose, Types and Tools; Institutional Repositories in India (ROAR, DOAR, SHERPA-RoMEO)• Institutional Repositories Preserving Indigenous Knowledge: TKDL (Traditional Knowledge Digital Library), and Indira Gandhi National Centre for the Arts (IGNCA)• Internet Protocols and Standards (HTTP, SHTTP, FTP, SMTP, TCP/IP, URI, URL)• Web Technologies in Libraries	15
III	<ul style="list-style-type: none">• Data Transmission• Transmissions Media, Video conferencing,• Data security, network security, firewalls, cryptographic techniques, anti-virus software, anti-spyware, and intrusion detection systems.• Virtual Reality, Augmented Technologies	15
IV	<ul style="list-style-type: none">• Databases management system (DBMS) Types and Elements of DBMS• Data Warehousing: Dublin Core, Data Mining, Z39.50• Ontology - Tools (RDF, RDFS); Semantic Web, Linked Data, Big Data, Data Mining, Data Harvesting• Application of Artificial Intelligence, Expert Systems and Robotics in Libraries; Social Mobile Analytics Cloud (SMAC); Cloud Computing.	15

V	<ul style="list-style-type: none"> • Digitization: Concepts and Needs • Steps of Digitization • Digital Library Software - DSpace & GSDL. • Content Management Systems (CMS) - Architecture, Data Integration, CMS Software - Selection, Implementation and Evaluation 	15
<p>Activities:</p> <ul style="list-style-type: none"> - Analyze the automation process of a traditional knowledge collection (e.g., Ayurvedic manuscripts). - Design a mini repository framework using DSpace or Greenstone. - Review any VR-based traditional knowledge project (e.g., 3D heritage temples or classical art reconstructions). - Metadata tagging: Assigning Dublin Core metadata to sample digital objects. - Demonstrate scanning, OCR, and saving files in the proper format. 		
<p>Keywords/Tags: Information Technology, Library Automation, Digital Library, Institutional Repository, Library Software</p>		

Part C-Learning Resources

Text Books, Reference Books, Other resources

Suggested Reading

- Barcode basics.
<http://www.makebarcode.com/info/info.html/>
- C. Xavier. World Wide Web Design with HTML. New Delhi: TMH, 2000.
- Carter, Roger: The Information Technology Handbook, London, Heinemann, 1987.
- Cooper. Michael D. Design of Library Automation System: File Structure, Data Structures and Tools. New York: John Wiley, 1996.
- G. G. Chowdhury. Introduction to Digital Libraries. London: Facet Publishing, 2003.
- Jeanne, F.M. A Librarian's Guide to the Internet: A Guide to searching and evaluating information. Oxford: Chandos publishing, 2006.
- John M. Cohn, Ann L. Kelsey and Keith Michael Fiels, Planning for library automation: a Practical Handbook - London: Library Association, 1998.
- John M. Cohn, AnnL Kelsey, Keith Michael Fiels. Planning for Automation: A How-to-do-it for Librarian. 2nd Ed. [S.I.]: Neal-Schuman, 1997.
- Kumar, P.S.G. Information Technology: Applications (Theory and Practice). Delhi. B.R. Publishing, 2004.
- Lancaster, F.W.: Electronic publishing and their implications for libraries and beyond, London, Clive Bingley, 1990.
- Leona Carpenter, Simon Shaw & Andrew Prescott. Towards the Digital Library. London: LA, 1998.
- Lucy, A. Tedd. An Introduction to computer-based library system. Ed. 3 Chichester, Wiley. 2005.
- Malwad, N.M. et.al. Digital Libraries: Dynamics storehouse of digitised information. New Delhi, New age, 1996.
- Patnaik, Srikant. The first textbook on Information Technology. New Delhi, DhanpalRai, 2001. Paul Pedley. The invisible Web: Searching the hidden parts of the Internet. London: Aslib, 2001.

	<ul style="list-style-type: none"> • Ravichandra Rao: Library Automation. New Delhi, New Age International, 1996. • Reynolds, Dennis. Library automation: Issues and applications. New York: Bowker, 1985. • Rich, Elaine and Knight Kevin, Artificial Intelligence, 2nd Ed. New Delhi, T.M.H. 1994. • Richard Jones. The Institutional Repository. Oxford, Chandos Publishing, 2006. • Singh, Ritu, Gautam, J.N. and Kushwah, S.S(2020). Open-Source Software Technologies for LIS Professionals (A Theoretical and Practical Approach). Agra: Associated Publishing House • Zorkoczy, Peter: Information Technology: An Introduction. London, Pitman, 2005. • सिंह, एस.पी. (2021). पुस्तकालयस्वचालन और प्रबंधन प्रणाली. दिल्ली: पुस्तक प्रकाशन, • गुप्ता, आर.के. (2020), डिजिटल पुस्तकालय और सूचना प्रौद्योगिकी, वाराणसी: ज्ञानगंगा पब्लिशर्स, • मिश्रा, बी. एन. (2019), सूचना प्रौद्योगिकी और पुस्तकालय सेवाएँ, लखनऊ: साहित्य निकेतन. • शर्मा, वी. पी. (2022). पुस्तकालयों में कृत्रिम बुद्धिमत्ता और सुरक्षा तकनीकें, जयपुर: भारत पुस्तक केंद्र, त्रिपाठी, डी.एन. (2021). संस्थागत
<p>Suggested equivalent online courses</p>	<p> https://swayam.gov.in/ https://www.coursera.org/ https://www.edx.org/ https://nptel.ac.in/ </p>

Part D-Assessment and Evaluation

Suggested continuous Evaluation Methods

Maximum Marks: 100

Continuous Comprehensive Evaluation (CCE): 40 Marks University Examination (UE): 60

Internal Continuous Evaluation (CCE): 40	Assignment Comprehensive	Class Test Assignment/ Presentation	Total- 40
External University Exam Time: 03.00 Hour	Assignment: Section: 60	05 Short Question 05 Long Question	05x02=10 05x10=50 Total-60
Any Remarks/Suggestion:			

MASTER OF LIBRARY AND INFORMATION SCIENCE

Title: Information, Communication, and Society

Code: MLIB 0202-T

Part A- Introduction			
PROGRAM: Post Graduate	Class: M. Lib. I.Sc	I Year/II Semester	Session- 2025-26
Subject- Library and Information Science			
1	Course Code	MLIB 0202-T	
2	Course Title	Information, Communication, and Society	
3	Course Type	Core Course	
4	Pre- requisite (if any)	To study this course, students must have a graduate degree in the Library and Information Science Discipline	
5	Course Learning Outcomes (CLO)	On completion of this course, learners will be able to: <ul style="list-style-type: none">• Understand and differentiate between data, information, and knowledge, including their properties, scope, and intellectual value.• Analyze historical and modern modes of information generation, communication processes, and the information life cycle.• Explore knowledge development processes, learning theories, and the societal role of knowledge.• Evaluate the role of libraries in the information society, referencing policy frameworks, legislation, and digital rights.• Apply principles of information economics, information literacy, and knowledge management in contemporary library and information settings.	
6	Credit Value	05	
7	Total Marks	Max. Marks: 40+60	Min. Passing Marks: 33

Part B-Content of the Course

Total No. of Lectures- Tutorials-Practical (in hour per week):

L.T.P

Unit	Topics	No. of Lectures
I	<ul style="list-style-type: none">• Data, Information and Knowledge: Intellectual Assets• Data: Definition, Types, Nature, Properties and Scope• Information: Definition, Types, Nature, Properties and Scope• Comparative study of Data, Information and Knowledge	15
II	<ul style="list-style-type: none">• Generation of Information and Communication in the Ancient Era• Generation of Information Modes and Forms• Information Life Cycle- Generation, Collection, Storage & Dissemination• Information Diffusion Process• Communication concepts, Theories, Channels and Barriers	15
III	<ul style="list-style-type: none">• Role of Classical Texts in Knowledge Development• Knowledge Generation, Exchange to utilization• Learning Process and Theories• Knowledge and Societal Survival	15
IV	<ul style="list-style-type: none">• Information Society: Genesis, characteristics and Implications.• National Knowledge Commission and National Mission on Library• Concepts of freedom, Censorship. Right to Information Act,• Copyright Act Information Technology Act.	15
V	<ul style="list-style-type: none">• Information as an Economic Resource• Economic value of indigenous knowledge (e.g., traditional medicine, agricultural practices)	15

	<ul style="list-style-type: none"> • Information Literacy: Concepts, needs, objectives, models and trends in information literacy • National Information Policy • Knowledge Management: Concept and Objectives 	
<p>Activities:</p> <ul style="list-style-type: none"> - Classification Exercise: Take a few examples from Indian scriptures (e.g., Ayurveda, Arthashastra) and classify them into data, information, or knowledge based on context and usage. - Role-play: Enact a scene from a traditional Indian oral transmission system (e.g., Guru-Shishya parampara, village storytelling) to understand Indigenous information communication channels. - Develop a timeline showing the evolution of knowledge generation in India, from the Vedic period to post-independence research institutions. - Read a real or hypothetical case where RTI was used. - Draft a knowledge management plan for a library 		
<p>Keywords/Tags: Information Society, Knowledge Management, Information Literacy, Data and Knowledge Continuum</p>		

Part C-Learning Resources

Text Books, Reference Books, Other resources

Suggested Reading

- Ackerman, Mark S. [et al.]. (2003). Sharing Expertise: Beyond Knowledge Management. Boston: MIT Press.
- Debons, Anthony (et al). (1988). Information Science: An Integrated View. Boston, Mass.: GK Hall.
- Dhiman, Anil Kumar and Sharma, Hemant. (2009). Knowledge Management for Librarians. New Delhi: Ess Ess.
- Haravu L. J. (2002). Lectures on Knowledge Management: Paradigms, Challenges and Opportunities. Bangalore: Sarada Ranganathan Endowment for Library Science.
- Kamalavijayan, D. (2005). Information and Knowledge Management. New Delhi: Macmillan.
- Kumar P.S.G. (2004). Information and Communication (Kumar's Curriculum Series in Library and Information Science) Paper IX of UGC model Curriculum. B. R. Publishing Corporation.
- Rao, Madan Mohan. (2003). Leading with Knowledge: Knowledge Management Practices in Global Infotech Companies. New Delhi: McGraw Hill.
- Sahu, Ashok Kumar. (2008). Information Management in New Millennium: Opportunities and Challenges for Library Professionals. New Delhi: Ess Ess.
- Satyanaraana, N. R. and Satyanarayana, R. ed. (1996). Problems of information Science.
- Taher, Nasreen. (2005). Knowledge Management: From Rhetoric to Reality. Hyderabad: ICFAI University Press.
- Vickery, B.C. and Vickery, A. (1994). Information Science theory and practice.
- Webster, F. (2002). Theories of the Information Society. 2nd ed. London: Routledge.
- Wolpert, S. A. and Wolpert, J. F. (1986). Economics of Information.
- <http://www.egyankosh.in!>
- तरिपाठी, डी. एन. (2020). सूचना, ज्ञान एवं समाज, लखनऊ: विश्वविद्यालय प्रकाशन

	<ul style="list-style-type: none">• शर्मा, ए.एल. (2019). सूचना और संचार: सिद्धांत एवं प्रयोग, दिल्ली: पुस्तक भवन• मिश्रा, आर. के. (2018). सूचना विज्ञान के सिद्धांत, वाराणसी: ज्ञानदीप पब्लिकेशन• सिंह, बी. पी. (2021). सूचनासाक्षरता और ज्ञान प्रबंधन, जयपुर: प्रकाश बुकडिपो• पांडे, एस. एन. (2022), सूचना समाज और पुस्तकालय विज्ञान, इलाहाबाद: साहित्य मंदिर
Suggested equivalent online courses	https://swayam.gov.in/ https://www.coursera.org/ https://www.edx.org/ https://nptel.ac.in/

Part D-Assessment and Evaluation

Suggested continuous Evaluation Methods

Maximum Marks: 100

Continuous Comprehensive Evaluation (CCE): 40 Marks University Examination (UE): 60

Internal Continuous Evaluation (CCE): 40	Assignment Comprehensive	Class Test Assignment/ Presentation	Total- 40
External University Exam Time: 03.00 Hour	Assignment: Section: 60	05 Short Question 05 Long Question	02x05=10 10x05=50 Total-60
Any Remarks/Suggestion:			

MASTER OF LIBRARY AND INFORMATION SCIENCE

Title: Information Storage and Retrieval System/Dissertation

Code: MLIB 0203-T */Dissertation**

Part A- Introduction			
PROGRAM: Post Graduate	Class: M. Lib. I.Sc	I Year/II Semester	Session- 2025-26
Subject- Library and Information Science			
1	Course Code	MLIB 0203-T	
2	Course Title	Information Storage and Retrieval System/Dissertation	
3	Course Type	Core Course	
4	Pre- requisite (if any)	To study this course, students must have a graduate degree in the Library and Information Science Discipline	
5	Course Learning Outcomes (CLO)	<p>On completion of this course, learners will be able to:</p> <ul style="list-style-type: none"> • Understand the historical and intellectual foundations of information organization, including classification systems and thesauri. • Analyze the structure and functioning of Information Storage and Retrieval Systems (ISAR), including models and indigenous knowledge challenges. • Apply various indexing techniques (pre-coordinate, post-coordinate, derived, citation-based, and automated) for efficient information retrieval. • Evaluate micrographic information retrieval systems and their role in preserving heritage and archival materials. • Demonstrate effective search strategies, use of Boolean operators, and assess retrieval performance using recall and precision metrics. 	
6	Credit Value	05	
7	Total Marks	Max. Marks: 40+60	Min. Passing Marks: 33

Part B-Content of the Course

Total No. of Lectures- Tutorials-Practical (in hour per week):

L.T.P

Unit	Topics	No. of Lectures
I	<ul style="list-style-type: none"> • Organization of Information in the Ancient Era • Intellectual Organization of information • Patterns for presentation of information to a searcher. • Classification system for knowledge organisation. • Thesaurus: definition of role of thesaurus in information storage and retrieval system, Construction of Thesaurus, Vocabulary Control of Subject Heading, The saurofacet, Classaurus 	15
II	<ul style="list-style-type: none"> • ISAR System: Definition, Components and Types • Elements of File Organisation • Information Retrieval Model • Storage and Retrieval of Indigenous Knowledge: Challenges and Solutions in Encoding Oral and Textual IKS Data 	15
III	<ul style="list-style-type: none"> • Assigned Indexing System: Pre-Coordinate Indexing System (PRECIS, POPSI, Chain Indexing) and Post-Coordinate Indexing System (Uniterm) • Derived Indexing System: Title based (KWIC, KWOC, KWAC) • Citation-based (SCI, SSCI, etc.) • Automated Indexing: COMPASS 	15
IV	<ul style="list-style-type: none"> • Evolution of Micrographics • Types of Microforms • Advantages of the micrographic system • Components of MIRS • Use of Micrographics in Digitizing Heritage Materials (e.g., Ancient Scripts, Temple Archives) 	15

V	<ul style="list-style-type: none"> • Information Retrieval Process and Techniques • Search Strategies: Search Methods, Boolean Search • Common Command Languages and Multiple Database Searching. • Retrieval Performance: Recall and Precision 	15
<p>Activities:</p> <ul style="list-style-type: none"> - Prepare a classification chart mapping various Indian Knowledge System domain (e.g., Ayurveda, Yoga, Jyotish, and Sanskrit Grammar) using UDC, CC and DDC. - Assignment on creating a flowchart showing how information flows through an ISAR - Index a short IKS-based article using pre-coordinate (POPSI/PRECIS) and post- coordinate (Uniterm) indexing systems. - Visit a library that preserves Indian manuscripts (e.g., Saraswati Mahal Library) and prepare a report on their micrographic or digitization practices. - Hands-on Practice on using various search strategies 		
<p>Keywords/Tags: Information Retrieval Systems, Indexing Techniques, Thesaurus and Vocabulary Control, Micrographic Information Systems</p>		

Part C-Learning Resources

Text Books, Reference Books, Other resources

Suggested Reading

- A course in Information consolidation: a handbook for education and training in analysis, synthesis and repackaging of Information. General Information Programme and UNISIST, UNESCO, PGI, Paris. 1986.
- Alberico, R. and Micco M. (1990). Expert systems for reference and Information retrieval. West Port: Meckler.
- Atchison, J. & Alan G. A. (1972). Thesaurus construction: a practical manual. London: Aslib.
- Atchison, J. & Gilchrist, A. (1972). Thesaurus construction: a practical manual. London: Aslib. Austin, D. (1984). PRECIS: A manual of concept analysis and subject indexing. 2nd Ed.
- Chowdhury, G.G. (2003). Introduction to modern Information retrieval. 2nd Ed. London, Facet Publishing.
- Cleaveland, D. B. (2001). Introduction to Indexing and Abstracting. 3rd Ed. Englewood, Colo.: Libraries Unlimited
- Crawford, M. J. (1988). Information broking: a new career in Information work. London: LA.
- Ford, N. (1991). Expert systems and artificial intelligence: An Information manager's guide. London: LA.
- Ghosh, S.B. and Biswas, S.C. (1998). Subject Indexing systems: Concepts, methods and techniques. Rev. Ed. Calcutta: IASLIC.
- Lancaster, F. W. (1968). Information retrieval systems, characteristics, testing and evaluation. London: Facet Publishing.
- Lancaster, F.W. (2003). Indexing and Abstracting in Theory and Practice. London: Facet Publishing.
- Pandey, S.K. Ed. (2000). Library Information retrieval. New Delhi: Anmol. Seetharama, S. (1997). Information consolidation and repackaging. New Delhi: ESS ESS.
- Van, R.C. J. (1970). Information retrieval. 2nd ed. London: Butterworth's.
- चंद्र, स. (2018). सूचना का संगठन, नई दिल्ली: प्रभात पब्लिकेशन.

	<ul style="list-style-type: none"> • सिंह, सी. पी. (2020). सूचना संग्रहण एवं पुनः प्राप्ति प्रणाली. आगरा: किशोरीलाल प्रकाशन. • यादव, के. पी. (2017). संचयन एवं अनुक्रमण प्रणाली. वाराणसी: विश्वविद्यालय प्रकाशन, • मिश्रा, व.के. (2019), पुस्तकालय एवं सूचना विज्ञान में माइक्रोग्राफिक तकनीक, लखनऊ: गुप्ता बुक डिपो. • पांडे, एस.एन. (2021). सूचना पुनः प्राप्ति एवं खोज रणनीतियाँ इलाहाबाद: साहित्यमंदिर,
Suggested equivalent online courses	https://swayam.gov.in/ https://www.coursera.org/ https://www.edx.org/ https://nptel.ac.in/

Part D-Assessment and Evaluation

Suggested continuous Evaluation Methods

Maximum Marks: 100

Continuous Comprehensive Evaluation (CCE): 40 Marks University Examination (UE): 60

Internal Continuous Evaluation (CCE): 40	Assignment Comprehensive	Class Test Assignment/ Presentation	Total- 40
External University Exam Time: 03.00 Hour	Assignment: Section: 60	05 Short Question 05 Long Question	05x02=10 05x10=50 Total-60
Any Remarks/Suggestion:			

Or

(Dissertation allowed in lieu of MLIB 0203-T)

Part A- Introduction			
PROGRAM: Post Graduate	Class: M. Lib. I.Sc	I Year/II Semester	Session- 2025-26
Subject- Library and Information Science			
1	Course Code	Dissertation**	
2	Course Title	**Dissertation base on current trends in Library and Information Science	
3	Course Type	Core Course	
4	Pre- requisite (if any)	To study this course, students must have a graduate degree in the Library and Information Science Discipline	
5	Course Learning Outcomes (CLO)	On completion of this course, learners will be able to: <ul style="list-style-type: none">• Frame an original, researchable question or hypothesis within the field of Library and Information Science.• Critically review, organize, and integrate existing research to establish the theoretical and contextual basis for the problems.• Design and execute qualitative, quantitative, or mixed-methods research strategies-choosing instruments, sampling techniques, and data-management protocols that align with the study objectives.• Analyze Data and Generate Insightful Conclusions• Present a Scholarly paper.	
6	Credit Value	05	
7	Total Marks	Max. Marks: 100	Min. Passing Marks: 33

Part B: Content of The Course	
Key areas (Not limited to)	Topics
User-Focused area	<ul style="list-style-type: none"> • Information Seeking Behaviour • User Satisfaction in Libraries • Reading Habits of Library Users • Information Literacy • Virtual Reference Chats for Distance Learners
System-oriented themes	<ul style="list-style-type: none"> • Interoperability of metadata standards across platforms • Implementation of linked open data in library infrastructures • Comparative evaluation of cataloguing and classification systems • Workflow and process optimization in digital repository management • Scalability and performance of next-generation library systems • AI and Machine Learning
Policy and management	<ul style="list-style-type: none"> • Adoption and impact of open-access and scholarly communication policies • Strategic planning for risk, continuity, and disaster recovery • Budgeting and resource allocation models for digital collections • Governance structures and consortium models in library networks • Partnerships and collaboration frameworks in library service deliver
Technology-driven themes	<ul style="list-style-type: none"> • Integration of artificial intelligence in library operations • Mobile and emerging interfaces for library discovery services • Blockchain and secure digital asset management in libraries • Immersive technologies (AR/VR) for information literacy and orientation

	<ul style="list-style-type: none"> • Machine learning approaches for personalized content recommendation
Research Data Management & Digital Scholarship	<ul style="list-style-type: none"> • Development of librarian competencies in data stewardship • User requirements for institutional research data infrastructures • Long-term preservation strategies for complex digital datasets • Application of FAIR principles in library-led data curation • Metadata interoperability and cross-disciplinary data sharing frameworks
Metric Studies	<ul style="list-style-type: none"> • Bibliometric • Scientometric • Altmetric • Webometric
<p>Activities:</p> <ul style="list-style-type: none"> - Regularly lead critical discussions of recent LIS research articles, honing skills in appraisal, synthesis, and scholarly dialogue. - Hands-on workshops in tools like NVivo (for qualitative coding), R/SPSS (for statistics), and VOS viewer (for bibliometric mapping) to build technical fluency. - Draft mini-proposals for mock or real funding calls, learning to articulate objectives, budgets, and impact statements under realistic deadlines. - Rotate draft chapters among small groups for structured feedback-emphasizing clarity, methodological rigor, and APA compliance-before supervisor review. - Task each student with preparing and submitting an abstract (real or simulated) to a relevant LIS conference, including poster or lightning-talk practice to build presentation confidence. 	

Part C-Learning Resources

Text Books, Reference Books, Other resources

Suggested Reading

- Creswell, J. W., & Creswell, J. D. (2018). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (5th ed.). SAGE Publications.
- Alberico, R. and Micco M. (1990). Expert systems for reference and Information retrieval. West Port: Meckler.
- Kothari. C. R. (2004). Research Methodology: Methods and Techniques (2nd rev. ed.). New Age International.
- Kumar, R. (2019). Research Methodology: A Step-by-Step Guide for Beginners (5th ed.). SAGE Publications.
- Mani, S., & Neelameghan, A. (Eds.). (2016). Research in Library and Information Science: A Practical Approach. Allied Publishers
- Levy, Y., & Ellis, T. J. (2006). A Systems Approach to Conducting Research in Information Systems. Communications of the Association for Information Systems, 19, 5.
- Yin, R. K. (2018). Case Study Research and Applications: Design and Methods (6th ed.). SAGE Publications

For Literature Discovery and Data Access: Scopus

Elsevier. (n.d.). Scopus: The abstract and citation database. Retrieved June 23, 2025, from <https://www.scopus.com>

Web of Science

Clarivate. (n.d.). Web of Science Core Collection. Retrieved June 23, 2025, from [hups://www.wehofscience.com](https://www.wehofscience.com)

Google Scholar

Google. (n.d.). Google Scholar. [hups://scholar.google.com](https://scholar.google.com)

JSTOR

ITHAKA. (n.d.). JSTOR: Digital library for scholars, researchers, and students. [hups://www.jstor.org](https://www.jstor.org)

Directory of Open Access Journals (DOAJ)

Lund University Libraries. (n.d.). Directory of Open Access Journals. Retrieved June 23, 2025, from <https://www.doaj.org>

Institutional Repository - Shodhganga

INFLIBNET Centre. (n.d.). Shodhganga: A reservoir of Indian theses. Retrieved June 23, 2025, from [hups://shodhganga.inflibnet.ac.in](https://shodhganga.inflibnet.ac.in)

arXiv

	<p>arXiv.org. (n.d.). arXiv e-print archive. https://arxiv.org</p> <p>Research Gate ResearchGate GmbH. (n.d.). ResearchGate: Connect, share, and discover research. Retrieved June 23, 2025, from https://www.researchgate.net</p> <p>SSRN (Social Science Research Network) Elsevier. (n.d.). SSRN: Social Science Research Network. Retrieved June 23, 2025, from https://www.ssrn.com</p> <p>CORE CORE. (n.d.). Connecting open access repositories. https://core.ac.uk</p> <p>EBSCOhost EBSCO Information Services. (n.d.). EBSCOhost research databases. Retrieved June 23, 2025, from https://www.ebscohost.com</p> <p>ProQuest Dissertations & Theses Global ProQuest. (n.d.). Dissertations & Theses Global. https://www.proquest.com/products-services/dissertations/</p> <p>Mendeley Elsevier. (n.d.). Mendeley reference manager. https://www.mendeley.com</p> <p>Zotero Corporation for Digital Scholarship. (n.d.). Zotero: A free, easy-to-use tool to help you collect, organize, cite, and share research. https://www.zotero.org</p> <p>SAGE Research Methods SAGE Publications. (n.d.). SAGE Research Methods. Retrieved June 23, 2025, from https://methods.sagepub.com</p>
<p>Suggested equivalent online courses</p>	<p>https://swayam.gov.in/ https://www.coursera.org/ https://www.edx.org/ https://nptel.ac.in/</p>

Part D-Assessment and Evaluation		
External Assignment:	Presentation of Dissertation	Total-100
Remarks/Suggestion: Assessment will be done by an External Expert only.		

MASTER OF LIBRARY AND INFORMATION SCIENCE

Title: Advanced Application of Information and Communication Technology
(Practical)

Code: MLIB 0204-P

Part A- Introduction			
PROGRAM: Post Graduate	Class: M. Lib. I.Sc	I Year/II Semester	Session- 2025-26
Subject- Library and Information Science			
1	Course Code	MLIB 0204-P	
2	Course Title	Advanced Application of Information and Communication Technology (Practical)	
3	Course Type	Core Course	
4	Pre- requisite (if any)	To study this course, students must have a graduate degree in the Library and Information Science Discipline	
5	Course Learning Outcomes (CLO)	On completion of this course, learners will be able to: <ul style="list-style-type: none">• Install and configure open-source Integrated Library Management Software (KOHA) to automate library functions such as cataloguing, circulation, and membership management.• Develop and maintain a functional digital library• using DSpace by creating communities and collections and uploading documents with standardized metadata.• Apply advanced online searching strategies and use specialised library portals and subject gateways to retrieve academic and research information.• Utilize emerging ICT tools such as Virtual Reality, Li-Fi, and video conferencing in library services and understand the importance of data and network security tools like firewalls and intrusion detection systems.	

		<ul style="list-style-type: none"> • Access, evaluate, and retrieve electronic resources and materials from digital platforms such as J-Gate, INDEST, and the National Digital Library of India, focusing on ancient and indigenous knowledge repositories.
6	Credit Value	05
7	Total Marks	Max. Marks: 40+60 Min. Passing Marks: 33

Part B-Content of the Course

Total No. of Lectures- Tutorials-Practical (in hour per week):

L.T.P		
Practical	Topics	No. of Lectures
Hands-on experience on Library Automation Software	<ul style="list-style-type: none"> • Integrated Library Software: KOHA Basic Installation • Creation and Maintenance 	15
Hands-on experience on Digital Library Creation using D-Space	<ul style="list-style-type: none"> • Basic Installation • Creating Data Community • Creating Collection • Browsing Collection • Uploading Metadata 	15
Web searching	<ul style="list-style-type: none"> • Searching subject getaways and • Library portals • Wi-Fi, Li-Fi • Video conferencing, Virtual Reality, Augmented Technologies • Data security, network security, firewalls, cryptographic techniques, anti-virus software, anti-spyware, and intrusion detection systems. • Exploring Portals Dedicated to Indian Knowledge System (e.g., TKDL, Bharatiya Gyan Parampara Portal, IGNCA Digital Repository) 	15
E-Resources: Browsing and Searching	<ul style="list-style-type: none"> • Structure of CD-ROM/DVD's • E-Books • E-Journals • E- News papers 	15
Searching on Consortia	<ul style="list-style-type: none"> • J-gate • INDEST 	15

and Repositories	<ul style="list-style-type: none"> • National Digital Library of India (NDLI) - Searching Ancient Materials 	
<p>Activities:</p> <ul style="list-style-type: none"> - Customizing KOHA OPAC for Iindigenous Knowledge Resources - Designing a basic digital library interface - Perform a security audit of a sample library network setup and identify measures to protect data collections - Create a directory of open-access e-newspapers - Conduct a comparative analysis of TKDL, Shodhganga, and IGNCA repositories for coverage of IKS topics. 		
<p>Keywords/Tags: Library Automation, Digital Library (DSpace), KOHA, E-Resources & Consortia</p>		

Part C-Learning Resources

Text Books, Reference Books, Other resources

Suggested Reading	<ul style="list-style-type: none">• Ghosh, S. B., & Ghosh, S. (2013). Library automation: A practical manual using Koha. New Delhi: PHI Learning.• Smith-Yoshimura, K. (2014). Managing born-digital content: DSpace, Fedora, and the preservation of digital content. Dublin, Ohio: OCLC Research.• Kaur, K., & Mahajan, P. (2012). Use of DSpace software for building institutional repositories in India. The Electronic Library, 30(2), 236-254. hups://doi.org/10.1108/02640471211221391• Satija, M. P., & Singh, J. (2006). A manual for digital libraries. New Delhi: Ess Ess Publications.• Sharma, A. K. (2017). ICT applications in libraries. New Delhi: Atlantic Publishers.• Sharma, P., & Singh, K. (2016). Role of consortia in digital resource sharing: A study. DESIDOC Journal of Library & Information Technology. 36(5). 305-311. https://doi.org/10.14429/djlit.36.5.10227.
Suggested equivalent online courses	<p>https://swayam.gov.in/ https://nptel.ac.in/ https://www.coursera.org/ https://www.edx.org/</p>

Part D-Assessment and Evaluation

Suggested continuous Evaluation Methods

Maximum Marks: 100

Continuous Comprehensive Evaluation (CCE): 40 Marks University Examination (UE): 60

Internal Continuous Evaluation (CCE): 40	Assignment Comprehensive	Class Test Assignment/ Presentation	40
External University Exam (UE)	Assignment:	Practical Evaluation	60
Any Remarks/Suggestion:			