PROGRAMME STRUCTURE

FOR 1-YEAR PG PROGRAMME (Master of Library and Information Science)

SUBJECT: LIBRARY AND INFORMATION SCIENCE (2025-26)

BASED ON ORDINANCE 14(2), SCHEME C-2, OPTION-1

SEMESTER I						
Course Code	**Course Code/Title**	**Credit**	**Theory Marks**	**Internal Evaluation Marks**	**External Evaluation Marks**	**Total Marks**
CC-31	Universe of Knowledge, Research Methodology and Publication Ethics	5	60	40		100
CC-32	Advanced Knowledge Organisation: Cataloguing and Classification	5	60	40		100
CC-33	Management of Libraries and Information Centres	5	60	40		100
PC-11	Advanced Knowledge Organisation: Cataloguing and Classification (Practical)	5		40	60	100
	Seminar*	2		100		100
	Total	22				500
SEMESTER II						
Course Code	**Course Code/Title**	**Credit**	**Theory Marks**	**Internal Evaluation Marks**	**External Evaluation Marks**	**Total Marks**
CC-41	Advanced Application of Information and Communication Technology	5	60	40		100
CC-42	Information, Communication and Society	5	60	40		100
CC-43*	*Information Storage and Retrieval System / **Dissertation	5	60	40		100

PC-21	Advanced Application of Information and Communication Technology (Practical	5		40	60	100
	VAC (Internship)*	2		100		100
	Total	22				500

***Seminar** Will be evaluated by Internal Examiners only

****Dissertation** Will be evaluated by an External Examiner only

VAC (Internship)* Each student will have undergone an Internship Programme at a library selected by the Department for one month immediately after the second semester examination. Successful completion of the programme is a must for their final result. It is equivalent to 2 credit course.

Master of Library and Information Science

Semester-I

Paper: CC-31 To PC-11

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

MASTER OF LIBRARY AND INFORMATION SCIENCE

Title: Universe of Knowledge, Research Methodology and Publication Ethics

Code: CC-31

Part A: Introduction			
Program: Post Graduate	**Class:** M.Lib.I.Sc	**One Year:** First Semester	**Session:** 2025-26
Subject: Library and Information Science			

1.	**Course Code**	CC-31
2.	**Course Title**	Universe of Knowledge, Research Methodology and Publication Ethics
3.	**Course Type (Core Course)**	
4.	**Prerequisite (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: • *know the nature, structure, and evolution of IKS, including its philosophical, scientific, artistic, and cultural dimensions.* • *Critically examine the process of data collection, data analysis and usage of statistical techniques and software packages for research* • *Develop skills in preparing research proposals, citation styles and avoiding plagiarism.* • *understand the universe of knowledge, research methods and learning the statistical measures of research.*
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 hours per week):
LTP:

Unit	**Topics**	**No. of Lectures**
I	• **Knowledge: Attribute, characteristics, Advantages, Methods of acquiring Knowledge** • **Historical Development of the Indian Knowledge System** • **Modes of Thinking** • **Universe of Subject: Modes of formation of Subject**	15 Hours
II	• Meaning, Need, Types and Purpose of Research • Steps of Research • Research Design • Hypothesis	15 Hours
III	• Research method: Scientific, Historical, Experimental • Descriptive Research: Survey and Case study method, Delphi method • Ranganathan's Spiral of Scientific Method	15 Hours
IV	• Sampling Techniques	15 Hours

	• Data Collection Techniques: Observation, Questionnaire, Interview, Schedule • Presentation of Data Tables, Charts, Graphs • Interpretation of Data: Frequency distribution, Measures of Central Tendency • Hypothesis Testing: Parametric and Non-Parametric test. • Use of Statistical Packages: MS Excel, Spreadsheet, Bibexcel, R Statistics, SPSS, PSPP	
V	• Research report writing; structure and format • Integrity of Research and Authorship • Plagiarism and fair use • Ethical practices in publication • Style manuals: APA, Chicago and MLA • Reference management software: Zotero and Mendeley.	15 Hours

Activities:

- *Creating comparison Knowledge charts between Indian Knowledge Sources and Western Epistemology*
- *To make students identify different kinds of variables and formulate a testable hypothesis.*
- *To organize a mini case study where students write a short case study and present their findings.*
- *Hands on tutorial or demonstration using various software related to research.*
- *To write a Mock research report structure including abstract, introduction, methodology etc. on a selected topic*

Keywords/Tags: Indian Knowledge System, Research, Data Collection, Universe of Subjects, Plagiarism

Part C: Learning Resources

Textbooks, Reference Books and Other Resources

Suggested Readings:

- *Busha, C.H. and Harter, S.S. (1980). Research methods in librarianship: Techniques and interpretation. Orlando, Academic press.*
- *Charles, H. et.al. (1993). Research methods in librarianship: Techniques and interpretations. New Delhi: Sage.*
- *Fowler, F.J. (1993). Survey research methods. New Delhi: Sage.*
- *Goode, W.J. and Hatt, P.K. (1986). Methods in social Science research. New Delhi: McGraw Hill.*
- *Kataria, S., & Pandey, S. R. (2023). Shodh Evam Prakashan Nitishastra (Research & Publication Ethics). RBSA Publication.*
- *Kotari, C.R. (2004). Research Methodology: Methods and Technique, 2nd Edition. New Age: New Delhi.*
- *Krishan Kumar (1992). Research methods in Library and Information Science. New Delhi: Vikas.*
- *Krishnaswami, O.R. (1993). Methodology of Research in Social Sciences. Bombay: Himalaya.*
- *Leddy, P. D. (1980). Practical research: Planning design. London: Clive-Bingley.*
- *Line, M.B. (1967). Library surveys. London: Clive Bingley.*
- *Nandish, J. (2024). Research Methodology & Biostatistics (तत्वमीमांसा) (760 pp.). Ram Ayurveda Sanskrit Publication.*
- *Nicholas D. and Ritchil, M. (1979). Literature and Bibliometrics. London: Clive Bingley.*

- *Ravichandra, Rao, I.K. (1985). Quantitative methods for Library and Information Science. New Delhi: Wiley Eastern.*
- *Satija, M. P., Martínez-Ávila, D., & Swain, N. K. (Eds.). (2019). Plagiarism: An international reader.*
- *Sharma, V. P. (n.d.). Research Methodology [Hindi ed.] (576 pp.). Panchsheel.*
- *Sheikhawat, V. (2022). Prashaskiya Nitishastra. Mahecha Publication.*
- *Slater, M. (1990). Research methods in Library and Information studies. London: L.A.*
- *Sonal Singh (1997). Universe of Knowledge: Structure and Development. Jaipur: Raj Publisher.*
- *सोनल सिंह (1998) ज्ञान जगत स्वरूप, संरचना एवं विकास. भोपाल, मध्य प्रदेश हिंदी ग्रंथ अकादमी.*

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 Exam (UE): 60 Marks

Internal Assessment: Continuous Comprehensive Evaluation (CCE): 40 Marks	Class Test/Assignment/Presentation	40
External Assessment: University Exam: 60 Marks Time: 03 Hours	05 Short Questions 05 Long Questions	05 x 02 = 10 05 x 10 = 50 Total: 60
Remarks/Suggestions:		

MASTER OF LIBRARY AND INFORMATION SCIENCE

Title: Advanced Knowledge Organisation: Cataloguing and Classification

Code: CC-32

Part A: Introduction			
Program: Post Graduate	**Class:** M.Lib.I.Sc	**One Year:** First Semester	**Session:** 2025-26
Subject: Library and Information Science			

1.	**Course Code**	CC-32
2.	**Course Title**	Advanced Knowledge Organisation: Cataloguing and Classification
3.	**Course Type (Core Course)**	
4.	**Prerequisite (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: • *Critically evaluate the principles, strengths, and limitations of major cataloguing codes and conceptual models for both printed and digital resources.* • *Apply international archival and metadata standards to create compliant descriptive and structural records.* • *Compare classification schemes ranging from traditional Indian philosophical categories (Nyāya, Vaiśeṣika) to universal systems (UDC, DDC, CC)* • *Utilize semantic-web and machine-assisted tools to automate cataloguing and classification processes.*
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 hours per week):
LTP:

Unit	**Topics**	**No. of Lectures**
I	• In-depth Analysis of Cataloguing Codes: AACR II and CCC • FRBR, FRAD, FRSAD Models • **ISAD (G): General International Standard Archival Description** • Linked Data and Bibliographic Control: RDF and BIBFRAME	15 Hours
II	• Ontologies and Semantic Web • Authority Control and Subject Heading Practices • Introduction to PID (Persistent Identifiers), VIAF (Virtual International Authority File), ORCID (Open Researcher and Contributor ID), and Wikidata	15 Hours
III	• Metadata Schemas and Application: Dublin Core, MARC 21, MODS, METS, EAD • Principles of Controlled vocabulary & subject analysis	15 Hours

	• Cataloguing of Non-book Materials • Cloud-based cataloguing	
IV	• **Traditional Classification Methods (e.g., categories in Nyaya, Vaisheshika, and other philosophical schools)** • In-depth analysis of major classification schemes • **Role of CRG, DRTC, and ISKO in classification** • Universal Decimal Classification: Nature, structure, auxiliaries, syntax, and application • Comparative study of classification schemes	15 Hours
V	• Cataloguing of Internet websites and electronic resources • Classification of audio-visual materials • Machine-assisted classification and auto-classification tools: Using ML, NLP, XAI	15 Hours

Activities:

- *FRBR/LRM Mapping Exercise: A scenario where students will be given sources (e.g., "Bhagavad Gita" - original Sanskrit text, various translations, different print editions, an audiobook) and to identify the Work, Expression, Manifestation, and Item according to the FRBR/LRM model and map the relationships.*
- *Advanced Classification Number Building by providing complex document titles*
- *Website cataloguing challenge by providing some diverse websites (e.g., an online journal, a digital archive of historical documents, a government portal)*

Keywords/Tags: Cataloguing Codes, Classification schemes, Bibliographic control, Subject headings, Authority control

Part C: Learning Resources

Textbooks, Reference Books and Other Resources

Suggested Readings:

- *Baca, M. (Ed.). (2016). Introduction to metadata (3rd ed.). Getty Publications.*
- *Bowman, J. H. (2003). Essential cataloguing. Facet.*
- *Chan, L. M., & Hodges, T. (2015). Cataloging and classification: An introduction (3rd ed.). Scarecrow Press.Chowdhury, G. G., & Chowdhury, S. (2007). Organizing information: From the shelf to the Web. Facet.*
- *Cook, T., & Schwartz, J. M. (2002). Archives, records, and power: The making of modern memory. University of Michigan Press.*
- *Dekkers, M. (2020). Universal Decimal Classification: A guide to its structure. UDC Consortium.*
- *Denton, W. (1998). Cataloguing of nonprint materials (4th ed.). Libraries Unlimited.*
- *Girja, K., & Krishan, K. (2011). Theory of cataloguing (5th ed.). Vikas Pub. House.*
- *Gorman, M., Winkler, P. W., Joint Steering Committee for Revision of AACR., & American Library Association. (2003). Anglo-American cataloguing rules. Canadian Library Association.*
- *International Council on Archives. (2000). ISAD(G): General international standard archival description (2nd ed.). ICA.*
- *Khanna, J. K., & Vashisht, B. B. (2010). Comprehensive cataloguing and classification (Rev. ed.). Ess Ess Publications.*
- *Lomash, B. (2016). Cloud computing for libraries. ALA Editions.*
- *Noy, N. F., & McGuinness, D. L. (2001). Ontology development 101: A guide to creating your first ontology (Technical Report KSL-01-05). Stanford University.*

- *Pradhan, S. (2019). Cataloguing of Non-print Resources: A Practical Manual. Ess Ess Publications.*
- *Rai, R. (2001). भारतीय पुस्तकालय वर्गीकरण: सिद्धान्त एवं अभ्यास [Indian library classification: Theory and practice]. Vishwavidyalaya Prakashan.*
- *Raimond, Y., & Abdallah, S. (2011). LSC ontology: A vocabulary for linking data. In Linked data for libraries, archives and museums (pp. 155–170). Facet Publishing.*
- *Ranganathan, S. R. (1967). Prolegomena to library classification. Asia Publishing House.*
- *Register, R., & McIlroy, T. (2016). The Metadata Handbook: A Book Publisher's Guide to Creating and Distributing Metadata for Print and Ebooks. DataCurate.*
- *Satija, M. P. (2020). Cutter-Sanborn three-figure author table supplemented with Indian names.*
- *Sears, M. E., & Westby, B. M. (2018). Sears List of subject headings (22nd ed.). H.W. Wilson.*
- *Sharma, S. K. (2015). पुस्तकालय वर्गीकरण एवं सूचना संकलन [Library classification and information organization]. Prabhat Prakashan.*
- *Smiraglia, R. P., Riva, P., & Zumer, M. (2013). The FRBR Family of Conceptual Models. Routledge.*
- *Taylor, A. G. (2005). Authority control: Principles, practice, and problems (2nd ed.). Libraries Unlimited.*
- *Tillett, B. B. (2003). What is FRBR? Cataloging & Classification Quarterly, 36(3–4), 17–36.*
- *Verma, P. (2012). पारंपरिक भारतीय दर्शन एवं वर्गीकरण प्रणाली [Traditional Indian philosophical systems and classification]. Rajkamal Prakashan.*
- *Welsh, A. & Batley, S. (2012). Practical cataloguing: AACR, RDA and MARC 21. Facet Publishing.*

Suggested Equivalent Online Courses:
https://swayam.gov.in/
https://www.coursera.org/
https://www.edx.org/
https://nptel.ac.in/
https://open.hpi.de/courses/
https://www.ala.org/core/continuing-education/courses

Part D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:
Maximum Marks: 100
Continuous Comprehensive Evaluation (CCE): 40 Marks, University Exam (UE): 60 Marks

Internal Assessment: Continuous Comprehensive Evaluation (CCE): 40 Marks	Class Test/Assignment/Presentation	40
External Assessment: University Exam: 60 Marks Time: 03 Hours	05 Short Questions 05 Long Questions	02 x 05 = 10 10 x 05 = 50 Total: 60
Remarks/Suggestions:		

MASTER OF LIBRARY AND INFORMATION SCIENCE

Title: Management of Libraries and Information Centres

Code: CC-33

Part A: Introduction			
Program: Post Graduate	**Class:** M.Lib.I.Sc	**One Year:** First Semester	**Session:** 2025-26
Subject: Library and Information Science			

1.	**Course Code**	CC-33
2.	**Course Title**	Management of Libraries and Information Centres
3.	**Course Type (Core Course)**	
4.	**Prerequisite (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: • *Analyse the different schools of management thought* • *Ascertain the process of managing resources in the library* • *Explore the concepts of human resource management* • *Critically examine the process of managing the library's financial aspects.*
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 hours per week):
LTP:

Unit	**Topics**	**No. of Lectures**
I	• **Library Management in Ancient India** • Evolution of Management Thought: Classical, Neo-classical and Modern Management Theories • POSDCORB as applied to Library Administration • Organizational Structures: Hierarchical, Flat, Matrix, and Network Structures within library contexts	15 Hours
II	• Collection Development and Management • Acquisition and Technical Processing • Electronic Resource Management (ERM) • Preservation and Conservation Techniques • Collection Assessment: Quality evaluation, Stock verification, Weeding Policies	15 Hours
III	• Human Resource Planning: Staffing needs, job analysis, job descriptions and specifications. • Recruitment and Selection • Performance Management and Appraisal • Motivation and Leadership: Theories of motivation (e.g., Maslow, Herzberg)	15 Hours
IV	• Total Quality Management (TQM)	15 Hours

	• Management Information Systems (MIS) • Library Automation and Integrated Library Systems (ILS/LMS): An overview • Data Analytics • Change Management	
V	• **Financial Management in the Ancient Era** • Financial Management in Modern Libraries • Cost-Benefit and Cost-Effectiveness Analysis • Annual Reports and Statistics • Marketing of Library Products and Services	15 Hours

Activities:

- *A chart creation comparing Western and ancient Indian management principles applied to libraries.*
- *Strategic HR Planning: Formulate a library's strategic objective and identify necessary HR roles/skills, including a brief recruitment strategy.*
- *Library Case Study Analysis: Analyze a management challenge in a library case study and present the findings.*
- *Hands-on Management Tools: Participate in a tutorial using library management software (LMS) or a basic project management tool.*
- *Mock Annual Report Section: Write a section of a hypothetical library's annual report focusing on a specific management area (e.g., HR, Finance, Marketing).*

Keywords/Tags: Library Management, Strategic Management, Human Resources, Information Resources, Library Technology

Part C: Learning Resources

Textbooks, Reference Books and Other Resources

Suggested Readings:

- *Ansari, M. M. (2005). पुस्तकालय संगठन एवं प्रबंध (384 pp.). Kala Prakashan. ISBN 8187566353*
- *Beard well, Ian & Holden, Len. (1997). Human Resource Management: A Contemporary perspective. Financial Times/ Prentice Hall.*
- *Bryson Jo. (2018). Effective Library and Information Management. Jaico Pub. House*
- *Bryson, J. (2017). Managing information services: A sustainable approach. Routledge Pub.*
- *Christian, A. R. (2013). Academic library management: Universities, colleges and institutions. Jaipur: Vista Publishers.*
- *Dorado, A. (2012). New trends in library management. London: Koros*
- *Drucker, Peter F. (2002). Management Challenges for the 21st century. Oxford; Butterworth Heinemann.*
- *Durean, J. M. & Clements, D. W. G. (1986). Principles of the preservation of library materials. IFLA.*
- *Sharma, S. K. (2012). पुस्तकालय प्रशासन एवं प्रबंध (290 pp.). Vani Prakashan. ISBN 9788170556312*
- *Kautilya. (2017). कौटिल्य का अर्थशास्त्र (Hindi ed., 1st ed.; 143 pp.). Rajpal and Sons. ISBN 9788170282105*
- *Edwards, E. G. (2005). Developing Library & Information Centre Collections. Westport: Libraries Unlimited.*
- *Evans, G. Edward & Layzell, Patricia. (2007). Management Basics for Information Professionals (2nd Ed). Libraries Unlimited.*
- *Harvey, Poss. (1993). Preservation in libraries: a reader. RR Bowker.*
- *Johnson, P. (2018). Fundamentals of collection development & management (4th ed.). Chicago: American Library Association.*

- *Kotler, Philip (2015). Marketing Management (15th Ed). New Delhi: Pearson. Narayana, G J. (1991).*
- *Krishan, K. (2007).Library Management in Electronic Environment. New Delhi: Har-Anand Publication.*
- *Robert A. (2000). Change Management. Response Books.*
- *McKnight, S. (2011). 101 ideas for successful library management. London: Facet.*
- *Mittal, R. L. (2007). Library administration: Theory and practice (4th ed.). Delhi: EssEss Pub.*
- *Rowley, Jennifer (2016). Information Marketing. Routledge.*
- *Sood, N. M. (2011). Fundamentals of library administration and management. New Delhi: Mahaveer& Sons.*
- *Stoner, James A F (et.al). (2003). Management: Global Perspectives (10th Ed). Pearson India.*
- *Stueart, R. D., Moran, B. B. & Morner, C. J. (2017). Library and information center management (9th Ed). Englewood, Colo: Libraries Unlimited.*
- *Thanuskodi, S. (2013). Challenges of academic library management in developing countries. Hershey PA: Information Science Reference.*
- *Velasquez, D. (2013). Library management 101: a practical guide. Chicago: ALA Editions, an imprint of the American Library Association.*

Suggested Equivalent Online Courses:

https://swayam.gov.in/
https://www.futurelearn.com/
https://www.ala.org/core/continuing-education/courses
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 Exam (UE): 60 Marks

Internal Assessment: Continuous Comprehensive Evaluation (CCE): 40 Marks	Class Test/Assignment/Presentation	40
External Assessment: University Exam: 60 Marks Time: 03 Hours	05 Short Questions 05 Long Questions	05 x 02 = 10 05 x 10 = 50 Total: 60
Remarks/Suggestions:		

MASTER OF LIBRARY AND INFORMATION SCIENCE

Title: Advanced Knowledge Organisation: Cataloguing and Classification (Practical)

Code: PC-11

Part A: Introduction			
Program: Post Graduate	**Class:** M.Lib.I.Sc	**One Year:** First Semester	**Session:** 2025-26
Subject: Library and Information Science			

1.	**Course Code**	PC-11	
2.	**Course Title**	Advanced Knowledge Organisation: Cataloguing and Classification (Practical)	
3.	**Course Type (Core Course)**		
4.	**Prerequisite (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: • *Explore the features of UDC and the practical classification skills of UDC;* • *Explore the features of AACR-II.* • *Provide practical cataloguing skills for various library resources according to AACR-II.* • *Know the assignment of the subject headings.*	
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 hours per week):
LTP:

Practical	**Topics**	**No. of Lectures**
Fundamentals of UDC	• Introduction to Universal Decimal Classification and its potential in classifying Indian Traditional Knowledge (e.g., Ayurveda, Vedas, Sanskrit texts). (Abridged Edition) • UDC Notation for Indigenous Knowledge: Mapping traditional subject areas into UDC main classes • Classification of Simple and Compound Subject Documents	15 Hours
Advanced Applications of UDC	• Introduction to Common Auxiliaries and Special Auxiliaries • Application of Common Auxiliaries, Special Auxiliaries, Devices, etc. • Classification of Complex Subject Documents	15 Hours
Multi-volume and composite book	• Cataloguing of multi-volume • Cataloguing with collective title (Ordinary composite book) • Cataloguing without collective title (Artificial composite book)	15 Hours

Serial Publication	• Cataloguing of Periodicals	15 Hours
Non-Book Materials	• Manuscripts • Cartographic Materials • Microforms • Motion Pictures • Video Recordings	15 Hours

Activities:

- *Discussion on exploring challenges in classifying ancient Indian subjects using Western-based classification systems like UDC*
- *Code construction puzzle: Break down a complex UDC number and reconstruct subject description*
- *Real-World Exploration: Examine a multi-volume work in the library and create proper catalogue cards*
- *Field visit/Demo of a media library or archive and understand cataloguing with digital example.*

Keywords/Tags: UDC, AACR II, Cataloguing, Classification, Non-book materials

Part C: Learning Resources

Textbooks, Reference Books and Other Resources

Suggested Readings:

- *Gautam, J.N. &Niranjan, Singh P (2015). Practical Manual of Universal Decimal Classification. Agra. Associated Publishing.*
- *Gautam, J.N (1996) Advanced Cataloguing: CCC and AACR-II (Theory and Practical). Agra: Y.K. Publisher,*
- *Anglo American Cataloguing Rules (2002). 2nd Ed. Rev. Ottawa: Canadian Library Association.*
- *Krishan Kumar (1986). An introduction to AACR-II 1988 revision. London: LA.*
- *MARC 21 and Related standards for Bibliographic Records. New York: LC. Riaz Muhammed (1996). A manual of practical cataloguing. New Delhi: Atlantic.*
- *Vishwanathan, C.G. (1983). Cataloguing theory and practice. 5th ed. Lucknow: Print House.*

Suggested Equivalent Online Courses:

https://www.ala.org/core/continuing-education/courses
https://swayam.gov.in/
https://nptel.ac.in/

Part D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:
Maximum Marks: 100
Continuous Comprehensive Evaluation (CCE): 40 Marks, University Exam (UE): 60 Marks

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

Remarks/Suggestions:

Master of Library and Information Science

Semester-II

Paper: CC-41 To PC-21

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: CC-41

Part A: Introduction			
Program: Post Graduate	**Class:** M.Lib.I.Sc	**One Year:** Second Semester	**Session:** 2025-26
Subject: Library and Information Science			

1.	**Course Code**	CC-41
2.	**Course Title**	Advanced Application of Information and Communication Technology
3.	**Course Type (Core Course)**	
4.	**Prerequisite (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: • *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 hours per week):
LTP:

Unit	Topics	No. of Lectures
I	• Purpose, Planning and Implementation of Library Automation • Library Automation Software: Types and Features • Automation of Housekeeping Operation	15 Hours
II	• 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 Hours

III	• 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 Hours
IV	• Databases management system (DBMS)-Types and Elements of DBMS • Data Ware housing: 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 Hours
V	• Digitization: Concepts and Needs • Steps of Digitization • Digital Library Software – DSpace & GSDL. • Content Management Systems – Architecture, Data Integration, CMS Software – Selection, Implementation and Evaluation	15 Hours

Activities:

- *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*

Keywords/Tags: Information Technology, Library Automation, Digital Library, Institutional Repository, Library Software

Part C: Learning Resources

Textbooks, Reference Books and Other Resources

Suggested Readings:

- *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. Chowdhaury. 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. Coln, 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, DhanpatRai, 2001.*
- *Paul Pedley. The invisible Web: Searching the hidden parts of the Internet. London: Aslib, 2001.*
- *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). पुस्तकालय स्वचालन 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*

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 Exam (UE): 60 Marks

Internal Assessment: Continuous Comprehensive Evaluation (CCE): 40 Marks	Class Test/Assignment/Presentation	40
External Assessment: University Exam: 60 Marks Time: 03 Hours	05 Short Questions 05 Long Questions	05 x 02 = 10 05 x 10 = 50 Total: 60
Remarks/Suggestions:		

MASTER OF LIBRARY AND INFORMATION SCIENCE

Title: Information, Communication, and Society

Code: CC-42

Part A: Introduction			
Program: Post Graduate	**Class:** M.Lib.I.Sc	**One Year:** Second Semester	**Session:** 2025-26
Subject: Library and Information Science			

1.	**Course Code**	CC-42
2.	**Course Title**	Information, Communication, and Society
3.	**Course Type (Core Course)**	
4.	**Prerequisite (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: • *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 hours per week):
LTP:

Unit	**Topics**	**No. of Lectures**
I	• 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 Hours
II	• **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, Models, Channels and Barriers	15 Hours

III	• **Role of Classical Texts in Knowledge Development** • Knowledge Generation, Exchange to utilization • Learning Process and Theories • Knowledge and Societal Survival	15 Hours
IV	• 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 Hours
V	• Information as an Economic Resource • **Economic value of indigenous knowledge (e.g., traditional medicine, agricultural practices)** • Information Literacy: Concepts, needs, objectives, models and trends in information literacy • National Information Policy • Knowledge Management: Concept and Objectives	15 Hours

Activities:

- *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*

Keywords/Tags- Information Society, Knowledge Management, Information Literacy, Data and Knowledge Continuum

Part C: Learning Resources

Textbooks, Reference Books and Other Resources

Suggested Readings:

- *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.: G K Hall.*
- *Dhiman, Anil Kumar and Sharma, Hemant. (2009). Knowledge Management for Librarians. New Delhi: Ess Ess.*
- *Haravu L. J. (2002). Lectures on Knowledge Managemeant: 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/*
- *त्रिपाठी, डी. एन. (2020). सूचना, ज्ञान एवं समाज. लखनऊ: विश्वविद्यालय प्रकाशन*
- *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). सूचना साक्षरता और ज्ञान प्रबंधन. जयपुर: प्रकाश बुक डिपो*
- *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 Exam (UE): 60 Marks

Internal Assessment: Continuous Comprehensive Evaluation (CCE): 40 Marks	Class Test/Assignment/Presentation	40
External Assessment: University Exam: 60 Marks Time: 03 Hours	05 Short Questions 05 Long Questions	05 x 02 = 10 05 x 10 = 50 Total: 60
Remarks/Suggestions:		

MASTER OF LIBRARY AND INFORMATION SCIENCE

Title: Information Storage and Retrieval System/Dissertation

Code: CC-43*/Dissertation**

Part A: Introduction			
Program: Post Graduate	**Class:** M.Lib.I.Sc	**One Year:** Second Semester	**Session:** 2025-26
Subject: Library and Information Science			
1.	**Course Code**	**CC-43*/Dissertation****	
2.	**Course Title (CC-43)***	*Information Storage and Retrieval System	
3.	**Course Type (Core Course)**		
4.	**Prerequisite (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: • *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 hours per week):
LTP:

Unit	**Topics**	**No. of Lectures**
I	• **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, Thesaurofacet, Classaurus	15 Hours
II	• 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 Hours

III	• 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 Hours
IV	• 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 Hours
V	• Information Retrieval Process and Techniques • Search Strategies: Search Methods, Boolean Search • Common Command Languages and Multiple Database Searching. • Retrieval Performance: Recall and Precision	15 Hours

Activities:

- *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*

Keywords/Tags- Information Retrieval Systems, Indexing Techniques, Thesaurus and Vocabulary Control, Micrographic Information Systems

Part C: Learning Resources

Textbooks, Reference Books and Other Resources

Suggested Readings:

- *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. (1072). 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.*
- *Chowdhruy, 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.*
- *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 Exam (UE): 60 Marks**		
Internal Assessment: Continuous Comprehensive Evaluation (CCE): 40 Marks	Class Test/Assignment/Presentation	40
External Assessment: University Exam: 60 Marks Time: 03 Hours	05 Short Questions 05 Long Questions	05 x 02 = 10 05 x 10 = 50 Total: 60
Remarks/Suggestions:		

Or

(Dissertation allowed in lieu of CC-43*)

Part A: Introduction			
Program: Post Graduate	**Class:** M.Lib.I.Sc	**One Year:** Second Semester	**Session:** 2025-26
Subject: Library and Information Science			
1.	**Course Code**	**Dissertation****	
2.	**Course Title****	**Dissertation based on current trends in Library and Information Science	
3.	**Course Type (Core Course)**		

4.	**Prerequisite (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: • *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	• Information Seeking Behaviour • User Satisfaction in Libraries • Reading Habits of Library Users • Information Literacy • Virtual Reference Chats for Distance Learners
System-oriented themes	• 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	• 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 delivery
Technology-driven themes	• 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

	• Machine learning approaches for personalized content recommendation
Research Data Management & Digital Scholarship	• 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	• Bibliometric • Scientometric • Altmetric • Webometric

Activities:

- *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 VOSviewer (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

Textbooks, Reference Books and Other Resources

Suggested Readings:

- *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 https://www.webofscience.com

Google Scholar

Google. (n.d.). Google Scholar.

https://scholar.google.com

JSTOR

ITHAKA. (n.d.). JSTOR: Digital library for scholars, researchers, and students. 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 https://shodhganga.inflibnet.ac.in

arXiv

arXiv.org. (n.d.). arXiv e-print archive. https://arxiv.org

ResearchGate

ResearchGate GmbH. (n.d.). ResearchGate: Connect, share, and discover research. Retrieved June 23, 2025, from https://www.researchgate.net

SSRN (Social Science Research Network)

Elsevier. (n.d.). SSRN: Social Science Research Network. Retrieved June 23, 2025, from https://www.ssrn.com

CORE

CORE. (n.d.). Connecting open access repositories. https://core.ac.uk

EBSCOhost

EBSCO Information Services. (n.d.). EBSCOhost research databases. Retrieved June 23, 2025, from https://www.ebscohost.com

ProQuest Dissertations & Theses Global

ProQuest. (n.d.). Dissertations & Theses Global. https://www.proquest.com/products-services/dissertations/

Mendeley

Elsevier. (n.d.). Mendeley reference manager. https://www.mendeley.com

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

SAGE Research Methods

SAGE Publications. (n.d.). SAGE Research Methods. Retrieved June 23, 2025, from https://methods.sagepub.com

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**		
External Assessment	**Presentation of Dissertation**	**Total: 100**

Remarks/Suggestions: 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: PC-21

Part A: Introduction			
Program: Post Graduate	**Class:** M.Lib.I.Sc	**One Year:** Second Semester	**Session:** 2025-26
Subject: Library and Information Science			

1.	**Course Code**	PC-21	
2.	**Course Title**	Advanced Application of Information and Communication Technology (Practical)	
3.	**Course Type (Core Course)**		
4.	**Prerequisite (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: • *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.* • *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 hours per week):
LTP:

Practical	**Topics**	**No. of Lectures**
Hands-on experience on Library Automation Software	• Integrated Library Software: KOHA-Basic Installation • Creation and Maintenance	15 Hours
Hands-on experience on Digital Library Creation using D-Space	• Basic Installation • Creating Data Community • Creating Collection • Browsing Collection	15 Hours

	• Uploading Metadata	
Web searching	• 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 Hours
E-Resources: Browsing and Searching	• Structure of CD-ROM/DVD's • E-Books • E-Journals • E- News papers	15 Hours
Searching on Consortia and Repositories	• J-gate • INDEST • **National Digital Library of India (NDLI) – Searching Ancient Materials**	15 Hours

Activities:

- *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.*

Keywords/Tags- Library Automation, Digital Library (DSpace), KOHA, E-Resources & Consortia

Part C: Learning Resources

Textbooks, Reference Books and Other Resources

Suggested Readings:

- *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. https://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: *https://swayam.gov.in/* *https://nptel.ac.in/* *https://www.coursera.org/* *https://www.edx.org/*

Part D: Assessment and Evaluation		
Suggested Continuous Evaluation Methods: **Maximum Marks: 100** **Continuous Comprehensive Evaluation (CCE): 40 Marks, University Exam (UE): 60 Marks**		
Internal Assessment: Continuous Comprehensive Evaluation (CCE): 40 Marks	Class Test/Assignment/Presentation	40
External Assessment:	Practical Evaluation	60
Remarks/Suggestions:		