

**Syllabus Outline for examination to be held in  
December 2021, 2022 & 2023  
& May 2022, 2023 & 2024**

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

**First & Second Semester**



**Post Graduate Department of  
Library and Information Science  
University of Jammu  
Jammu**

**Master of Library & Information Science - First Semester  
Examination to be held in December 2021, 2022 & 2023**

**M.Lib.I.Sc. Programme**

The following courses of study are prescribed in the First and Second Semesters of the M.Lib.I.Sc. Programme, for the Session December 2021, 2022 & 2023 and May 2022, 2023 & 2024

**First Semester Courses**

<b>Course Code</b>	<b>Title of the Course</b>	<b>Max. Marks/ Credits</b>
ML 101	Research Methodology	100/ 6
ML 102 (A)	Library Automation (Theory)	50/ 3
ML 102 (B)	Library Automation (Practical)	50/ 3
ML 103	Advanced Knowledge Organization (Theory)	100/ 6
ML 104	Bibliographic Database and Information Retrieval	100/ 6
ML 105	Library Metrics	50/ 3

**Total Marks/Credits: 450/ 27**

**Second Semester Courses**

<b>Course Code</b>	<b>Title of the Course</b>	<b>Max. Marks/ Credits</b>
ML 106 (A)	Digital Libraries (Theory)	50/ 3
ML 106 (B)	Digital Libraries (Practical)	50/ 3
ML 107	Information Literacy & User Studies	100/6
ML 108 (A)	Knowledge Organization (Cataloguing Practical): CCC	50/3
ML 108 (B)	Knowledge Organization (Classification Practical): UDC	50/3
ML 109 Elective:	(A) Information Sources and Products in Science and Technology <b>Or</b> (B) Information Sources and Products in Agricultural Sciences <b>Or</b> (C) Information Sources and Products in Social Sciences <b>Or</b> (D) Dissertation	100/ 6
ML 110	Library Internship	50/ 3

**Total Marks/Credits: 450/ 27**

**Master of Library & Information Science - First Semester  
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**The following courses of study are prescribed in the First Semester of M.Lib.I.Sc. Programme for the session December 2020, 2021 & 2022.**

**First Semester Courses**

<b>Course Code</b>	<b>Title of the Course</b>	<b>Max. Marks/ Credits</b>
ML 101	Research Methodology	100/ 6
ML 102 (A)	Library Automation (Theory)	50/ 3
ML 102 (B)	Library Automation (Practical)	50/ 3
ML 103	Advanced Knowledge Organization (Theory)	100/ 6
ML 104	Bibliographic Database and Information Retrieval	100/ 6
ML 105	Library Metrics	50/ 3

**Total Marks/Credits: 450/ 27**

**Master of Library & Information Science - First Semester  
Examination to be held in December 2021, 2022 & 2023**

**Course Code: ML 101  
Research Methodology**

**Credits: 6**

**Duration of Exam: 3 Hours**

**Max. Marks: 100**

**Semester Examination: 80 Marks**

**Internal Assessment: 20 Marks**

**Objectives:**

- To familiarize with basic concepts of research, various types, methods design of research in the field of library and information science.
- To develop basic understanding of various statistical techniques applicable in the field of library and information science for descriptive/inferential analysis.

**Learning outcomes:**

The student will be able to:

- Understand the Concept and Need of Research Methods in a Discipline
- Understand Ethical Issues related to Research
- Collect Data using different methods of Data collection
- Analyze and present the Data for meaningful inferences
- Use of Referencing Styles

**Unit- I**

Research: Theory, Types, Process

Research Methods: Descriptive, Historical, Case study, Spiral of Scientific Method

Research Problem: Formulation

**Unit- II**

Hypothesis: Definition, Formulation and Types

Research Design: Need, Purpose and Types

Sampling Techniques: Steps and Types

Data Collection Tools: Interview, Observation and Questionnaire

**Unit- III**

Measurement and Scaling: Tools and Techniques

Data Analysis-1: Measure for Central Tendency: Mean, Median and Mode, Dispersion: Range Variance & Standard Deviation

Data Analysis-2: Correlation and Regression Analysis, Hypothesis Testing: T test, Z test, ANOVA

Statistical Packages (SPSS, MS Excel) and Data Presentation

**Unit- IV**

Interpretation, Generalization, Theory Building (Model, Theories, and Paradigm), Technique and Precaution of Interpretation

Writing Research Report: Types, Layout and Significance of Report Writing

Referencing Styles: APA 6<sup>th</sup> Edition

Plagiarism: Ethics, Issues and Challenges

**Master of Library & Information Science - First Semester  
Examination to be held in December 2021, 2022 & 2023**

**Course Code: ML 101  
Research Methodology**

**Instructions for paper-setters / examiners and candidates**

- The syllabus is divided into four units.
- The examination in theory shall consist of 2 sections:
  - ❖ **Section-A:** shall be of **20 marks** and will comprise of 4 short answer type questions, one from each of the units and carrying 5 marks each. Answer should be comprehensive having 150-200 words only (all compulsory).
  - ❖ **Section-B:** shall be of **60 marks** and will comprise of 4 long answer type questions, one from each of the units and carrying 15 marks each. Answer should be 500 to 600 words with detailed analysis/ explanation/critical evaluation to the question.
- The candidates will be required to pass separately in theory and internal assessment examination.

**Recommended Readings**

- ⇨ Ahuja, R. (2005). *Research methods*. New Delhi: Rawat Publications.
- ⇨ Alvenson, M., & Skoldberg, K. (2009). *Reflexive methodology: New vistas in qualitative research*. (2nd ed.). London: Sage Publication.
- ⇨ Baker, L. (2006). *Research methods*. U.S.A: John Hopkins University Press.
- ⇨ Balasubramanian, P., & Baladhandayutham, A. (2011). *Research Methodology in Library Science*. New Delhi: Deep & Deep.
- ⇨ Connaway, L. S. & Powell, R. R. (2010). *Basic Research Methods for Librarians*. (5th ed.). Santa Barbara, CA: Libraries Unlimited.
- ⇨ Daland, H. D. (2016). *New roles for research librarians: Meeting the expectations for research support*. London: Chandos Publishing.
- ⇨ Denzin, N. K. & Lincoln, Y. S. (Eds.) (2017). *The SAGE Handbook of Qualitative Research*. (5<sup>th</sup> Ed.). London: SAGE
- ⇨ Devarajan, G. (2002). *Research in Library and Information Science*. New Delhi: EssEss Publications.
- ⇨ Dhanavandan, S. (2017). *Research Methodology for Libraries: Tools & Techniques*. New Delhi: Dominant Publishers.
- ⇨ Goddard, W., & Melville, S. (2011). *Research methodology*. Kenwyn, South Africa: Juta & Co.
- ⇨ Gupta, S. C. (2007). *Fundamental of statistics*. New Delhi: Himalaya.
- ⇨ Gupta, S. P. (2004). *Statistical methods*. New Delhi: S. Chand.
- ⇨ James, T., & Mc-Clave. (2005). *First course in statistics*. (9th ed.). New Delhi: Prentice Hall.
- ⇨ Khanna, J. K., & Khurana, S. (2008). *Handbook of research methodology*. Agra: Y.K. Publishers.
- ⇨ Kothari, C. R. (2004). *Research methodology: Methods & techniques*. New Delhi: New Age Publishers.
- ⇨ Kothari, C. R. & Garg, G. (2019). *Research methodology: Methods and techniques*. New Delhi: New Age International Publishers.
- ⇨ Thakur, D. (2008). *Research methodology in social sciences*. New Delhi: Deep & Deep Publications.
- ⇨ Upson, M. (2015). *Information Now: A graphic Guide to Student Research*. Chicago: The University of Chicago Press Books.

**Master of Library & Information Science - First Semester  
Examination to be held in December 2021, 2022 & 2023**

**Course Code: ML 102 (A)  
Library Automation (Theory)**

**Credits: 3**  
**Duration of Exam: 2 Hours**

**Max. Marks: 50**  
**Semester Examination: 40 Marks**  
**Internal Assessment: 10 Marks**

**Objectives:**

- To make student learn the concept of Library Automation and Database Management System

**Learning outcomes**

The student will be able to:

- Comprehend Object Identification Technologies
- Automate the Library Activities
- Comprehend the concept of Database Management System

**Unit- I**

Library Automation: An Overview  
Library Automation Software: Types & Features  
Selection and Evaluation Criteria of Automation Software  
Object Identification Technologies: RFID, QR Code, Bio-Metric

**Unit- II**

DBMS: Definition, Concept  
DBMS: Components and Types  
Database Structure: Logical Data Structure, Physical Data Structure  
Database Management System Models: Structure – Hierarchical and Relational and Object Oriented

**Instructions for Paper-Setters / Examiners and Candidates**

- The syllabus is divided into two units.
- The examination in theory shall consist of 2 sections:
  - ❖ **Section-A:** shall be of **10 marks** and will comprise of 2 short answer type questions, one from each of the units and carrying 5 marks each. Answer should be comprehensive having 150-200 words only (all compulsory).
  - ❖ **Section-B:** shall be of **30 marks** and will comprise of 2 long answer type questions, one from each of the Units and carrying 15 marks each. Answer should be 500 to 600 words with detailed analysis/ explanation/critical evaluation to the question.
- The candidates will be required to pass separately in theory and internal assessment examination.

**Recommended Readings:**

- ⇔ Tiwari, P. (2010). *Library Automation*. New Delhi: APH Publishing Corporation.
- ⇔ Bilal, D. (2014). *Library Automation: Core, Concepts and Practical Systems Analysis*. (3<sup>rd</sup> Ed.). Libraries Unlimited Inc.
- ⇔ Kahate, A. (2004). *Introduction to Database Management Systems*. Pearson India.
- ⇔ Oxborrow, E.A. (1991). *Databases and database systems: Concepts and issues*. Bromley: Chartwell Bratt.
- ⇔ William, J. (1992). *Database Design and Construction: An open learning course for students and information managers*. London: Library Association.

**Master of Library & Information Science - First Semester  
Examination to be held in December 2021, 2022 & 2023**

**Course Code: ML 102 (B)  
Library Automation (Practical)**

**Credits: 3**

**Duration of Exam: 2 Hours**

**Max. Marks: 50**

**Semester Examination: 40 Marks**

**Internal Assessment: 10 Marks**

**Objectives:**

- To have a hands-on practice on Web designing, automation software and file sharing

**Learning outcomes**

The student will be able to:

- Learn Webpage designing
- Learn Installing, configuring and using KOHA
- Learn Subscribing RSS Feeds
- Learn to Share Files between Computers

**Unit- I**

Webpage designing using HTML Code

KOHA: Installation and Configuration

**Unit- II**

Subscribing RSS Feeds through Online Aggregator or Desktop Aggregator in Libraries

Sharing Files between Computers

**Instructions for paper-setters / examiners and candidates**

- The syllabus is divided into two units.
- The practical examination will be conducted jointly by invited external examiner and the internal examiner.
- The candidates will be required to pass separately in practical examination and internal assessment examination.

**Recommended Readings:**

- ⇔ Devika, P. M. (2003). Introduction to XML and HTML. In: PGDLAN course material, MLI-006, Unit 8. New Delhi: Indira Gandhi National Open University.
- ⇔ Devika, P.M. (2003). Web based content development. In: PGDLAN course material, MLI-006, Unit 9. New Delhi: Indira Gandhi National Open University.
- ⇔ Powell, T. A. (2000). The HTML complete reference. (2<sup>nd</sup>ed.). New Delhi: Tata McGraw Hill.
- ⇔ Robbins, J.N. (2012). *Learning Web Design: A Beginners Guide to HTML, CSS, JavaScript, and Web Graphics (4<sup>th</sup> ed)*. Cambridge: O'Reilly. ISBN: 9781449319274
- ⇔ HTML Tutorial. Link: <https://www.w3schools.com/html/default.asp>
- ⇔ Koha Library Software. Link: <https://koha-community.org/>

**Master of Library & Information Science - First Semester  
Examination to be held in December 2021, 2022 & 2023**

**Course Code: ML 103  
Advanced Knowledge Organization (Theory)**

**Credits: 6**

**Duration of Exam: 3 Hours**

**Max. Marks: 100**

**Semester Examination: 80 Marks**

**Internal Assessment: 20 Marks**

**Objectives:**

- To make students acquainted with advanced Library Classification and Library Cataloguing
- To make students acquainted with recent trends in Library Classification and Cataloguing
- To acquaint with the principles, standards, techniques of Knowledge Organization in libraries particularly with reference to Classification and Cataloguing.

**Learning Outcomes:**

The student will be able to:

- Assimilate the recent advancements in Library Classification
- Learn in detail about Machine Readable Cataloguing formats and related bibliographic standards

**Unit- I**

Structure and Attributes of Universe of Knowledge  
Growth of Knowledge and its Impact on Library and Information Centers  
Structure and Features of Universal Decimal Classification (UDC)

**Unit- II**

Role of CRG, ISKO, DRTC, and BSO in the field of Library Classification  
Comparative Study of Standards Schemes of Classification: CC & UDC  
Modes of Formation of Subjects  
Trends in Classification: Automatic and Online Classification System  
Ontologies

**Unit- III**

Cataloguing of Indic Names  
Online Computer Library Centre (OCLC)  
Recent trends in the field of Cataloguing: World-Cat, Ind-Cat  
Online Public Access Catalogue (OPAC) and Web-OPAC

**Unit- IV**

ISBD, AACR2, RDA; FRBR  
MARC: Overview; MARC family of Formats, MARC- XML, MARC21, UNIMARC  
Metadata and Metadata Standards: Dublin Core



**Master of Library & Information Science - First Semester  
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**Course Code: ML 103  
Advanced Knowledge Organization (Theory)**

**Instructions for Paper-Setters / Examiners and Candidates:**

- The syllabus is divided into four units.
- The examination in theory shall consist of 2 sections:
  - ❖ **Section-A:** shall be of **20 marks** and will comprise of 4 short answer type questions, one from each of the units and carrying 5 marks each. Answer should be comprehensive having 150-200 words only (all compulsory).
  - ❖ **Section-B:** shall be of **60 marks** and will comprise of 4 long answer type questions, one from each of the units and carrying 15 marks each. Answer should be 500 to 600 words with detailed analysis/ explanation/critical evaluation to the question.
- The candidates will be required to pass separately in theory and internal assessment examination.

**Recommended Readings:**

- ⇔ American Library Association, et al. (1998). *Anglo American Cataloging rules*, Rev. Ed., London, Library Association,
- ⇔ Batley, S. (2014). *Classification in Theory and Practice*.
- ⇔ Bowman, J. H. (2003). *Essential cataloguing*, London: Facet Publishing.
- ⇔ Cutter, C. A. *Three Figure Author Table*. Available online at:  
<http://www.columbia.edu/cu/libraries/inside/units/bibcontrol/osmc/cutter.html>.
- ⇔ OCLC. (2008). *Web-Dewey*. Dublin, Ohio: OCLC Forest Press.
- ⇔ Hunter, E. J. & Bakewell, K. G. B. (1989). *Advanced cataloging*. London: Clive Bingley.
- ⇔ Kumar, G. & Krishna Kumar. (1993). *Theory of Cataloguing*. New Delhi: South Asia Books.
- ⇔ Kumbhar, R. (2011). *Library Classification Trends in the 21<sup>st</sup> Century*. Burlington: Elsevier Science.
- ⇔ Miller, J. Ed. *Sear's List of Subject Headings*. (15<sup>th</sup> Ed.). New York, Wilson, 1994
- ⇔ Read, J. (2003). *Cataloguing Without Tears: Managing Knowledge in the Information Society*. Oxford: Chandos Publishing,
- ⇔ Husain, S (2004). *Library Classification: Facet and Analysis*. (2<sup>nd</sup> Ed.) Delhi: B. R. Publishing Corporation.
- ⇔ Wilson, K. A. & Marylou, C. (Eds.) (1997). *Outsourcing Library Technical Services Operations: Practices in Academic, Public, and Special Libraries*. Chicago: ALA.

**Master of Library & Information Science - First Semester  
Examination to be held in December 2021, 2022 & 2023**

**Course Code: ML 104  
Bibliographic Database & Information Retrieval**

**Credits- 6**

**Duration of Exam: 3 Hours**

**Max. Marks: 100**

**Semester Examination: 80 Marks**

**Internal Assessment: 20 Marks**

**Objectives:**

- To acquaint with various Databases.
- To know problems of Information Retrieval
- To learn modern practices of Information Retrieval

**Learning Outcomes:**

Students will be able to:

- Analyze the subject for meaningful Retrieval
- Understand and Evaluate models of Information Retrieval
- Realize the Man Machine Interaction
- Comprehend the Applications of Information Retrieval
- Understand the architecture of Web-based information retrieval

**Unit- I**

Introduction and concept of Online Databases  
Definition and Characteristics of Online Databases  
Types of Databases (including web of science, LISA, Scopus, and ICI)  
Bibliographic Databases and various Search Strategies

**Unit- II**

Fundamentals of Retrieval Systems: Nature and Characteristics  
Problems of Subject Analysis & Knowledge Representation: Contribution of Cutter, Kaiser, Ranganathan, Farradane & Coates  
Rule-based, Frame-Based and Semantic Web Methods of Knowledge Representation

**Unit- III**

IR Models: Cognitive, Probabilistic, etc.  
IR Performance Evaluation  
Web-Based Retrieval with Reference to Search Tools, and XML Retrieval  
Data Mining  
Semantic Web, Linked Data & Big Data

**Unit- IV**

Abstracting: Definition, Types and Principles of Abstracting  
Subject Indexing: Concept & Development  
Assigned Indexing: Pre-Coordinate and Post Coordinate Indexing  
Derived Indexing: KWIC, KWOC, and Citation Indexing

**Master of Library & Information Science - First Semester  
Examination to be held in December 2021, 2022 & 2023**

**Course Code: ML 104  
Bibliographic Database & Information Retrieval**

**Instructions for Paper-Setters / Examiners and Candidates**

- The syllabus is divided into four units.
- The examination in theory shall consist of 2 sections:
  - ❖ **Section-A:** shall be of **20 marks** and will comprise of 4 short answer type questions, one from each of the units and carrying 5 marks each. Answer should be comprehensive having 150-200 words only (all compulsory).
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- The candidates will be required to pass separately in theory and internal assessment examination.

**Recommended Readings:**

- ⇔ Chodhury, C.G. (2004). *Introduction to modern information retrieval*. (2<sup>nd</sup>ed.). London: Facet Pub.
- ⇔ Chu, S.K.W., & Law, N. (2006). *Development of information search expertise: Research students' knowledge of source types*. *Journal of Librarianship and Information Science*, 39 (1), 27- 40.
- ⇔ Cleveland, D. B., & Cleveland, A. D. (1990). *Introduction to indexing and abstracting*. (2<sup>nd</sup>ed.). USA: University of Michigan.
- ⇔ Cruz, A. M. R., & In Cruz, M. E. F. (2019). *New perspectives on information systems modeling and design*.
- ⇔ Dhawan, K.S. (1997). *Principles of information retrieval*. New Delhi: Commonwealth
- ⇔ Foskett, A.C. (1996). *The subject approach to information* (5<sup>th</sup> ed.). London: Library Association.
- ⇔ Harman, D. K. (2011). *Information retrieval evaluation*. San Rafael, Calif. (1537Fourth Street, San Rafael, CA 94901 USA: Morgan & Claypool.
- ⇔ International Conference on Multi-Media Modeling, & In Cheng, W.-H. (2020). *Multimedia modeling: 26th International Conference, MMM 2020, Thessaloniki, Greece, January 8-11, 2019, proceedings*.
- ⇔ Jones, K. S. (1981). *Information retrieval experiment*. London: Butterworth.
- ⇔ Kiewitt, E. L. (1979). *Evaluating information retrieval systems: The probe program*. London: Greenwood.
- ⇔ Lancaster, F.W. (2003). *Indexing and abstracting in theory and practice* (3<sup>rd</sup>ed.). London: Facet Pub.
- ⇔ Meadow, C. T. (1967). *The analysis of information systems*. New York: John Wiley.
- ⇔ Rajan, T. N. (1981). *Indexing systems: Concepts, models & techniques*. Calcutta: IASLIC.
- ⇔ Ranganathan, S. R. (1973). *Documentation: Genesis and development*. Delhi: Vikas Publishing.
- ⇔ Riaz, M. (1991). *Advanced indexing and abstracting*. New Delhi: Atlantic
- ⇔ Rijsbergen, J. V. (1979). *Information retrieval* (2<sup>nd</sup> ed.). London: Butterworths.
- ⇔ Smiraglia, R. P. (2002). *Works as entities for information retrieval*. New York: Haworth.
- ⇔ Vickery, B.C. (1970). *Techniques of information retrieval*. (2<sup>nd</sup> ed.). London: Butterworth.
- ⇔ Warner, J. (2010). *Human information retrieval*. Cambridge, Mass: MIT Press.
- ⇔ Wessel Andrew, E. (1974). *Computer aided information retrieval*. Los Angeles: Melville Publishing.

**Master of Library & Information Science - First Semester  
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**Course Code: ML 105  
Library Metrics**

**Credits- 3**

**Duration of Exam: 2 Hours**

**Max. Marks: 50**

**Semester Examination: 40 Marks**

**Internal Assessment: 10 Marks**

**Objectives:**

- To recognize the occurrence of the phenomena in other subject fields as well
- To understand the scope of Bibliometrics and Scientometrics, etc.
- To perform citation analysis, impact factor, etc.

**Learning Outcomes:**

Students will be able to:

- Apply the Scientometric approach to science
- Formation of Scientometrics maps of literature
- Apply Bibliometrics laws to identify the core journals in a subject
- Understand the phenomenon of Informetrics, webometrics, and altmetrics

**Unit- I**

Bibliometrics, Scientometrics, Informetrics: concepts, evolution and present status  
Bibliometric Laws: Bradford, Zipf, Lotka and their Utility and Application  
Webometrics and Altmetrics: Concept and Present Status  
Citation analysis, Bibliographic Coupling, Obsolescence, Impact factor

**Unit- II**

Measuring of Scientific productivity: Problems and Prospects  
Growth and Obsolescence Study of Literature  
Science and Technology Indicators: A tool for Policy and Decision Makers  
Approach to modeling in Scientometrics and Informetrics.

**Instructions for paper-setters / examiners and candidates**

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  - ❖ **Section-A:** shall be of **10 marks** and will comprise of 2 short answer type questions, one from each of the units and carrying 5 marks each. Answer should be comprehensive having 150-200 words only (all compulsory).
  - ❖ **Section-B:** shall be of **30 marks** and will comprise of 2 long answer type questions, one from each of the Unit and carrying 15 marks each. Answer should be 500 to 600 words with detailed analysis/ explanation/critical evaluation to the question.
- The candidates will be required to pass separately in theory and internal assessment examination.

**Recommended Readings:**

- ⇔ Baruah, A. (2004). *Library science: Prospects in 21st century*. New Delhi: KilaroBooks.
- ⇔ Borgman, C. L. (1990). *Scholarly communication and bibliometrics*. Newbury Park: Sage Publications.
- ⇔ Dhawan, K.S. (2001). *Reading in library science*. New Delhi: Commonwealth. 2.

**Master of Library & Information Science - First Semester  
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**Course Code: ML 105**

**Library Metrics**

- ⇔ Glänzel, W., In Moed, H. F., In Schmoch, U., & In Thelwall, M. (2019). *Springer handbook of science and technology indicators*.
- ⇔ Kawatra, P.S. (2000). *Textbook of information science*. New Delhi: A.P.H. Publishing.
- ⇔ McIntosh, J. *Library and information sciences: Parameters and perspectives*. Canada: Apple Academic Press.
- ⇔ Raju, N. G. (2009). *Bibliometric applications: Study of literature, use patterns*.
- ⇔ Rubin, Herbert & Irene. (2004). *Qualitative interviewing: The art of hearing data*. USA: Sage.
- ⇔ Sardana, J.L., (2002). *Libraries and information studies in retrospect and prospect: Essay in honour of D. R. Kalia*. New Delhi: Concept publishing company.
- ⇔ Sugimoto, C. R. (2016). *Theories of Informetrics and Scholarly Communication*.