

Central University of Himachal Pradesh  
Shahpur Parisar  
Department of Library and Information Science

**Program Specific Outcomes**  
**Program Outcomes**  
**Course Outcomes & Course Contents**  
of  
**Master of Library and Information Science (M.Lib.I.Sc.)**  
**School of Mathematics, Computers and Information Science**



## **Programme Specific Outcomes of M.Lib.I.Sc.**

**PSO 1 - To ensure participation of all students in seminar presentations, group discussions and real-time library work.**

**PSO 2 - To enhance students' interpersonal, research and academic writing skills.**

**PSO 3 -To foster a culture of academic and research integrity.**

## **Programme Outcomes of M.Lib.I.Sc.**

**PO 1 - To develop skills of students to face contemporary challenges and changing methods of information handling.**

**PO 2 - To enhance skills of the students in the latest technologies in the field.**

**PO 3 - To augment diverse skills and competencies required for the emerging knowledge society.**

**PO 4 - To inculcate a sense of responsibility in fulfilling the information needs of society at large to the best of their abilities.**

**Course Name:** Library Automation and Networks (Theory)

**Course Code:** LIS 501

**Credits:** 4

**Credits Equivalent:** 4 Credits (One credit is equivalent to 10 hours of lectures / organized classroom activity / contact hours; 5 hours of laboratory work / practical / field work / Tutorial / teacher-led activity and 15 hours of other workload such as independent individual/ group work; obligatory/ optional work placement; literature survey/ library work; data collection/ field work; writing of papers/ projects/dissertation/thesis; seminars, etc.)

### **Course Objectives:**

On successful completion of the course the students will be able to do the following:

- To acquaint the students with the planning and management of automated library systems
- To impart practical training in the housekeeping operations

### **Course Outcomes:**

After the successful completion of this course, the student will be able to:

CO-1. Understand the various working and functions of library automation systems

CO-2. To know various tools necessary for library automation

CO-3. To know about select LMSs

CO-4. Get themselves acquainted with the various information organization standards and networking protocols required in a library automation system.

### **Attendance Requirements:**

Students are expected to attend all lectures in order to be able to fully benefit from the course. A minimum of 75% attendance is a must failing which a student may not be permitted to appear in examination.

### **Evaluation Criteria:**

#### **Total marks: 200**

1. Mid Term Examination: 20%
2. End Term Examination: 60%
3. Counseling, Activities and Tutorials (CAT): 20%
  - i. Assignment & Seminar: 10%
  - ii. Library Work: 5%
  - iii. Surprise Test: 5%

## **Course Content:**

### **UNIT - I: Library automation**

- Definition, need, purpose and advantages, historical development
- Identifying goals and objectives of automation
- Areas of Automation: Acquisition, technical services, OPAC, Administrative routines, Circulation and Serial Control
- Application of barcoding, RFID in libraries

### **UNIT - II: Evaluation of library automation systems**

- Criteria for selection of library automation software: open sources, property, customized
- Criteria for selection of hardware specification
- Evaluation techniques
- Study of standards relevant to library automation

### **UNIT - III: Automation Procedure**

- Steps in Automation: Developing a basic Technology Plan
- Assessing needs and priorities, Preparing strategic Plan, Feasibility Study, Describing existing library services and technology
- Retrospective conversation techniques and process
- Integrated Library Management System, KOHA and SOUL
- Current trends in Library automation

### **UNIT - IV: Library networks and information systems**

- Library Networks- OCLC, BLAISE, INFLIBNET, STN, RLIN
- Information Systems: NISCAIR, DESIDOC, SENDOC, NASSDOC
- PADIS, ENVIS, INIS, AGRIS, BIOSIS, MEDLARS
- Digital Data Security

## **Prescribed Text Books:**

1. R.S.Aswal. Library Automation for 21 st Century, New Delhi, Ess Ess Publication.
2. Desiree Webber and Andrew Peters. Integrated Library Systems: Planning, Selecting, and Implementing, London: Libraries Unlimited, 2010.
3. Thomas R. Kochtanek and Joseph R. Matthews . Library Information Systems: From Library Automation to Distributed Information Access Solutions, London: Libraries Unlimited, 2002
4. H. K. kaul. Library Networks: An Indian Experience, New Delhi: Virgo Publications, 1992.

## **Suggested Extra Readings:**

1. Satyanarayana, N. R. A manual of computerization of libraries. New Delhi: Viswa Prakashan, 1995.
2. John M. Cohn, Ann L. Kelsey and Keith Michael Fiels .Planning for library automation: A Practical Handbook, London : Library Association, 1998.
3. Michael D. Cooper, Design of Library Automation Systems: File Structures, Data Structures, and Tools, London: John Wiley & Sons

Course Outcomes	Programme Outcomes 1	Programme Outcomes 2	Programme Outcomes 3	Programme Outcomes 4	Programme Specific Outcomes 1	Programme Specific Outcomes 2	Programme Specific Outcomes 3
CO1	2	3	2	2	3	1	1
CO2	3	3	3	2	2	1	1
CO3	3	3	3	2	2	1	1
CO4	3	2	3	2	2	1	1

1. Partially Related
2. Moderately Related
3. Highly Related

**Course Name:** Library and Automation Network (Practical)

**Course Code:** LIS-502

**Credits:** 4

**Credits Equivalent:** 4 Credits (One credit is equivalent to 10 hours of lectures / organised Classroom activity / contact hours; 5 hours of laboratory work / practical / field work /Tutorial / teacher-led activity and 15 hours of other workload such as independent Individual/ group work; obligatory/ optional work placement; literature survey/ library Work; data collection/ field work; writing of papers/ projects/dissertation/thesis; seminars, Etc.)

**Course Objectives:**

1. To impart practical training in the use software to develop bibliographic databases.
2. To give practical training in the use of library automation software

**Course Outcomes:** After the successful completion of this course, the student will be able to

CO<sup>1</sup> understand the practical training in the use of library automation software.

CO<sup>2</sup> Understand about the Open-Source library automation software.

CO<sup>3</sup> understand the different features of ILMS.

CO<sup>4</sup> understand the advantages and different modules of ILMS.

**Attendance Requirements:**

Students are expected to attend all lectures in order to be able to fully benefit from the course. A minimum of 75% attendance is a must failing which a student may not be permitted to appear in examination.

**Evaluation Criteria:**

Mid Term Examination: 20%

End Term Examination: 60%

Counselling, Activities and Tutorials (CAT): 20%

Assignment: 10%

Library Work: 5%

Surprise Test: 5%

**Course Contents:**

**UNIT - I:** Hands-on experience with the WINISIS

**UNIT-II:** Hands-on experience with the KOHA

**UNIT-III:** Hands-on experience with the SOUL

**UNIT-IV:** Mini project

**Prescribed Text Books:**

1. WINISIS Manual
2. KOHA Manual
3. SOUL Manual

**Course Articulation Matrix of LIS-502 - Library and Automation Network  
(Practical)**

Course Outcomes	Programme Outcomes 1	Programme Outcomes 2	Programme Outcomes 3	Programme Outcomes 4	Programme Specific Outcomes 1	Programme Specific Outcomes 2	Programme Specific Outcomes 3
CO1	2	3	3	3	2	3	2
CO2	2	2	2	2	2	2	2
CO3	2	2	3	3	2	3	3
CO4	3	2	1	1	2	2	2

1. Partially Related
2. Moderately Related
3. Highly Related

**Course Name:** Web Designing and Hosting (Theory & Practical)

**Course Code:** LIS 505

**Credits:** 4

**Credits Equivalent:** 4 Credits (One credit is equivalent to 10 hours of lectures / organised classroom activity / contact hours; 5 hours of laboratory work / practical / field work / Tutorial / teacher-led activity and 15 hours of other workload such as independent individual/ group work; obligatory/ optional work placement; literature survey/ library work; data collection/ field work; writing of papers/ projects/dissertation/thesis; seminars, etc.)

### **Course Objectives:**

On successful completion of the course the students will be able to do the following:

- Creating own websites and host
- The students will understand, essential step by step guide on how to set up a website

### **Course Outcome:**

After the successful completion of this course, the student will be able to:

CO-1. Understand the guidelines of creating an effective web page, including consideration of information architecture.

CO-2. Do HTML coding

CO-3. Learn the integration of multimedia features in webpages

CO-4. Hosting websites using web servers

### **Evaluation Criteria:**

Total marks: 200

- Mid Term Examination: 20%
- End Term Examination: 60%
- Counselling, Activities and Tutorials (CAT): 20%
  - Assignment/Class Test/Surprise Test/Quiz: 10%
  - Mini Project: 10%

### **Course Content:**

UNIT I: Web designing using HTML codes

UNIT II: Web designing using HTML editors

UNIT III: Hyperlinks and multimedia features

UNIT IV: Hosting on Web Servers

### **Prescribed Text Books:**

1. Bruce Lawson. Introducing HTML5 (Voice That Matter), 2010, New Riders Press, USA
2. Gavin Hoole & Cheryl Smith. The Really, Really, Really Easy Step-by-Step Guide to Building your Own Website: For Absolute Beginners of All Ages, New Holland Publisher, 2008, London.
3. Lan Lloyd. Build Your Own Website: The Right Way Using HTML & CSS, 2<sup>nd</sup> Ed. , 2003, Sitepoint Pvt Ltd.
4. Thomas A. Powell. HTML & CSS: The Complete Reference, Fifth Edition, 2006, Mc Graw Hill.

### Extra Readings:

1. C Xavier. World Wide Web Design with HTML. New Delhi: TMH, 2000
2. Alan Poulter, Gwyneth Tseng and Goff Sargent: The Library and Information Professionals Guide to the World Wide Web. London: Facet Publishing, 1999

### Web resources:

1. W3 Schools. <https://www.w3schools.com/html/>

Course Outcomes	Programme Outcomes 1	Programme Outcomes 2	Programme Outcomes 3	Programme Outcomes 4	Programme Specific Outcomes 1	Programme Specific Outcomes 2	Programme Specific Outcomes 3
CO1	3	3	3	2	2	1	1
CO2	3	3	3	2	2	1	1
CO3	3	3	3	2	2	1	1
CO4	3	3	3	2	2	1	1

1. Partially Related
2. Moderately Related
3. Highly Related



**Course Name:** Research Methodology  
**Course Code:** LIS 527  
**Course Instructor:** Sh. Sudam CHaran Sahu  
**Credits:** 2

**Credits Equivalent:** 2 Credits (One credit is equivalent to 10 hours of lectures / organised classroom activity / contact hours; 5 hours of laboratory work / practical / field work / Tutorial / teacher-led activity and 15 hours of other workload such as independent individual/ group work; obligatory/ optional work placement; literature survey/ library work; data collection/ field work; writing of papers/ projects/dissertation/thesis; seminars, etc.)

**Course Objectives:**

- To introduce scholar about the concept of Research.
- To develop understanding of Research Design and Methods.
- To introduce different data collection techniques.

**Course Outcomes:** After the successful completion of this course, the student will be able to

**CO<sup>1</sup>** Understand the basic concepts of research.

**CO<sup>2</sup>** Understand the importance of research.

**CO<sup>3</sup>** understand the Research Design and Methods.

**CO<sup>4</sup>** understand the different method of data collections.

**Attendance Requirements:**

Students are expected to attend all lectures in order to be able to fully benefit from the course. A minimum of 75% attendance is a must failing which a student may not be permitted to appear in examination.

**Evaluation Criteria:**

Mid Term Examination: 20%

End Term Examination: 60%

Counselling, Activities and Tutorials (CAT): 20%

Assignment: 10%

Library Work: 5%

Surprise Test: 5%

**Course Contents:**

**Unit 1: Introduction to Research (05 hours)**

- Research: Concept, Process, Types of Research- Basic and Applied research; Research Ethics.
- Research hypothesis- Definitions, Characteristics, Types and Functions.
- Review of Literature: Meaning, Needs and objectives, Sources and Functions.

**Unit 2: Research Methods (05 hours)**

- Research Design: Meaning, exploratory research design and descriptive research design.
- Survey Method: Meaning, Characteristics, Sampling-Types of Sampling methods and Sample Size.
- Historical Method: Meaning, Steps of Historical Research.
- Experimental Method: Meaning, characteristics, Variables, Steps of the experimental method.

**Unit 3: Data Collection Techniques (05 hours)**

- Questionnaires: Advantages and disadvantages, Types of Questionnaires.
- Interviews: Advantages and Disadvantages, Interview schedule, Personal Interview, Group Interview and Telephone Interview
- Observation: Advantages and Limitations of Observational Research, Unstructured Observation and Structured Observation

**Unit 4: Statistics and its Applications (05 hours)**

- Descriptive Statistics Measures of Central Tendency: Mean Median and Mode. Standard Deviation
- Statistical Packages – MS-Excel, SPSS (Statistical Package of Social Sciences)
- Presentation of Data: Tabular, Graphic, Bar Diagram and Pie Char.
- Research Report: Concept, Structure and Reference style

**Prescribed Text Books:**

1. Alasuutari, P., Bickman, L. & Brannen, J. (Eds.) (2008). The SAGE Handbook of Social Research Methods. London: Sage Publication
2. Atkinson, P & Delamont, S. (Ed.) (2011). Sage Qualitative Research Methods. (Vols. 1-4). New Delhi:Sage Publication.
3. Burton, D. & Bartlett, S. (2009). Key Issues for Education Researchers. California: Sage Publication.
4. Cooper, H. M. (2006). Synthesizing research: A guide for literature reviews. Thousand Oaks.Calif:Sage.
5. Creswell, J. W. (2014). Research design: Qualitative, quantitative, and mixed

- methods approaches. (4thed.). California: Sage Publication.
6. Fetterman, D. M. (2010). *Ethnography: step-by-step* (3rd Ed). (Applied social research methods series; v.17). California: Sage Publication.
  7. Goon, A M. (2000). *Fundamental of Statistics*. Calcutta: World Press .
  8. Julie McLeod, J. & Thomson, R. (2009). *Researching Social Change: Qualitative Approaches*. London: Sage Publication.
  9. Kerlinger, Fred N & Lee, Howard B. (2010). *Foundations of Behavioural Research* (4th Ed). Bemont: Cenage Learning.
  10. Leo, E. and Rousseau, R. (2001). *Elementary Statistics for Effective Library and Information Service Management*. London: Aslib.
  11. Oliver, P. (2010). *Understanding the Research Process*. New Delhi: Sage Publication.
  12. Powell, R. R. & Connaway, L. S. (2010). *Basic Research methods for Librarians*. 5thed. Westport: Libraries Unlimited.
  13. Rudolf J. Freund, William J. Wilson, Donna L. Mohr. (2010). *Statistical methods*. London: Elsevier.
  14. Wallace, Danny P. Fleet, Connie Van. (2012). *Knowledge into action: research and evaluation in library and information science*. Libraries Unlimited.
  7. Thelwall, M. (2009). *Introduction to webometrics: Quantitative web research for the social Sciences*. Morgan and Claypool Publishers.

### Course Articulation Matrix of LIS 527 - Research Methodology

Course Outcomes	Programme Outcomes 1	Programme Outcomes 2	Programme Outcomes 3	Programme Outcomes 4	Programme Specific Outcomes 1	Programme Specific Outcomes 2	Programme Specific Outcomes 3
CO1	2	2	2	3	2	3	2
CO2	2	2	2	2	2	2	2
CO3	1	2	2	3	2	3	3
CO4	2	2	2	3	3	3	3

1. Partially Related
2. Moderately Related
3. Highly Related

**Course Name: Knowledge Management**

**Course Code: LIS 531**

**Credits: 4**

**Credits Equivalent:** 4 Credits (01 credit is equivalent to 10 hours of lectures / organized classroom activity / contact hours; 5 hours of laboratory work / practical / field work / Tutorial / teacher-led activity and 15 hours of other workload such as independent individual/ group work; obligatory/ optional work placement; literature survey/ library work; data collection/ field work; writing of papers/ projects/dissertation/thesis; seminars, etc.)

**Course Objectives:**

- To have an in-depth understanding of how knowledge is created and communicated
- To develop an awareness of value of knowledge assets
- To learn how the KM strategies can enhance organization's work performance
- To learn how advances in ICTs and various KM tools can help in more effective management of knowledge resources and services
- To understand how KM practice can be aligned with parent organization's work processes and activities

**Course Outcomes:**

After the successful completion of this course, the student will be able to:

- CO-1. Understand how knowledge is created and communicated
- CO-2. To develop an awareness of value of knowledge assets and to learn how the KM strategies can enhance organization's work performance
- CO-3. To learn how advances in ICTs and various KM tools can help in more effective management of knowledge resources and services.
- CO-4. To understand how KM practice can be aligned with organization's work processes and activities.

**Attendance requirements:**

Students are expected to attend all lectures in order to be able to fully benefit from the course. A minimum of 75% attendance is a must failing which a student may not be permitted to appear in examination.

**Evaluation Criteria:**

Total Marks: 200

- Mid Term Examination: 20%
- End Term Examination: 60%
- Counselling, Activities and Tutorials (CAT): 20%

- Assignment/Class Test/Surprise Test/Quiz: 10%
- Seminar: 10%

## **Course Content:**

### **UNIT I: Basic concepts of knowledge**

- Concepts of data, information and knowledge. What is KM? Why it is essential?
- Characteristics of knowledge resource, Generation of knowledge and knowledge process
- Types of knowledge and their relationships
- Knowledge society and knowledge economy

### **UNIT II: Learning organization and organizational learning**

- Knowledge leadership, Developing knowledge culture
- Learning and developing in a knowledge setting
- Information skills and lifelong learning
- Aligning knowledge management with organizational work processes and activities

### **UNIT III: Strategic knowledge management**

- Principles of knowledge management
- Strategies for knowledge management
- Linkages with Communities of Practice
- Achieving competitive advantage through strategic knowledge management

### **UNIT IV: Developing knowledge resources and services**

- Developing and managing knowledge repositories
- Evaluation and quality control of knowledge resources
- Developing an effective knowledge service
- Role of information technology in knowledge management
- Knowledge management tools – Intranets, Social networking and knowledge sharing, Select KM tools

## **Prescribed Text Books:**

5. Shelda Debowski, Knowledge Management, Milton, John Wiley & Sons, 2006, 368p.
6. I V Malhan & Shivarama Rao, Perspectives on Knowledge Management, Maryland, The Scarecrow Press, 2008, 454p.
7. Irma Bacerra, Avelino Gonzalez, Rajiv Sabherwal, Knowledge Management Challenges, Solutions and Technologies, Prentice Hall, 2004

## Extra Readings:

3. Carl Frappolo, Knowledge Management, Oxford: Capstone, 2002
4. Yogesh Malhotra, Knowledge Management, Hershey, Idea groups, 2000
5. Brain Lehaney, Beyond Knowledge Management, Hershey, Idea groups, 2000

Course Outcomes	Programme Outcomes 1	Programme Outcomes 2	Programme Outcomes 3	Programme Outcomes 4	Programme Specific Outcomes 1	Programme Specific Outcomes 2	Programme Specific Outcomes 3
CO1	3	2	3	3	3	2	1
CO2	3	3	3	2	3	1	1
CO3	3	3	3	2	3	1	1
CO4	3	2	3	2	3	1	1

1. Partially Related
2. Moderately Related
3. Highly Related

**Course Name:** Bibliometrics, Informetrics and Scientometrics

**Course Code:** LIS-532

**Credits:** 4

**Credits Equivalent:** 4 Credits (One credit is equivalent to 10 hours of lectures / organised Classroom activity / contact hours; 5 hours of laboratory work / practical / field work /Tutorial / teacher-led activity and 15 hours of other workload such as independent Individual/ group work; obligatory/ optional work placement; literature survey/ library Work; data collection/ field work; writing of papers/ projects/dissertation/thesis; seminars, Etc.)

## Course Objectives:

- The students will understand the basic concepts of Librametrics, Bibliometrics, Scientometrics and other important metrics used in LIS.
- The students will understand the application of different Bibliometrics laws.
- The students will also understand the latest trends the developments in the Informetrics and Scientometrics analysis.
- The students will also understand citation analysis and different Tools for citation analysis.
- The students will also understand Applications of citation analysis and their limitations.

**Course Outcomes:** After the successful completion of this course, the student will be able to

**CO<sup>1</sup>** Understand the basic concepts of Librametrics, Bibliometrics, Scientometrics and other important metrics used in LIS

**CO<sup>2</sup>** Understand the importance of Bibliometrics tools and technique in research.

**CO<sup>3</sup>** understand the application of different Bibliometrics laws.

**CO<sup>4</sup>** understand the latest trends the developments in the Informetrics and Scientometrics analysis.

### **Attendance Requirements:**

Students are expected to attend all lectures in order to be able to fully benefit from the course. A minimum of 75% attendance is a must failing which a student may not be permitted to appear in examination.

### **Evaluation Criteria:**

Mid Term Examination: 20%

End Term Examination: 60%

Counselling, Activities and Tutorials (CAT): 20%

Assignment: 10%

Library Work: 5%

Surprise Test: 5%

### **Course Contents:**

#### **UNIT – I: Origin and Development of Bibliometrical Studies (10 hours)**

- Metrics: Meaning & Definitions; Classes of Metrics: Classical Metrics,
- Neo-Classical Metrics, And Modern Metrics;
- Metric Studies in LIS: Librametrics; Bibliometrics; Scientometrics;
- Informetrics;
- Cybermetrics & Webometrics: Meaning, Definition, Key areas of
- Webometrics
- Altmetrics: Meaning, Definition, Functions, & Important Altmetrics Tools

#### **UNIT – II: Bibliometrics Laws (10 hours)**

- Lotka's law of scientific productivity,
- Bradford's law of scatter, and
- Zipf's law of word occurrence
- Other Empirical Laws & Models: Based on Bradford's Law; Based on
- Lotka's Law; Based on Zipf's Law

### **UNIT – III: Application of Bibliometrics**

**(10 hours)**

- Citations & Citation Analysis: Meaning, Definitions & Purpose
- Important areas of Citation Analysis; Applications & Limitations of
- Citation Analysis
- Citation Index: Science Citation Index; Social Science Citation Index
- Science Impact Factors: Journal Impact Factor, h-index, g-index, i-10 index

### **UNIT – IV: Trends and Developments**

**(10 hours)**

- Current trends and developments in Informetrics and Scientometrics:
- Software for bibliometric analysis with emphasis on Open-source software.
- Data Sources and Software Tools for Bibliometric Studies:
- Web of Science; Scopus; Indian Citation Index; Google Scholar

### **Prescribed Text Books:**

1. Egghe, L. and Rousseau, R. (2001). Elementary statistics for effective Library and Information services management. London: Aslib,
2. Garfield, E. (1979). Citation Indexing: Its theory and applications in science, technology and humanities. New York: John Wiley.
3. Meadows, A.J. (1974). Communication in Science. London: Butterworths.
4. Neuendorf, K. (2002). The content analysis guidebook. London: Sage.
5. Nicholas D. and Ritchi, M. (1979). Literature & bibliometrics. London: Clive Bingley.
6. Ravichandra Rao, I.K. (1985). Quantitative methods for Library and
7. Information Science. New Delhi: Wiley Eastern, 1985.
8. Thelwall, M. (2009). Introduction to webometrics: Quantitative web research for the social Sciences. Morgan and Claypool Publishers.



## Course Articulation Matrix of LIS-532- Bibliometrics, Informetrics and Scientometrics

Course Outcomes	Programme Outcomes 1	Programme Outcomes 2	Programme Outcomes 3	Programme Outcomes 4	Programme Specific Outcomes 1	Programme Specific Outcomes 2	Programme Specific Outcomes 3
CO1	3	2	2	2	2	1	1
CO2	2	2	2	1	2	2	1
CO3	2	3	3	1	2	2	2
CO4	2	3	3	1	3	2	2

1. Partially Related
2. Moderately Related
3. Highly Related