MLISc. SYLLABUS

As Per NEP: 2020

Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

CBCS: Master of Library and Information Science (MLISc)

CURRICULUM

(For Two Years)

(As per National Education Policy 2020)

CBCS MLISc. Curriculum Semester - I to IV

w. e. f. 2023-24

PREAMBLE:
The structure and Credit distribution of MLISC and Ph.D. Program and the syllabus of MLISC has been revised by the Board of Studies in Library and Information Science (Autonomous) by keeping in view of the vide **G.R. No. NEP-2020 /CR No. 09 VISHI-3 SHIKANA, dated May 16, 2023** and the recent trends in the subject of Library and Information Science. The revised structure and syllabi of MLISC Library and Information Science will be made effective **from the Academic Year 2023-24**. A broad overview of the structure and other details of the course is givenbelow.

DURATION:
The MLISC Library and Information Science shall be a full time Two Year (across Four Semester) PG Programme with Exit Option after successfully completion of one year /two semester and One Year P.G. Programme for four year/ eight semesters U.G. students.

MLISC Part I: SEMESTER – I,comprising of Two mandatory, one RM, one elective course and three practical.
MLISC Part I: SEMESTER –II,comprising of Two mandatory, one OJT/FP, one elective course andthree practical.
MLISC Part II: SEMESTER – III, comprising of Two mandatory, one RP, one elective course and Two pracical.
MLISC Part II: SEMESTER –IV comprising of Three mandatory, one RP and one elective course.

TOTAL CREDITS & ITS DISTRIBUTION:

A student enrolled for Two Year MLISC Degree Program should acquire a total of 88 credits after completion of four semesters. And, One Year MLISC Degree Program should acquire a total of 44 credits after completion of Two semesters for four year U.G. Students. Also one exit option with one year/ two semester P.G. Diploma Program should acquire a total of 44 credits.

TYPE OF COURSE	**SEM-1**	**SEM-2**	**SEM-3**	**SEM-4**
Mandatory	2 Courses x 4 credit =**8**	2 Courses x 4 credit =**8**	2 Courses x 4 credit = **8**	3 Courses x 4 credit = **12** -
Elective	1 Course x 4 credit = **4**	1 Course x 4 credit = **4**	1 Course x 4 credit = **4**	1 Course x 4 credit = **4**
RM	1 Course x 4 credit = **4**	-	-	-
Practical	3 Practical x 2 credit = **6**	3 Practical x 2 credit = **6**	2 Practical = **4+2 credit =6** credit	
OJT/FP	-	1 course = 4 credit = **4**		
Research Project (RP)	-	-	RP -1 x 4 credit = **4**	RP-1x6 credit = **6**
Total credit	**22**	**22**	**22**	**22**
Exit option: PG Diploma (44 Credits) after Three Year UG Degree			**For One Year P.G. Degree (after Four Year UG Degree) Total 44 credits**	
For Two year P.G. Degree Total 88 credits				

Program Outcomes

Name of Program: **Master of Library and Information Science**

No. of Courses:**25**

Targeted Graduate Attributes: Disciplinary Knowledge, Critical Thinking, Problem Solving, Analytical Reasoning, Communication Skills, Teamwork, Moral and Ethical Awareness

	Program Outcomes
P01	The student will be able to develop an aptitude to manifest wide and expensive knowledge in the field of library and information science.
P02	The student will be able to apply the knowledge, skills and values that are fundamental to professional competence in the field of Library and information services and research.
P03	The student will be able to think critically and analytically for solving various problems pertaining to the management of Library and information centres.
P04	The student will be able to locate, organized, understand, evaluate and analyze information using modern and digital technology.
P05	The student will be able to express thoughts and ideas effectively in writing and orally, communicates with others using appropriate media, confidently share one's views and express herself/himself.
P06	The student will be able to work effectively and respectfully with diverse teams, facilitate cooperative and coordinated work culture.
P07	The student will be able to embrace moral and ethical values in all the work and avoid unethical behavior such as fabrication, falsification or misrepresentation of data or committing plagiarism and will be able to understand and follows intellectual property rights.

ProgramSpecificOutcomes (PSOs)

On completing Master of Library and Information Science Programme, students shall be able to realize following outcomes:

PSO-1: Demonstrate knowledge of the information profession by relating foundational principles,philosophy,and ethics to contemporary issues,by identifying key, on-going interdisciplinary developments in the field, and by analysing current practices for future implications of the profession.

PSO-2: Create, select, acquire, manage, and maintain the information environment by analyzing how users seek out information.

PSO-3: Demonstrate and be able to explain the principles of organizing recorded information by exploring both past and present theories of organizing and representing recorded information and by understanding and applying the standards of organizing recorded information in libraries and information centres.

PSO-4: Identify, explain, use and critically evaluate both current and emerging information technologies in libraries and information centres.

PSO-5 :Provide information services to adiverse community by analysing, synthesizing, and disseminating traditional and emerging information resources, by developing communication and interpersonal skills for determining the information needs of all users, by creatively utilizing techniques and tools to address information needs, and by advocating for underserved audiences.

PSO-6: Demonstrate an understanding of research by identifying the fundamental characteristics of quantitative and qualitative research and by analyzing the value of research literature in the library and information field.

PSO-7: Develop a commitment to continuous learning by participating in local, regional, and national professional development opportunities.

PSO-8: Use Indian knowledge and principles to analyze and evaluate ideas and theories in modern disciplines.

Post-graduateAttribute:

The learner of M.Lib.&Inf.Sc. Programme should have the following attributes:

(a) ***Disciplinary knowledge***: Capable of demonstrating comprehensive knowledge and understanding of major concepts, principles, theories and laws of various subjects in Library and Information Science and other related fields of study, including broader interdisciplinary subfields such as Management, Economics, Information and Communication Technologies, Indology, Statistics, Journalism and Mass Communication, Printing and Packaging, etc.

(b) ***Professional and Managerial skills:*** Ability to classify simple, compound and

complex documents using standard classification schemes; capability to catalogue all types of documents using standard catalogue codes and metadata standards; ability to create database of records and search information from OPAC, Internet and electronic databases; ability to carry out housekeeping operations and to provide library and information services by using information and communication technologies and addressing managerial challenges,

(c) ***Skilled communicator:*** Ability to communicate effectively in oral and written forms with users, colleagues and authorities in an effective manner. Further ability to create information products such as announcements, information leaflets, bibliographies, e-publications.

(d) ***Critical thinker :***Capability to critically analyze subjects of documents to classify them properly and to derive subject headings for subject cataloguing, indexing purposes and ability to think critically for solving various problems pertaining to the management of Libraries and Information Centers. Further, abilities to judge for the use of ICT support for effective and efficient management of information and sources, resources.

(e) ***Problem solver:*** Apply problem solving skills while providing support services for teaching, learning and research and for formulating appropriate strategies to use technologies, databases, platforms, resources. The acquired knowledge and skill would be tested through support to the activities of the School of Biological and Applied Sciences.

(f) ***Team player/worker:*** Capable of working effectively in diverse teams in classrooms, in computer laboratory, in finding technological solutions, resource-based activities and in Libraries and Information Centers.

(g) ***Digitally literate:*** Capable of using digital technology for communication purpose, for library housekeeping operations, and for searching information from OPAC, Internet and online databases and e-resources. Further, ability to work comfortably with the Learning Management System, Content Management System, Digital Library software, and explore possibilities of applying technologies associated with Internet of Things, Artificial Intelligence and Big data for finding ways to improve services.

(h) ***Moral and Ethical Values:*** Capable of demonstrating the ability to understand professional ethics along with moral values based on the Indian ethos. Also well versed with the issue related with Intellectual Property Rights, copyright, open access, etc. while providing library services.

(i) ***Life long learners:*** Capable of self-paced and self-directed learning aimed at personal development; for improving knowledge and skills and for re-skilling through continuing educational opportunities. Further, capable of providing support to individuals, institutions and the societal groups towards attaining objectives of lifelong learning.

Teaching Learning Process

The M.Lib.I.Sc. Programme is designed to encourage the acquisition of disciplinary knowledge, understanding, skills, attitudes and ethical values required for library and information-based professions and jobs. Keeping this in mind the teaching learning experiences should be designed and implemented to enable active/participative learning of the students. Librarianship being a practice-oriented service profession, development of practical skills constitutes an important aspect of the Programme'steaching-learning process. In order to provide knowledge, develop understanding and impart required skills in the students, a variety of teaching learning approaches would be adopted. These include

- Expert Lectures from eminent LIS Professionals
- Seminars, Discussions and debates
- Brainstorming sessions
- Case studies
- Demonstrations
- Practical
- Tutorials
- Group/ Peer teaching and learning
- Project-based learning
- Field-based learning
- Open-ended project work

- Quiz and games
- Technology-enabled learning, etc.

Teaching-learning process suitable to impart problem solving, reasoning and analytical skills may also be adopted. Internship and/or industrial training in school, college, university, research, corporate libraries and other information organizations will be a value adding teaching-learning opportunity. Modes of study are flexible, being offered on both, the student's traditional face-to-face experience is enriched with the support of e-learning portal'.

Blended Learning

Blended learning is a combination of face-to-face and online learning in a way that the one compliments the other. It provides individuals with the opportunity to enjoy the best of both worlds. For example, a student might attend classes in a real-world classroom setting and then supplement the lesson plan, activities, resource-based learning can take place online.

Scheme of teaching and examination for MLISc
(LIBRARY AND INFORMATION SCIENCE)(CBCS) As per NEP 2020
Structure and Credit Distribution of PG Degree Program for Two years
Choice Based Credit System (Semester Pattern)
Effective from 2023-2024

MLIScSemester I												
Code	Theory / Practical	Teaching scheme (Hours / Week)			Credits	Examination Scheme						
						Duration in hrs.	Max. Marks		Total Marks	Minimum Passing Marks		
		Theory	Practical	Total			External Marks	Internal Assessment		Theory	Practical	
MLI 1T1	Foundation of Library and Information Science	4		4	4	3	60	40	100	50	-	
MLI 1T2	Knowledge Organization	4		4	4	3	60	40	100	50	-	
MLI 1T3	Research Methodology	4		4	4	3	60	40	100	50	-	
Electives MLI1T4	**Elective Papers** **(Any One)**	4		4	4	3	60	40	100	50	-	
MLI1T4E1	Information Sources and Services	---		---								
MLI1T4E2	E-Resource Management	---		---								
MLI1T4E3	Any One Course of Library Science or allied subject from MOOC having 4 Credits	---		---								
Practical												
MLI 1L1	Classification Practice (Part-I)Batch 1 & Batch 2		8	8	2	2-4*	50	---	50		25	
MLI 1L2	Cataloguing Practice (Part-I)Batch 1 & Batch 2		8	8	2	2-4*	50	---	50		25	
MLI 1L3	Information Sources Batch 1 & Batch 2		8	8	2	2-4*	50	---	50		25	
Total		**16**	**24**	**40**	**22**	**----**	**390**	**160**	**550**	**200**	**75**	

MLISc Semester II												
Code	Theory / Practical	Teaching scheme (Hours / Week)			Credits	Examination Scheme						
		Theory	Practical	Total		Duration in hrs.	Max. Marks		Total Marks	Minimum Passing Marks	
							External Marks	Internal Assessment		Theory	Practical
MLI 2T1	Management of Libraries and Information Centres	4		4	4	3	60	40	100	50	-
MLI 2T2	Applications of ICT in Libraries & Information Centres	4		4	4	3	60	40	100	50	-
Electives MLI2T3	**Elective Papers (Any One)**	4		4	4	3	60	40	100	50	-
MLI2T3E1	Information & Communication	---		---							
MLI2T3E2	Information Analysis, Repackaging and Consolidation	----		-----							
MLI2T3E3	Any One Course of Library Science or allied subject from MOOC having 4 Credits	**---**		**---**							
Practical											
MLI 2L1	Classification Practice (Part- II)Batch 1 & Batch 2		8	8	2	2-4*	50	---	50		25
MLI 2L2	Cataloguing Practice (Part-II)Batch 1 & Batch 2		8	8	2	2-4*	50	---	50		25
MLI 2L3	Information Technology Application Batch 1 & Batch 2		8	8	2	2-4*	50	---	50		25
MLI 2L4	Internship (On Job Training)/Field Work				04	--	60	40	100		50
Total		**12**	**24**	**36**	**22**	**28**	**390**	**160**	**550**	**150**	**125**

- **Note:** Internship/On Job Training will be for 30 working days in any Library and Information centres.

MLISc Semester III											
Code	Theory / Practical	Teaching scheme (Hours / Week)			Credits	Examination Scheme					
						Duration in hrs.	Max. Marks		Total Marks	Minimum Passing Marks	
		Theory	Practical	Total			External Marks	Internal Ass		Theory	Practical
MLI 3T1	Information Storage, Retrieval and Bibliographical Control	4		4	4	3	60	40	100	50	
MLI 3T2	Modern Libraries	4		4	4	3	60	40	100	50	
ElectivesMLI 3T3	**Any one of the following**	4		4	4	3	60	40	100	50	
MLI 3T3E1	Agricultural Information System	----		----							
MLI 3T3E2	Legal Information System	----		---							
MLI 3T3E3	Industrial Information System	-----		---							
MLI 3T3E4	Any One Course of Library Science or allied subject from MOOC having 4 Credits	-----		**----**							
Practical											
MLI 3L1	IT Applications to Libraries		8	8	4	2-4*	50	50	100		50
MLI 3L2	Research Project		8	8	4	3	50	50	100		50
MLI 3L3	Soft skills for Library Professionals		4	4	2	2-4*	25	25	50		25
Total		**12**	**20**	**32**	**22**	**--**	**305**	**245**	**550**	**150**	**125**

MLISc Semester IV											
Code	**Theory / Practical**	**Teaching scheme (Hours / Week)**			**Credits**	**Examination Scheme**					
						Duration in hrs.	**Max. Marks**		**Total Marks**	**Minimum Passing Marks**	
		Theory	**Practical**	**Total**			**External Marks**	**Internal Ass**		**Theory**	**Practical**
MLI 4T1	System Analysis and Bibliometrics	4		4	4	3	60	40	100	50	
MLI 4T2	Emerging Trends in Library and Information Centres	4		4	4	3	60	40	100	50	
MLI 4T3	Intellectual Property Rights	4		4	4	3	60	40	100	50	
ElectivesMLI4T4	**Any one of the following**	4		4	4	3	60	40	100	50	
MLI 4T4E1	Archival, Museum and Archaeological Information System	----		----							
MLI 4T4E2	Biotechnology Information System	----		---							
MLI 4T4E3	Engineering and Technological Library and Information System	-----		---							
MLI 4T4E4	Any One Course of Library Science or allied subject from MOOC having 4 Credits	-----		**----**							
Practical											
MLI 4L1	Research Project		12	12	6	3	100	50	150		75
Total		**16**	**12**	**28**	**22**	**---**	**340**	**210**	**550**	**200**	**75**

Program Matrix

Name of Program:**Master of Library and Information Science (CBCS)**

(Low Correlation = L/1; Moderate Correlation = M/2; High Correlation = H/3

Course Outcomes (COs)		Program Outcomes (POs)						
	MLISc Semester- I (CBCS)	1	2	3	4	5	6	7
	Course Name: **Foundation of Library and Information Science**							
C01	The student will understand the purpose, role and importance of libraries in society, various types of libraries, their nature, objectives and service.	H	H	M	L	L	M	L
C02	The student will be able to apply the fundamental knowledge and laws of Library Science in practical work.	H	H	H	L	L	M	L
C03	The student will be able to analyze the library scenario in general and the Indian scenario in particular and to excel into the profession and society.	H	H	M	H	M	M	L
C04	The student will be able to evaluate the current scenario and modern trends in Library and Information Science.	H	M	M	H	M	M	L
	Course Name: **Knowledge Organization**							
C01	The student will be able to understand the role of cataloguing in retrieving library material and the need for standardization in cataloguing.	H	H	M	M	L	L	L
C02	The student will be able to remember the fundamentals of cataloguing and catalogue construction.	H	H	M	M	L	L	L
C03	The student will be able to analyse and evaluate the role of library classification in knowledge organization.	H	H	M	M	L	L	L

C04	The student will be able to apply the knowledge organization in the internet era.	H	H	M	H	M	L	M
	Course Name: **Research Methodology**							
C01	The student will be able to understand the value of research in Library and information Science.	H	H	M	M	M	M	H
C02	The student will be able to undertake supervise research, including the design and conduct of investigations in a systematic, critical manner.	H	H	H	M	M	M	H
C03	The student will be able to evaluate the qualitative and quantitative aspects of research and develop the skills of interpretation.	H	H	H	M	M	M	M
C04	The student will be able to develop the intensive search, investigation and critical analysis, usually in response to a specific research question or hypothesis.	H	H	M	L	M	M	M
	Course Name: **Information Sources and Services**							
C01	The student will be able to understand the basic concept of reference and information service and its organization.	H	H	M	M	M	L	M
C02	The student will be able to provide various reference and information services to the users effectively.	H	H	H	M	M	M	L
C03	The student will be able to analyze the categories of reference and information sources with examples	H	H	M	M	M	L	L
C04	The student will be able to inculcate the skills of critical evaluation of reference sources.	H	H	M	M	L	L	L

	Course Name: **E- Resource Management**							
C01	Students can learn about selection, licensing, and evaluation of electronic resources.	H	H	M	M	M	L	M
C02	Students can critically examine the laws and policies that made an impact on electronic resource management.	H	H	H	M	M	M	L
C03	Students can understand the critical technologies and standards behind electronic resource management	H	H	M	M	M	L	L
C04	Student can gain the knowledge of current trends in e-resource management	H	H	M	M	L	L	L
	MLISc Semester- II (CBCS)							
	Course Name: **Management of Libraries and Information Centres**							
C01	The students will be able to understand the principles of Library administration and management	H	H	H	M	M	H	H
C02	The students will be able to provide quality services to the stakeholders.	H	H	H	H	M	M	M
C03	The students will be able to analyse and apply modern management techniques in libraries and information centers.	H	H	H	H	M	M	M
C04	The students will be able to apply the concepts of planning, marketing, Human Resource Development and control- both budgetary and non-budgetary in libraries and information centres and know the monitor and evaluate library performance	H	H	H	M	M	H	M

	Course Name: **Applications of ICT in Libraries & Information Centres**							
C01	The students will be able to understand the fundamentals of Computer, its hardware, software	M	H	L	H	L	L	L
C02	The students will be able to analyze the applications of Computers and Information Technology in libraries	H	H	H	H	L	M	L
C03	The students will be able to design automated system in libraries and information centers.	H	H	H	H	L	M	L
C04	The student will be able to apply emerging ICT technologies in various domains of management of libraries and information centres.	H	H	H	H	L	M	L
	Course Name: **Information and Communication**							
C01	The student will be able to understand the role of library in the communication process	H	H	M	M	H	M	L
C02	The student will be able to understand the concept of information society and its implications	H	H	M	M	H	M	L
C03	The student will be able to analyze the role of professional library associations	H	M	M	L	H	H	M
C04	The student will be able to evaluate the modern trends in Library and Information Science	H	H	H	H	M	M	M
	Course Name: **Information Analysis, Repackaging and Consolidation**							
C01	The student will be able to understand the concepts of Information analysis, Consolidation and repackaging.	H	H	M	M	L	M	L
C02	The student will be able to evaluate the information consolidation products.	H	H	M	M	M	M	M

C03	The student will be able to design need based information consolidation products for the stakeholders.	H	H	M	H	H	M	M
C04	The student will be able to analyze the trends at national and international level agencies.	H	H	M	M	M	M	M
	MLISc Semester- III (CBCS)							
	Course Name: **Information Storage, Retrieval and Bibliographical Control**							
C01	The student will be able to understand the different methods of processing information	H	H	H	H	L	L	L
C02	The student will be able to analyze the information centres at national and international level	H	H	H	H	L	L	L
C03	The student will be able to understand and apply various Indexing models and control devices	H	H	H	M	L	L	L
C04	The student will be able to understand and apply the concept of Bibliographic Control and its implications at national and international level.	H	H	H	M	L	M	L
	Course Name: **Modern Libraries**							
C01	The student will be able to understand the elements of Information and Communication Technology.	M	M	M	H	M	M	L
C02	The student will be able to implement ICT skills in Libraries and Information Centres.	H	H	H	H	M	M	M
C03	The student will be able to create the ability to design automated systems in Libraries.	H	H	H	H	M	M	M
C04	The student will be able to apply emerging ICT technologies in various domains of management of libraries and information centres.	H	H	H	H	M	M	M

	Course Name: **Agricultural Information System**							
C01	The student will be able to understand the purpose, role and importance of Agricultural libraries	H	H	H	M	L	M	L
C02	The student will be able to analyze the library scenario in general and in Indian scenario in particular of Agricultural libraries	H	H	H	M	L	M	L
C03	The student will be able to fulfill the special information needs of Agricultural stakeholders.	H	H	M	M	M	M	L
C04	The student will be able to develop managerial skills for effective and efficient management of agricultural libraries and information centres.	H	H	H	M	M	H	M
	Course Name: **Legal Information System**							
C01	The student will be able to understand the purpose, role and importance of Law libraries	H	H	H	M	L	M	L
C02	The student will be able to analyze the library scenario in general and in Indian scenario in particular of Law libraries	H	H	H	M	L	M	L
C03	The student will be able to fulfill the special information needs of stakeholders of law libraries and Legal Information Centers.	H	H	H	M	M	M	L
C04	The student will be able to develop managerial skills for effective and efficient management of law libraries and information centres.	H	H	H	M	M	H	L
	Course Name: **Industrial Information System**							
C01	The student will be able to understand the purpose, role and importance of industrial libraries and information centres	H	H	H	M	L	M	L
C02	The student will be able to analyze the library scenario in general and in Indian scenario in particular of Industrial libraries	H	H	H	M	L	M	L

C03	The student will be able to fulfill the special information needs of stakeholders of industrial libraries and Information Centers.	H	H	H	M	M	M	L
C04	The student will be able to develop managerial skills for effective and efficient management of industrial libraries and information centres.	H	H	H	M	M	H	L
	MLISc Semester-IV (CBCS)							
	Course Name: **System Analysis and Bibliometrics**							
C01	The student will be able to understand the value of library systems in Library and information Science.	H	H	M	M	L	M	L
C02	The student will be able to remember the process of System Analysis, System Design and Development.	H	H	M	M	L	M	M
C03	The student will be able to apply system development life cycle to the existing library system.	H	H	H	M	M	M	M
C04	The student will be able to create the ability of designing effective and efficient systems and evaluating to redesign the systems.	H	H	H	H	M	H	M
	Course Name:**Emerging Trends in Library & Information Centres**							
C01	The student will be able to understand the concepts of modern libraries in context to implementation of sophisticated web based tools and techniques to the library projects	H	H	H	H	M	M	H
C02	The student will be able to design and manage digital libraries	H	H	H	H	M	M	H
C03	The student will be able to evaluate the digital libraries in context to digital copyright.	H	H	H	H	M	M	H
C04	The student will be able to analyze various library initiatives at national and international level	H	H	H	H	M	M	M

	Course Name: **Intellectual Property Rights**							
C01	The student will be able to understand the Fundamentals of Intellectual Property Rights.	H	H	H	H	M	M	H
C02	The student will be able to analyze the facets of industrial property i.e. Patents, Industrial Designs, Trademark and Geographical Indications.	H	H	H	H	M	M	H
C03	The student will be able to remember the concept of Copyright and application of the concept of Plagiarism in practical.	H	H	M	M	H	M	H
C04	The student will be able to evaluate and formulate the search strategy for information retrieval through online IPR databases.	H	H	M	M	H	M	M
	Course Name: **Archrival, Museum and Archeological Information System**							
C01	The student will be able to understand the purpose, role and importance of Archrivals, Museums and Archeological Information System	H	H	H	M	L	M	L
C02	The student will be able to analyze the library scenario in general and in Indian scenario in particular of Archival, Museums and Archeological Information System	H	H	H	M	L	M	L
C03	The student will be able to fulfill the special information needs of stakeholders of Archrivals, Museums and Archeological Information System	H	H	M	M	M	M	L
C04	The student will be able to develop managerial skills for effective and efficient management of Archrivals, Museums and Archeological Information System	H	H	H	M	M	H	M

	Course Name: **Biotechnology Information System**							
C01	The student will be able to understand the purpose, role and importance of Biotechnology Information System	H	H	H	M	L	M	L
C02	The student will be able to analyze the library scenario in general and in Indian scenario in particular of Biotechnology Information System	H	H	H	M	L	M	L
C03	The student will be able to fulfill the special information needs of stakeholders of Biotechnology Information System	H	H	M	M	M	M	L
C04	The student will be able to develop managerial skills for effective and efficient management of Biotechnology Information System	H	H	H	M	M	H	M
	Course Name: **Engineering and Technological Library and Information System**							
C01	The student will be able to understand the purpose, role and importance of Engineering and Technological Library and Information System	H	H	H	M	L	M	L
C02	The student will be able to analyze the library scenario in general and in Indian scenario in particular of Engineering and Technological Library and Information System	H	H	H	M	L	M	L
C03	The student will be able to fulfill the special information needs of stakeholders of Engineering and Technological Library and Information System	H	H	M	M	M	M	L
C04	The student will be able to develop managerial skills for effective and efficient management of Engineering and Technological Library and Information System	H	H	H	M	M	H	M

MASTER OF LIBRARY AND INFORMATION SCIENCE (CBCS)
SEMESTER- I

MLI 1T1
Major

FOUNDATIONS OF LIBRARY AND INFORMATION SCIENCE

Learning Outcomes:

1. Understanding the purpose, role and importance of libraries in society, various types of libraries, their nature, objectives and services.
2. Analyzing the library scenario in general and the Indian scenario in particular and to excel into the profession and society.
3. To create the ability to evaluate the current scenario and modern trends in Library and Information Science.

Unit-I : Types of Libraries

- Library as a Social Institution
- History of Libraries-Origin, Development with special reference to India
- Types of Libraries: Academic Libraries: School, College and University Libraries
- Public Libraries, National Library, Calcutta: Concept, Functions and Services
- Special Libraries and Information Centers: State Central Libraries in Maharashtra

Unit-II : Laws & Services

- Five Laws of Library Science by S. R. Ranganathan and its implication to Library and Information Science
- Public Relation and Publicity
- Extension Activities and Outreach Services
- Promotional and Consultancy Services

Unit-III : Acts, Committees & Commissions

- Library Legislation in India
- Salient Features of Maharashtra Public Library Act 1967
- The Press and Registration Act, Delivery of Books and News Papers (Public Libraries) Act
- Role of Union and State Governments (Committees & Commissions on Libraries, UGC, RRRLF etc.)
- National Information Policy, India

Unit-IV : Professionalism & Associations

- Library Movement with Special Reference of India
- Librarianship as a Profession
- Attributes, Ethics of a Profession
- Philosophy of Librarianship
- Professional Associations: National (ILA, IATLIS, IASLIC) and International (IFLA, ALA, LA)

Recommended Books for Study

1. Chakraaborty, N.C. Library Movement in India. Delhi, Hindustan.1962.
2. Khanna, J. K. Library and Society. Kurukshetra Research Publication. 1987.
3. Krishna Kumar. Public Library Stem in India. Indian Book Industry 21st 1992.
4. Kumar PSG. Indian Library Chronology,Ed.2. Bombay, Allied Publishers. 2000.
5. Kumar, PSG. Fundamentals of Information Science. Delhi, S. Chand. 1997.
6. Mittal, R.L. Library Administration. Delhi, Metropolita. 1964
7. Nalhe, Umaji. Working and Finance of Aided Public Libraries. ISBN-978-93-82664-38-3;Satyam Publishers & Distributors, Jaipur. (Rajasthan). 2015.
8. Ranganathan S. R.New Education and School Library. Ed.2. Delhi, Vikas.1973.
9. Ranganathan, S.R. Five Laws of Library Science. Madras LibraryAssociation. 1957.
10. Sharma, O.P. History of the Development of University Libraries in India: an appraisal. Indian Librarian. Dec.1964.
11. Sharma, Pandey S. K. Library and Society. Ed. 2 ND. Ess Ess . 1992
12. Subramoni (TS) Public Relations in Libraries (IASLIC Bulletin v31;1986.
13. The National Library (Calcutta). Brochure,1992.
14. Vashisth, C.P. University Libraries in India: a review. Library Herald V 19: 1980.
15. Vyas, S.D. Library and Society. Jaipur. Panchasheel. 1993.

MASTER OF LIBRARY AND INFORMATION SCIENCE (CBCS)
SEMESTER-I

MLI 1T2
Major

KNOWLEDGE ORGANISATION

Learning Outcomes:

1. Creating the role of library classification in knowledge organization.
2. To create the ability to apply the knowledge organization in the internet era.
3. Understanding the role of cataloguing in retrieving library material and the need for standardization in cataloguing.
4. To remember the fundamentals of cataloguing and catalogue construction.

Unit-I: Universe of Knowledge and Library Classification

- Knowledge: Concept, Definition, Types
- Universe of Subject: Structure, Attributes and Mode of Formation
- Library Classification: Concept, Definition, Need and Purpose
- Knowledge Classification Vs Book Classification

Unit-II: Classification: Foundation And Trends

- Basic Concepts and Terminology
- Canons for three Planes: Idea, Verbal, Notation.
- Schemes of Classification: CC, DDC, UDC, LC.
- Modern Trends in Classification: CRG, BSO, Web Dewey

Unit-III: Cataloguing Foundation

- Cataloguing: Concept, Need, Purpose
- Cataloguing Code & Standard: AACR-II
- Canons of Cataloguing
- Types of Entries: Main, Added, Reference, Cross Reference
- Parts of Book

Unit-IV: Standards of Bibliographic Record & Communication

- Cataloguing of Non Book Material: Traditional & Electronic
- OPAC, Web OPAC, CCF
- RDA, FRBR, Bibframe
- Standards for Bibliographic Information Interchange: ISO 2709, Z39.50, Z39.71

Recommended Books for Study

1. American Library Association Anglo American Cataloguing Rules 1967, North American Text, Chicago:A.L.A., 1967.
2. Bavakutty, M.Conons of Library Classification, Trivandrum: Kerala Library Associations, 1981.
3. Campbell, M. Cataloguing of Non Book Material, U.S.A: University Microfilms, 1965.
4. Chakraborty, A.K. Bibliography: theory and practice, Calcutta; World Press, 1987.

5. Coates, E.J. Subject Catalogue Heading and Structure, London: Library Association, 1961.
6. Dhyani, P. Library Classification, Theory and Principles New Delhi: Vishva Prakashan, 1998.
7. Girija Kumar and Krishan Kumar. Bibliography, New Delhi: Vikas Publications, 1990.
8. Girija Kumar and Krishan Kumar. Cataloguing, New Delhi: Vikas Publications, 1986.
9. Hingve, K.S. Granthalaya Vergikaran, Pune: Suvichar Prakashan, 1974.
10. Horner, J. Cataloguing, London: Association of Assistant Librarian, 1970.
11. Husain, S. Library Classification: Facets and Analysis, New Delhi: Tat McGraw Hill, 1993.
12. Khanna, J.K.Handbook of Library Classification System, New Delhi: Beacon Books, 1997.
13. Krishan Kumar, Theory of Classification, 5th ed. New Delhi: Vikas Publication, 1996.
14. Kumar P.S.G. and Mohammad , Riaz. Cataloguing, New Delhi: Vikas Publications,m 1986.
15. Kumar, P.S.G. Knowledge Organisation, Information Processing and Retrieval. New Delhi. B.R.Publishing House, 2003.
16. Kumar, P.S.G. Practical Guide to DDC 20. Nagpur, Dattasons, 1990.
17. Kumar, P.S.G., Knowledge organization, information processing and Retrieval: Practical paper 3 of UGC Model curriculum. B.R. Publication, New Delhi, 2003.
18. Lihitkar, Shalini, R. and Veranjanallu. Cataloguing: Theory and Practice. B.S. Publication, 2012.Hyderabad.
19. Mahajan, S.G.Granthalayan Talikikaran Prathyakshika. Vol. 1, Pune: Maharashtra Vidyapith Granth Nivedhi Mandal, 1974.
20. Marcella, R.A. New Manual of Classification, Delhi: Jaico Publications, 1997.
21. Pande, S.K.Sharma. POusthakalaya Siddantha. Delhi: Satisahitya Prakashan.
22. Rajyalakshmi, D. Impact of Ranganathan on AACR. Datison Publication, 2004. New Delhi.
23. Ranganathan, S.R. Classification and Communication, Bangalore: Sarada Ranganathan Endowment for Library Science, 1989.
24. Ranganathan, S.R. Classified Catalogue Code, 5th ed. Bombay: Asia Publication House, 1964.
25. Sajita, M.P. Manual of Practical Colon Classification, New Delhi: Sterling Publishers, 1984.
26. Satija, M.P. DDC-20th Edi: Practice.
27. Satija, M.P. Theory and Practice of Subject Headings: The Sears List. Today and Tomorrow's Printers and Publishers, New Delhi, 2011.
28. Satijia, M.P. and Goswami, J.P. Exercises in the 21st edition of DDC, New Delhi: Sterling Pub.Pvt. Ltd, 1998.
29. Sengupta, B,K. Cataloguing: Its Theory and Practice, 3rd ed., Calcutta: Work Press, 1974.
30. Shera, J.H. Classified Catalogue Basic Principles of Practice, Chicago: A.L.A., 1956.
31. Tripathi, S.M. and Showkeen, N.S. Prasuchirkaran Siddantatha Multalva. Agra: .K.Publishers, 1997.
32. Tripathi, S.M. Modern Cataloguing theory and practice, Agra: Shivlal Agrawal, 1969.
33. Vishwanathan, C.G. Cataloguing: Theory and Practice, 6th ed., New Delhi: Today and Tomorrow, 1970.

MASTER OF LIBRARY AND INFORMATION SCIENCE (CBCS)
SEMESTER-I

MLI 1T3
Mandatory

RESEARCH METHODOLOGY

Learning Outcomes:

1. Understanding the value of research in Library and information Science.
2. Applying the process of research in Library and Information Science.
3. Evaluating the qualitative and quantitative aspects of research and to interpret and infer based on data/information.

Unit-I: Introduction to Research

- Concept, Meaning, Need and purpose of Research, Motivation and objectives of research.
- Types of Research: Basic and Applied Research
- Ethics in Research: Areas of Research in LIS,Role of research in the development of scholarship.

Unit-II: Research Methods and Design

- Planning of research- The planning process, review of literature
- Selection of a problem for research-mode of selection, sources of problem, process of identification, criteria of selection.
- Hypothesis- Meaning, types, sources, functions, conceptualization and operationalization
- Designing research proposal
- Literature Search-Print, non-print and electronic sources
- Research methods- Scientific method, historical method, descriptive, survey and case study method.

Unit-III: Research Tools and Statistical Techniques

- Questionnaire, schedule, Interview, Observation, Library records etc. Primary and secondary data
- Sampling techniques, sample design, sample size, criteria of selecting sample.
- Statistical analysis of data- Mean, Median and Mode, Measures of central tendency.
- Presentation of Data-Tabular, Graphic, Bar diagram, Pie chart etc.
- Statistical Packages- SPSS, Web based tools etc.

Unit-IV: Research Report Writing

- Organisation of report, structure, style, contents, Guidelines of research reports.
- Style Manual-Chicago. MCA,, APA, .e-citations etc
- Current Trends in LIS research
- Role of computer in Research.

Recommended Books for Study

1. Gorman, G.E. and Clayton, P. Qualitative Research for Information Professionals: A Practical Hand Book.
1. Goswami, M. Research Methodology in Library Science. New Delhi. Common Wealth Publications, 1995.
2. Kothari, C.R. Research Methodology: Methods and Techniques: New Delhi. Weily Eastern Limited, 1985.
3. Krishan Kumar. Research Methods in Library and Information Science. New Delhi. Har Anand Publications, 1999.
4. Kumar, P.S.G. A Student's Manual of Library and Information Science. New Delhi. B.R.Publishing House, 2002.
5. Nikose, S.M. Granthalaya Aani Mahitishatra Sanshodhan Padhati, Pradnya Publication, Nagpur 2007.
6. Ravichandra Rao I.K. Quantitative Methods for Library and Information Science. New Delhi.Wiley Eastern Limited, 1983.
7. Wilkinson, T.S. and Bhandarkar, P.L. Methodology and Techniques of Social Research. Bombay. Himalaya Publishing House. 1984.

MASTER OF LIBRARY AND INFORMATION SCIENCE (CBCS)
SEMESTER-I

MLI 1T4

Elective Papers (Choose Any One)

INFORMATION SOURCES AND SERVICES

(Elective-1)

Learning Outcomes:

1. To understand the basic concept of reference and information service and its organization.
2. To analyse the categories of reference and information sources with examples.
3. To inculcate the skills of critical evaluation of reference sources.

Unit-I:Information Sources

- Need for Information Sources in Library.
- Sources of Information: Documentary and Non Documentary Information Sources/ Electronic Information Sources.
- Nature, Characteristics of Printed and Electronic Reference books and Criteria for Evaluation of Printed and Electronic Reference Books.

Unit-II:Reference Services, User Studies and User Education

- Definition, Need, Nature and scope of Reference Service (Manual and Electronic).
- Types of Reference Service: Ready and long Range Reference Services, Anticipatory, Responsive Service and Electronic Reference Service.
- Steps in Reference Services**,** Reference Services in Public, Academic and Special Libraries
- Organisation of Reference Department.
- Types of Users, User studies: Purpose and Techniques.
- User education: Objective and Techniques.

Unit-III:Information Services

- Information Services: Definition, Concept, Need and Current Trends.
- Types of Abstracts: International and National Abstracting Services.
- Index: Meaning, Types and its use, International and National Indexing services.
- Alerting (CAS and SDI), Bibliographical, Referral, Electronic Document delivery Service and Translation Services.
- Internet as a source of information in Library Services.

Unit-IV:Trends in Reference and information Services & Information Centers/ System

- Impact of IT on Reference and Information Services
- Databases, E-books and Journals
- Digital and Virtual Reference Service
- Alerting Services
- Information Services through Web 2.0/Web 3.0

Recommended Books for Study

1. Bhat, S.G, Pralekhan Parichaya, Nagpur: Maharashtra Rajya Granth Mirmiti Manda, 1977.
2. Bose, H.C. Information Science, Principles and Practices, 2nd ed. Delhi: Sterling, 1993.
3. Chaturvedi, D. Sandarbha Seva Ke Vividha Ayam, Mumbai: Himalaya Publishing house, 1993.
4. Foskett, D.J. Information Service in Libraries, New Delhi: Anmol Publications, 1994
5. Guha, B. Documentation and Information, 2nd ed. Calcutta: World Press, 1983.
6. Katz W.A. Introduction to Reference work. Vol. I and II, 6th Ed. New Delhi: Vikas Pub. House, 1992.
7. Krishna Kumar Reference Service, 5th edition, New Delhi: Vikas Pub. House, 1996.
8. Kumar, P.S.G. Information Sources & Services: Theory & Practice. New Delhi, B.R. Publishers, 2004.
9. Mukherjee, A.K. Reference work and its tool, 3rd ed. Calcutta: World Press, 1975.
10. Ranganathan, S.R. Documentaation, Genesis and Development. New Delhi: Vikas Pub. House, 1975.
11. Ranganathan, S.R. Reference Services, 2nd ed. Banglore: Sarda Rangnathan Endowment for Library Science, 1961 [Reprint (1990)].
12. Sewa Singh. Manual of Reference Service and Sources, New Delhi: B.R. Publishing Corporation, 2004.
13. Sharma, J.S. and Grover, D.R. Reference Service and Sources of information, New Delhi: Ess Ess Publications, 1987.
14. Sharma, S.K. Reference Service, New Delhi: Shree Publications, 2008.
15. Sood, S.P. (ed.) Pralekhan Evam Suchana Vigyan, Jaipur: Raj Publishing House, 1994.
16. Tripathi, S.M. Sandarbha Avam Suchana Seva Ke Navin Ayam (New Dimension of Reference/information services), Agra: Y.K. Publishers, 1993.
17. Varma, S.R. Reference and Information Service, New Delhi: Shree Publications, 2006.
18. Walfard, A.J. (ed.) Concise Guide to Reference Material, London: Library Association, 1981.
19. Kale, K.B. Sandarbha Seva Ani Mahiti Sadhananche Mulyankan (Reference and Evaluation of Information Sources), Nagpur: Vishva Publishers and Distributors, 2010.
20. Kale, K.B. Mahiti Seva Va Sadhane (Information Services and Sources), Nagpur: Vishva Publishers and Distributors, 2010.
21. Bhat, S.G. Electronic Mohiti Sadhane, Nagpur: Pimpalapure Book Dustributor, 2008.

MASTER OF LIBRARY AND INFORMATION SCIENCE (CBCS)
SEMESTER-I

MLI 1T4
Elective Papers (Choose Any One)

E -RESOURCE MANAGEMENT (2 Credit)
(Elective-2)

Course Objectives:

- Students can learn about selection, licensing, and evaluation of electronic resources.
- Students can critically examine the laws and policies that made an impact on electronic resource management.
- Students can understand the critical technologies and standards behind electronic resource management

Unit:I Electronic Resources Overview

- Concept and Definition of E-Resources
- Evolution, Need and Characteristics of E-Resources
- Benefits and Drawbacks of E-Resource
- E-Resource Life Cycle
- E- Resources Vs Print Resources

Unit:II Electronic Resource Management Systems (ERMS)

- Methods of Selection and Acquisition of E-Resources
- Basic concepts of Licensing and Subscription of E-Resources
- Methods of Access of E-Resources
- E ShodhSindhu: Consortium for Higher Education Electronic Resources
- New Trends in E-Resource Management

Unit:III Collection Development Process

- Procurement policy, budgeting, evaluation of E-resources;
- Organization & description of E- resources.
- Concept of Metadata for E-Resources
- Organization of E-Resources

Unit:IV Preservation and Evaluation of E-Resources

- Preservation and archiving of E-resources
- Legal and ethical aspects of E-resources
- Intellectual property rights and copyright law for E-Resources
- Security and privacy issues in E-resource management

Recommended Books for Study

1 Dhiman, A. K. and Yashoda Rani. (2005). Learn Library and Society. EssEss Publications.
2 Emery, J., and Stone, G. (2013). Techniques for Electronic Resource Management (Library Technology Reports). Chicago: Amer Library Assn.
3 Hawthorne, D. (2008). History of electronic resources. In Electronic resource management in libraries: Research and practice. IGI Global
4 Yu, H., &Breivold, S. (2008). Electronic resource management in libraries research and practice. Hershey: Information Science Reference
5 Jennings, L. (2009). Electronic resources management for electronic resources librarians: a bibliography. Bath: University of Bath.
6 Pandey, D. K. (2013). Library and Information Science. Atlantic
7 Patra, N. K. (2014). Electronic Resource Management: A Case Study of Management School Libraries In India. Sampalpur: Sampalpur University.

MASTER OF LIBRARY AND INFORMATION SCIENCE (CBCS)
SEMISTER –I

PRACTICAL

Learning Outcomes:

1. To develop the skill of classification Techniques for the APUPA arrangement of books.
2. Applying the knowledge of classification with hands on experience.

MLI 1L1 : Classification Practice (Part-I) Marks – 50

- Classification of Subject using DDC (Latest Edition)
- Basic Subject and Compound Subject
- Tables : 1, 2 and 3
- "Add" Instruction

Learning Outcomes:

1. To develop the skill of cataloguing Techniques for the APUPA arrangement of books.
2. Applying the knowledge of cataloguing with hands on experience.

MLI 1L2 : Cataloguing Practice (Part-I) Marks – 50

- Cataloguing of Documents using AACR (Latest Edition)
- Simple, Joint Author, Corporate Author, Composite Books, Pseudonymous
- Structure of Main entries, Added entries, Reference entries

Learning Outcomes:

1. To develop the skill of information sources Techniques for the APUPA arrangement of books.
2. Applying the knowledge of information sources with hands on experience.

MLI 1L3 : Information Sources Practice Marks – 50

- Study of various Reference Sources with special reference to India: Dictionaries, Encyclopaedias, Year Books, Directories, Bibliographical sources, Geographical sources, Special Reference Sources, Biographical Sources
- Evaluation of selected standard Reference Sources
- Finding information from above standard reference sources
- List of the sources is enclosed.

List of Reference Sources for Evaluation

Dictionaries

1. Webster's Third New International dictionary of English Language
2. Oxford English Dictionary
3. The Twenty Century English-Marathi Dictionary
4. Chambers English-Hindi Dictionary
5. English-Marathi
6. The Librarians Glossary of Terms Used in Librarianship, Documentation

Encyclopedias

1. The New Encyclopedia Britannica
2. Encyclopedia Americana
3. 4. McGraw-Hill Encyclopedia of Science & Technology
5. International Encyclopedia of the Social Sciences
6. Encyclopediaof Library and Information Science

Yearbooks & Almanacs

1. India 2014: A Reference Annual
2. Manorama Yearbook.
3. The Statesman's Yearbook.
4. The Europa World Yearbook.
5. World Alamanac and Book of Facts

Biographical Sources

1. India who's who
2. The International who's who
3. Who's who of Indian Writers:1999
4. Dictionary of National Biography (by S.P. Sen)

Geographical Sources

1. Britannica World Atlas
2. India Handbook (Broadnauk, Robert)
3. Gazetteer of India: Indian

Union Directories

1. Directories of Libraries in India
2. World of learning.
3. Commonwealth Universities Yearbook: A Directory
4. University Handbook: AIU Publication (INDIA)

Handbook and Manuals

1. Guinness Book of World Record.
2. Limca Book of Record.

Bibliographies

1. Indian National Bibliography
2. British National Bibliography

3. Indian Books in Print
4. Books in Print (R.R. Bowker)
5. National Union Catalogue of Scientific Serials (NUCSSI)
6. Ulrich's International Periodicals Directory

Indexing Sources

1. Guide to Indian Periodical Literature: Social Sciences and Humanities
2. Index India
3. Current Technology Index

Abstracting Sources

1. Indian Library Science Abstracts
2. Indian Science Abstracts
3. Chemical Abstracts
4. Biological Abstracts
5. Library and Information Science Abstracts (LISA)
6. Sociological Abstracts

Reference Source of National Importance

1. Constitution of India

MASTER OF LIBRARY AND INFORMATION SCIENCE (CBCS)
SEMESTER- II

MLI 2T1
Major

MANAGEMENT OF LIBRARY AND INFORMATION CENTRES

Learning Outcomes:

1. To develop information and communication managers for the society.
2. Understanding the principles of Library administration and library as an organization.
3. To remember the idea of 'Quality' in library procedure and services.
4. To apply the concepts of planning, marketing, Human Resource Development and control- both budgetary and non-budgetary in libraries and information centres and know the monitor and evaluate library performance

Unit-I: Management of LICs

- Meaning and definitions, Role/functions and principles of management, schools of thoughts in management, levels of management
- Planning: Characteristics Need, Forecasting, Types and Steps
- Organisational structure, Authority and Delegation

Unit-II: Library Housekeeping Operations

- Sections of Library and Information Centers, Book Ordering, Acquisition and Technical Processing, Serial Control, Circulation Control, Maintenance, Stock Verification,
- Online Books Shops, Weeding, Conservation and Preservation of Library Resources
- Library Committee, Library Statistics, Library Reports, Library Rules and Regulations
- Building and Space Management in LICs

Unit-III: HRM and Financial Management

- Recruitment and Selection, Training and Development, Leadership Styles, Motivation.
- Financial Management: Budgeting Techniques Traditional- PPBS and ZBB
- Sources of Finance and Resource Mobilisation
- Budget and Control – Cost effectiveness and Cost benefit Analysis.

Unit-IV: Trends in Management Techniques

- Trends in Management Techniques: MBO, TQM, SWOT, Management of Change, Outsourcing, Brain Storming, Mind Maping, Re-engineering, Six-Sigma, Delphi, Quest, Innovative

Recommended Books for Study

1. Evans, E. Management Techniques for Libraries, New York, Academic Press Inc. 1984.
2. Faraqui Khalid, F. (ed). Planning Budget in Libraries, New Delhi: Anmol Publications, 1997.
3. Jain, M.K. Library Manual: A Practical Approach to Management, New Delhi: Shipra Publication, 1996.
4. Kale, K.B. Library Security, Nagpur: Dattason's Publication, 2010.

5. Khan, M.A. The Principles and Practice of Library Science, New Delhi: Sarup & Sons, 1996.
6. Khanna, J.K. Fundamentals of Library Organisation, New Delhi: Ess Ess Publication, 1984.
7. Koontz, H and Weitghric, H. Essentials of Management. 5th ed. New Delhi, Tata McGraw Hill Publishing Co.Ltd., 1998.
8. Krishan Kumar. Library Administration.
9. Krishan Kumar. Library Mannual
10. Krishna Murthy, R. Library Administration & Resources, New Delhi: Common Wealth Publishers, 1997.
11. Kumar, PSG. Management of Libraries and Information Centers, B R Publication, Delhi.
12. Lahiri, R. Management of Libraries Concepts and Practices, New Delhi: Ess Ess Pub. 1996.
13. Mittal, R.L. Library Administraction: Theory and Practice, New Delhi: Metropolitan, 1996.
14. Mukherjee, S.K. and Sengupta, B. Library Organisation and Library Administration, 2nd ed. Calcutta: The World Press Private Ltd., 1977.
15. Narayanan, G.J.Library Management and Information of Management. New Delhi, Printice Hall of India, 1991.
16. Nikose, S.M. Aadhunik Granthalaya Vyvasthapan (M) Pradyna Publication, Nagpur. 2007.
17. Nikose, S.M. Granthalaya Vyvasthapan (M). Pradyna Publication, Nagpur. 2007.
18. Pawar, B.S. and Vyas, S.D.Library Management, New Delhi: B.R.Publishing Corporation, 1986.
19. Ranganathan, S.R. Library Administration. Madras: Asia Publishing House, 1959.
20. Sehgal, R.L. Guide to Library and Information Science, New Delhi: Ess Ess Publications, 1999.

MASTER OF LIBRARY AND INFORMATION SCIENCE (CBCS)
SEMESTER-II

MLI 2T2
Major

APPLICATIONS OF ICT IN LIBRARIES AND INFORMATION CENTRES

Learning Outcomes:

1. Understanding the fundamentals of Computer, its hardware, software
2. To analyze the applications of Computers and Information Technology in libraries
3. To create the ability to design automated system in libraries and information centers.

Unit-I : Information Technology

- Information Technology: Definition, Need, Scope and Objectives.
- Computer Hardware: Classification of Computer, Components, Input-Output devices, Memory, Secondary Storage Devices.
- Computer Software: System Software, Application Software, Operating System, Programming Languages, Word Processing, Spread Sheet, PPT, DDMS.
- Computer Networks: Types and Topologies

Unit-II : Planning of Library Automation

- Steps in Planning Library Automation
- Selection of Hardware and Software
- Automation of Housekeeping Operations
- Library Management Software: LIBSYS, SOUL, KOHA, e-Granthalaya

Unit-III : Modern Libraries

- Electronic Libraries: Definitions, Concept, Development and Services
- Digital Library: Definitions, Concept, Objectives, Scope, Growth and Development, Services
- Virtual Libraries: Definitions, Concept, Objectives, Scope, Development, Services

Unit-IV: Introduction to Internet

- Basics of Internet: History and Development
- Web browsers, Search Engines, Meta Search Engines
- Search Techniques
- Protocols: TCP/IP, FTP, HTTP, E-mail Protocols, etc.
- Internet Security

Recommended Books for study

1. Arvind Kumar. Ed.(2006). Information technology for all (2 vols.). New Delhi: Anmol
2. Dhiman, A.K.(2003). Basics of Information technology for librarians and Information scientists, Vol.1. New Delhi: ESS ESS.
3. Bansal, S.K.(2005). Information technology and globalisation, New Delhi: A.P.H. Publishing Corporation

4. Curtin, D.P. & others: Information technology: The breaking wave. New Delhi: TMH, Latest Edition
5. Khobragade, Amol & Lihitkar, Shalini "Virtual Reference Service" published by Lambart Academic Publishing, 2018
6. Nandagaoli, Jayant & Lihitkar, Shalini "Information Security Management of University Libraries" published by Scholars Press, UK, 2020 ISBN-9786-13-89439846
7. Sinha, P.K.(1992). Computer fundamentals: concept, systems and applications. 2nd ed. NewDelhi: BPB Publications, 1992.

MASTER OF LIBRARY AND INFORMATION SCIENCE (CBCS)
SEMESTER-II

MLI 2T3
Elective Papers (Choose Any One)

INFORMATION AND COMMUNICATION
(Elective-1)

Learning Outcomes:

1. Understanding the role of library in the communication process
2. To develop the concept of information society and its implications
3. Analyzing the role of professional library associations
4. Evaluating the modern trends in Library and Information Science

Unit-I: Information Science

- Definition, Genesis, Scope and Objectives
- Growth and Development of Library and Information Science
- Information and Knowledge Society: Genesis, Characteristics and Implication
- Interdisciplinary nature of Information Science

Unit-II: Communication of Information

- Information: Nature and Characteristics
- Generation of Information
- Value and Use of Information
- Communication Channels, Models and Barriers

Unit-III: Economics of Information

- Information as a Commodity
- Economics of Information
- Information Industry- Generators, Providers and Intermediaries
- Global village

Unit-IV: Current Trends in Information and Communication

- Databases: Security and Legality
- Right to Information Act, NEP-2020
- National Knowledge Commission
- Marketing of Information: Concept, Marketing Strategies, Marketing Mix

Recommended Books for Study

1. Hirwade Anil. Patent Information Sources on Internet, Himalaya Publishing House: Mumbai, 2009.
2. Hirwade M.A. and Anil W. Hirwade. Fundamentals of Intellectual Property Rights. Mumbai, Himalaya Publishing House. 2007. P 92.
3. Kumar P.S.G. Fundamentals of Information Science, New Delhi: S.Chand & Co. 1998.
4. Kumar, P.S.G. Information and Communication. Vol.8: Paper 9 of UGC Model Curriculum, B.R.Publication, New Delhi.2004.
5. Lihitkar, Shalini, R. Information Systems and Networks in India. Today Tomorrow, Printer & Publishers, New Delhi, 2012.
6. Lihitkar, Shalini, R. Libraries and Information centres in Maharashtra. Pimplapure Publication Nagpur, 2012.
7. McGrarry, K.J. The Changing Context of Information: An Introductory Analysis, London: CliveBingley, 1981.
8. Narayana, G.J. Knowledge and Information Perspective and Prospects. Ess Ess Publication, New Delhi.2010.
9. Nikose, S.M. Resource Sharing Through Networking of University Libraries, Pradnya Prakashan, Chandrapur. 2006.
10. Toffer, Alvin. The Power shift: Knowledge wealth and violence at the Edge of the 21st Century, New York: Bantam House, 1991.
11. Vickery, B.c. & Vickery, A. Information Science in Theory and Practice. London: Butterworth, 1987.

MASTER OF LIBRARY AND INFORMATION SCIENCE (CBCS)
SEMESTER- II

MLI2T3
Elective Papers (Choose Any One)

INFORMATION ANALYSIS, REPACKAGING AND CONSOLIDATION (Elective-2)

Learning Outcomes:

1. Understanding the concepts of Information analysis and Consolidation and repackaging.
2. Evaluating the information consolidation products.
3. Creating the ability to design need based information consolidation products for the stakeholders.

Unit-I: Information analysis and Consolidation

- Definition, Concept and Need
- Methods of Information analysis
- Abstracting: Types, Techniques, Standards and Guidelines

Unit-II: Packaging, Repackaging and Consolidation

- Content analysis
- Packaging and Repackaging
- Methods of Consolidation: Prerequisites and Steps
- Tools for Consolidation

Unit-III: Information Consolidation Products

- Nature, concept and different types Consolidation Products
- Design and development of Information Products
- Tools and Techniques
- Electronic Content Creation
- Marketing of Information services and Products
- Evaluation of Information Products
- Recent Trends in Information analysis Consolidation and Repackaging

Unit-IV: Information Agencies and Trends

- Information analysis Centres (IAC): Planning and Management
- Government and Non-Government Information Agencies: NISCAIR, NASSDOC, DESIDOC, SENDOC etc

Recommended Books for Study

1. Bhat, S. G. Mahiti Prakriya wa Tantrik Lekhan, Nagpur: Pimpalapure Books Distributors, 2014
2. Bhattacharya, G. DRTC Annual Seminar on IA+C: A Review (DRTC Annual Seminar, 18, 1981;Paper IA).
3. Brandreth, M. Specialised Information/Analysis Centres in International Development: Report of a meeting held at Montebellow, Quebec, Canada 4-8, October, 1982. 12DC Manuscript Series. March, 1984.
4. Bryson (J.O.) Effective Library and Information Centre Management, USA Gower Publishing Company, 1980.
5. Chandra, A. and Saxena, P. Style Manual for Writing thesis, Dissertations and papers in Social Science. 1979. Metropolitan Book Co.Pvt. Ltd., Delhi.
6. Chattergee, Amitabh. Element s of Information analysis, Consolidation and Repackaging, Calcatta. Prova Prakashan, 2014.
7. Dinesh, E. and Ramachandran, M. Organisation and set up of an Information Analysis Centers (DRTC Annual Seminar 18, 1981. Paper HB)
8. G.J. Narayana, Library and Information Management, New Delhi. Printice Hall India, Pvt.Ltd. 1991.
9. Gopinath, M.A. Typology of structural relations for Information Analysis and Consolidation Products: Feed Back and Evaluation: A case Study. DRTC Annual Seminar. 18: 1981, paper EA.
10. Kumar P.S.G. Information Analysis, Repackaging Consolidation and Information Retrieval. B.R. Publication Vol.9: Paper X & XI of UGC Model Curriculum, 2004. New Delhi.
11. Metcalfe, J.R. Organisation of information consolidation units: Centralised or Decentralised? Information Analysis and Consolidation: who page (Paper presented at the third meeting of UNISIST working Group on Information Analysis and Consolidation. Kaula Lumpur 12-16 September, 1983.
12. Sarcevic, T. and Wood, J.S. Consolidation of Information: A hand book of evaluation restructuring and repackaging of Scientific Technical Information. 1981. UNESCO, Paris.
13. Seetharama, (S). Costing of Information Systems and Services: Some General Considerations (DRTC Annual Seminar 24, 1990. Paper B).
14. Seetharama, S. (ed) Libraries and information Centres as Profit Marking Institutions, New Delhi,Ess Ess Publication, 1998.
15. Seetharama, S. Evaluation measures in Information Retrieval System IASLIC Conference 1992.Chidamboram.
16. Seetharama, S. Guidelines for Planning of Libraries and Information Centeres, Calcutta, IASLIC,1990.
17. Seetharama, S. Information Consolidation and Repackaging. New Delhi, Ess Ess Publications,1997.
18. Seetharama, S. Information Consolidation and Repackaging: Frame work, Methodology, Planning. New Delhi: Ess Ess Publications, 1997.

MASTER OF LIBRARY AND INFORMATION SCIENCE (CBCS)
SEMISTER –II

PRACTICALS

Learning Outcomes:

1. To develop the skill of classification Techniques for the APUPA arrangement of books.
2. Applying the knowledge of classification with hands on experience.

MLI 2L1: Classification Practice (Part-II) Marks - 50

- Classification of subject using DDC (Latest Edition)
- Complex Subject
- Tables 4, 5, 6 and 7
- Assigning Book Number (Using at least one standard Book Numbering System)

Learning Outcomes:

1. To develop the skill of cataloguing Techniques for the APUPA arrangement of books.
2. Applying the knowledge of cataloguing with hands on experience.

MLI 2L2 : Cataloguing Practice (Part-II) Marks - 50

- Cataloguing of Documents using AACR (Latest Edition)
- Government Publications, Serial Publications, Collected Work, Series

Non-Book Materials: Audio – Video Disks, Microforms, Maps, Atlases, Globes

Learning Outcomes:

1. To develop the skill of IT Techniques for the libraries.
2. Applying the knowledge of IT with hands on experience.
3. Creating searching abilities and formulation of search strategies for effective information retrieval through network.

MLI 2L3 : Information Technology Applications to Libraries Marks – 50

Information Technology Applications to Libraries

- Database creation using any Library Automation Software
- Searching of Bibliographic database, OPAC
- Creation of Users Database
- Automated Circulation Systems
- Information Searching from online Databases and Retrieval:
- Web of Science, Scopus, LISTA
- Evaluation of Library Webpages
- Internet Searching from websites – Library Networks, Library Consortia, Library Associations, Vidyanidhi, NDLTD, LIS Gateways, Infolibrarian, Information Systems, Digital Libraries, DOAJ, DOAR, DLIST etc.

Learning Outcomes:

1. To understand the actual working of library practically
2. To gain the knowledge of hands on experience on library automation software.

MLI 2L4 : Internship **Marks – 100**

MASTER OF LIBRARY AND INFORMATION SCIENCE (CBCS)
SEMESTER- III

MLI 3T1
Major

INFORMATION STORAGE, RETRIEVAL AND BIBLIOGRAPHICAL CONTROL

Learning Outcomes:

1. Understanding the different methods of processing information
2. Analyzing the information centres at national and international level
3. Evaluating the information needs and to know the factors affecting information organization.

Unit-I: Information Storage and Retrieval

- Information Storage and Retrieval: Concept, Objectives and Functions
- Document Description: Concept, Standards and Trends
- Information exchange
- Concept, History and Principles of subject Indexing

Unit-II: Indexing models and control devices

- Pre-coordinate Indexing
- Post Co-ordinate Indexing
- Characteristics of Indexing Language
- Vocabulary Control: Concept
- Vocabulary Control Devices: Thesaurus and Subject Heading List

Unit-III : Trends in Information Retrieval

- Citation Indexing
- Computer Based Indexing System: KWIC, KWOC etc.
- Search Strategy
- Search Processes: Offline and Online Information Retrieval Techniques
- Evolution of Information Retrieval System
- Research in Information Retrieval System

Unit-IV: Bibliographic Control

- Bibliographical control:Concept and Need
- National Bibliographical Control
- Universal Bibliographical Control
- Role of UNESCO and IFLA for Bibliographical Control

Recommended Books for Study

1. Atchison, J. Gilchrist: Thesaurus Construction, a practical manual, 1972.
2. Austin D., Precis, A Manual of concept analysis and subject indexing: 2nd ed. 1984.
3. Chowdhary G.C. Introduction to Modern Information Retrieval, London. Facet Publising, 2009.
4. Dhawan, K.S. Principles of Information Retrieval. New Delhi, Commonwealth Publication, 1997.
5. Ellis, D.New Horizons in Information Retrieval, London: Library Association, 1990.
6. Fosket, A.C. Subject Approaches to Information 5th Ed. London: Clive Blingley, 1996.
7. Ghosh, S.B. and Satpathi, J.N. Subject Indexes: Methods and Techniques.
8. Gopinath, M.A. Preparation of an Index to a Book: Case study Lib.Sci with a s lant to Documentation, 1967, Paper E.
9. Kesarwani, S.K. Information Access to contributions from LIS feschrifts published from India. New Delhi, Ess Ess Publication, 2011.
10. Kochen, M et.al., Principles of Information Retrieval, 1974.
11. Kumbhar, Rajendra. Thesaurus of Library and Information Science terms. New Delhi, Ess Ess Publication, 2004.
12. Lancaster, F.W. Indexing and abstracting theory and practice. London, facet Publication, 2009.
13. Lancaster, F.W. Information Retrieval System Characteristics, Testing and Eva luation, New York: John Wiley, 1968.
14. Lancaster, F.W. Vocabulary Control for Information Retrieval, New York: Information Resources Press, 1972.
15. Prashar, R.G. Index and indexing system, New Delhi, Medollian Press, 1990.
16. Sengupta, B. and others. Documentation and Information Retrieval, Calcutta, World Press, 1972.

MASTER OF LIBRARY AND INFORMATION SCIENCE (CBCS)
SEMESTER-III

MLI 3T2
Major

MODERN LIBRARIES

Learning Outcomes:

1. Understanding the elements of Information and Communication Technology.
2. To implementing ICT skills in Libraries and Information Centres.
3. To create the ability to design automated systems in Libraries.

Unit-I : Creation & Organization of Digital Libraries

- Hardware and Software: Scanners, Digital Camera, OCR, Image Editing Software, Open Source Software (DSpace, Eprint, Green Stone, Fedora)
- Collection Development of Digital Libraries
- Digitization Process
- Metadata: Definition, Types, Creation,
- Metadata Standards: Dublin Core, MARC 21, METS, MODES, EAD
- Preservation Technologies

Unit-II : Digital Library Initiatives

- Digital Library Initiatives in India and Worldwide
- Institutional Repository: Concept, Definitions, Steps in Creation, Institutional Repository initiatives in India
- ETD Repositories: Concept, Definitions, Importance in R, Initiatives in India and Worldwide.

Unit III : Web Technologies in Libraries and Information Centres

- Library websites: Contents, Design & Evaluation
- Web 2.0, 3.0, 4.0: Features, Functions and Tools
- Application of Web Technologies in Libraries

Unit-IV : Emerging Technologies in Library

- Library Security Technologies: RFID, Bar Code, Smart Card, 3M Security, CCTV
- E-Learning : Concept, Need, Objectives, Tools
- Multimedia applications in Libraries
- Cloud Computing : Concept, Need, Objectives, Tools

Recommended Books for Study

1. Ackermann, F and Hartman, K. The Information specialist's guide to searching and Researching on the Internet and the World Wide Web, Chicago: Fitzroy Dearborn Publishers, 1999.
2. Bhatnagar, S.C and Ramani, K.U. Computers and Information Management: A Printers for practicing Managers, New Delhi: Printice Hall of India, 1989.
3. Bradley, P. and Smith, A. World Wide Web: How to design and construct home pages, London: ASLIB, 1996.
4. Chaudhary, C.G. Text Retrieval System in Information Management, New Delhi: New AgeInternation, 1996.
5. Hirwade M.A. Websites of Indian Universities: An Evaluation. Mumbai, Himalaya PublishingHouse. 2006.p.376. (ISBN 818-4886802 & 978-8184886801)
6. Hirwade, M.A. and Anil W. Hirwade. Information Technology: A Practical Manual. Mumbai,Himalaya Publishing House. 2007. P. 164.
7. Kumar, P.S.G. Computerisation of Indian Libraries, New Delhi: B.R. Publishing, 1987.
8. Kumar, P.S.G. Information Technology Application: Theory & practice. Vol-2: paper 13 &14 of UGC model Curriculum. B.R. Publication. New Delhi, 2004.
9. Manohare, Vaibhav & Lihitkar, Shalini "Web 2.0 in Libraries" published by Studera Press, New Delhi ISBN :978-81-930333-6-4,2017
10. Leon, A and Leon, M. Fundamentals of Information Technology. Chennai, Leon Tech World1999.
11. Naidu, Shraddha & Lihitkar, Shalini "E-learning Programmes for Library and Information Science Education"published by Scholars Press ISBN-13:978-3-639-70732-8 ISBN-10: 363970732X EAN:9783639707328, Pages: 284 ,2015
12. Lihitkar, Shalini, R. Information Systems and Networks in India. Today and Tomorrow's printer and publishers, New Delhi.2012.
13. Lihitkar, Shalini "Design and Development of Institutional Repository: A Step by Step Approach." Published by Sai Joyti Publication, 2015
14. Prabhakaran, R. & Lihitlar, Shalini "Webometric Analysis of Library Websites: Emerging Research and Opportunities. Published by Today and Tomorrow, New Delhi, 2019.Pp 225.ISBN : 978-81-70196-31-0
15. Ravichandra Rao, I.K. Library Automation, New Delhi: Wiley eastern, 1993.
16. Saffady, W. Introduction to Automation for Librarians, 3rd ed. London: American LibraryAssociation, 1996.
17. Taxali, R.K. FOXPRO 2.5 Made Simple for DOS and Windows, New Delhi: BPB Publications, 1996.
18. Thomas,R and Yates, J.A. User's guide to the Unix System, 2nd ed. New Delhi: Tata McGraw Hill, 1995.
19. Wadhawa, R.K. Management Information Systems and Corporate Coomunications, New Delhi: Kanishka Publishers, 1998.

MASTER OF LIBRARY AND INFORMATION SCIENCE (CBCS)
SEMESTER- III

MLI 3T3
(Disciplinary Elective Course)
(Choose anyone)

AGRICULTURAL INFORMATION SYSTEM
(Elective-1)

Learning Outcomes:

4. Understanding the purpose, role and importance of Agricultural libraries
5. Analyzing the library scenario in general and in Indian scenario in particular.
6. Evaluating the modern trends in Library and Information Science

Unit-I: Agricultural Education and Research

- Growth and development of Agricultural Education in India
- Growth and development of Agricultural Research in India
- Role of Libraries in Agricultural Education, Research and Extension
- Development of Agricultural Libraries in India

Unit-II : Information Needs

- Information requirement of Agricultural faculty
- Information requirement of Agricultural Research Workers, Farmers Extension Workers
- Study of Local Agricultural Libraries and Preparation of Report
- User Education

Unit-III : Information Resource Development, Organization of Sources

- Collection Development
- Sources of Information:
  - Documentary
  - Non-Documentary
  - Electronic Resources
  - Agricultural Databases
- Internet as a source of information
- Organization and Documentary Sources
- Classification
- Cataloguing
- Indexing
- Storage of document

Unit-IV: Management Aspects

- Management of Agricultural Libraries and Information centres
- Planning of Library and Information Centres
- Human Resource Development-Staffing, Training and Development
- Professional Skills
- Financial Management- Budgetary Provisions, Resource Generation

Recommended Books for study

1. Alan Chard, J.R. and Farrel, Lois. Guide to Agricultural and Biological Research. Berlveley: University of California, 1981.
2. Banerjee, S.R. and Moitra, S. Agricultural Documentation Services in India. New Delhi: ICARLibrary (Unpublished).
3. Deshmukh, P.P. Indian Council of Agricultural Research (Delhi). Agricultural University Libraries on Committee, Find Report, New Delhi: ICAR, 1969.
4. Gupta, S.R. Stock Verification in Libraries; Problems and Solutions. Delhi: Ken Pub, 1990.
5. Kumar, P.S.G. Agricultural Librarianship MLISc Elective paper; K umar's curriculum series in Library & information science 12, 2008 x, 380 B.R. Publication, New Delhi.
6. Lihitkar, Shalini.R. Information Systems & Networks in India. Today& Tomorrow's printer & publishers, New Delhi, 2012.
7. Lihitkar, Shalini, R. Libraries and Information centres in Maharashtra. Pimplapure Publication.Nagpur, 2012.
8. Lilley, G.P. Information Sources in Agriculture and Food Science. London: Butter Worths, 1981.
9. Maharashtra Government of: Report of the Advisory Committee for Establishment of Agricultural University, Maharashtra, November, 1965, Bombay: Govt. of Maharashtra.
10. Ramtirth, Agris. Information System for Agriculture Science and Technology Inperspective in Library and Information Science. 1, 1982. Pp211-214.
11. Rokde, S.M. Agriculture Education and Libraries in India. Masford Publication. New Delhi, 2009.

MASTER OF LIBRARY AND INFORMATION SCIENCE (CBCS)
SEMESTER- III

MLI 3T3
(Disciplinary Elective Course)
(Choose anyone)

LEGAL INFORMATION SYSTEM
(Elective-2)

Learning Outcomes:

1. Understanding the purpose, role and importance of Legal libraries
2. Analyzing the library scenario in general and in Indian scenario in particular.
3. Evaluating themodern trends in Library and Information Science

Unit-I: Law Librarianship

- Growth and development of Legal Institutions in India
- Nature, Principles and characteristics of legal information and law libraries
- Types of Law Libraries
- Legal Information Systems: National and International
- Resource sharing and Networks of Legal Information

Unit-II: Information Sources

- Special Information Sources: Bills, Acts, Books, Serials, Law Reports, Law Court Notices, Law Case amendments
- Tribunal Report, Law Digests, Legal judgments, delegated legislation
- Rules and Orders, Legal information Sources and Lexicons
- Legal Databases and Digital Libraries

Unit-III: Organization and Management of Resources

- Information Processing: Classification, Cataloguing and Indexing
- Developing Special Skills and Techniques to handle legal information
- Managing Finances: Funds and Fund Generation

Unit-IV: Information needs and Services

- Special needs of lawyers and legal professionals
- Information Services to Law students, faculty and Research Scholars
- Preparation of a Report on Law Libraries (Local)
- Dissemination methods and techniques
- Advanced Information Services and Products

Recommended Books for Study

1. Anthony, L.J. Handbook of Special Librarianship and Information Work 5th ed. ASLIB, 1982.
2. Banks, M.A. Using a Law Library. 3rd ed. Agricultural in Court out, carsurth, 1980.
3. Dane, J. and Thomas, P.A. How to use Law Library, Sweet and Maxwell, 1979.
4. Kumar, P.S.G., Law Librarianship MLISc Elective Paper Kumar Curriculum series in LISc-15 B.R. Publisher, New Delhi, 2008.
5. Lihitkar, Shalini,R. Information Systems and Networks in India, Today's & Tomorrow: Printer & Publisher, New Delhi, 2012.
6. Lihitkar, Shalini, R. Libraries and Information centres in Maharashtra. Pimplapure Publication.Nagpur, 2012.
7. Logaw, R.G. Information Sources in Law. Butter Worths, 1986.
8. Miskin, E. Library and Information Services for the legal profession. London: British Library Research & Development Report, 5633, 1981.
9. Moys, E.M. Ed. Manual of Law Librarianship. Ed.2 Wiltshire: Redwood, 1987.
10. Moys, E.N. Ed.Manual of Law Librarianship: the use and organization of legal literature.2nd Ed.Hants, UK: Gower, 1987.

MASTER OF LIBRARY AND INFORMATION SCIENCE (CBCS)
SEMESTER- III

MLI 3T3
(Disciplinary Elective Course)
(Choose anyone)

INDUSTRIAL INFORMATION SYSTEM
(Elective-3)

Learning Outcomes:

1. Understanding the purpose, role and importance of Industrial libraries
2. Analyzing the library scenario in general and in Indian scenario in particular.
3. Evaluating the modern trends in Library and Information Science

Unit-I: Industries and Industrial Information

- Types of industries
- Industrialization and growth of industries in India
- Categories of Industrial Organizations
- Industrial Information, Nature and Characteristics, Users and Role
- Industrial Libraries and Information Centres: Characteristics and Roles

Unit-II: Information Sources, Management of Industrial Libraries and Information Centres

- Information Resource Development
- Information Sources: Internal and External Sources
- Information Sources specific to Industries: Government Document, Technical Report Literature, Trade Literature, Standards, Patents
- Management Aspects

Unit-III: Information Service and Products

- Information requirement of various categories and levels of users, function/activities areas in industries
- Reference, Referral and Document Delivery Services
- Technical enquiry service, Alerting Service, Translation Service
- Development of Information Analysis and Consolidation Products: Reviews, State of the Art Report, Trend Report, Technical Digest
- Information Service to Management: Management briefs, Technical notes, Feasibility Study Reports, Mark of Survey Reports, Company Profiles
- Data Services

Unit-IV: Impact of IT, Resource Sharing and Networking, Information Systems and Centres

- Impact of IT: Impact on Collection Development, Industrial Databases, Use of Internet and Digital Resources
- Resource Sharing and Networking, Consortia
- National Information Centres: CSIR and its National Laboratories, NISCAIR, SENDOC, Patent Information System, TIFAC
- Role of International Organizations in Industrial Information: UNIDO, UNDP, OECD, ISO etc.

Recommended Books for Study

1. Anthony, L.J. Handbook of Special Librarianship and Information Work 5th ed. London, ASLIB,1982.
2. Blakewell, K.Y. Industrial Libraries throughout the World. Oxford, Pergamon Press, 1969.
3. Burkett, Jack. Industrial and Related Information Services in United Kingdom 3rd. London: LA.1972.
4. DRTC Annual Seminar-17 Industrial Information Systems and Services, Bangalore, Documentation Research and Training Centre, 1979.
5. Gopinath, M.A. and Seetarama, S. Industrial Information Systems and Services, DRTC, AnnualSeminar (17), 1979, Bangalore: DRTC, 1979.
6. Houghton, Berhard, Technical Information services. 2nd ed. London, Clive Bingley, 1972.
7. Jackson, E.B. and Jackson, R.L. Industrial Information Systems: A Manual for Higher Management and their information officers/ Librarian Associates. F.Stroudsberg. DowdenG. Huchenson Association and Ross, 1978.
8. Kumar, P.S.G. Business/Industrial Librarianship, New Delhi, B.R.Publishing Corporation, 2008.
9. Library Association Industrial group: Industrial and commercial Library , An Introductory guide.London, Library Association, 1986.
10. Lihitkar, Shalini, R. Libraries and Information centres in Maharashtra. Pimplapure Publication.Nagpur, 2012.
11. Neelameghan, A: Information for small enterprises. Bangalore, Sarda Ranganathan Endowment for Library Science, 1994.
12. Sasikala, C. Industrial Library System, New Delhi, Reliance Publishing House, 1994.
13. Seetharama. S: Planning of Library and Information Centres, Calcutta, IASLIC, 1990.
14. Seetharama. S: Dynamics of Planning and Marketing of Modern Libraries and Information Centres in an Information Technology based environment, Calcutta, IASLIC, 2015.
15. Thakur, D.S. Scientific and Technical Libraries. New Delhi, Ess Ess Publication, 2006.

MASTER OF LIBRARY AND INFORMATION SCIENCE (CBCS)
SEMISTER –III

PRACTICALS

Learning Outcomes:

1. To develop the skill of IT Techniques for the libraries.
2. Applying the knowledge of IT with hands on experience.
3. Creating searching abilities and formulation of search strategies for effective information retrieval through network.

MLI 3L1 : Information Technology Applications to Libraries Marks- 100

- Hands on experience on Content Management Software
- E-learning Platforms: MOOCS & SWAYAM
- Accessing of Creative Common Licensing
- Hands on practice on: Urkund or anyother OSS
- Creation of Institutional Repository: GSDL, DSpace, KOHA
- Uploading of Data in disciplinary archives: ELIS, DLIST
- Hands on practice in any Reference Management Tool: Zotero, Mendeley or anyother

Learning Outcomes:

1. Students will be able to gain the knowledge of selection to topic, searching literature, research design
2. Students will understand how to collect data, coding of data, analyze and interpretation,
3. Students will to gain knowledge of drafting report and representation of report.

MLI 3L2:Research Project (Minor) Marks- 100

Sr. No.	Topic	Maximum Marks Allotted
1	Problem / Objectives / Hypothesis	10
2	Research Design	5
3	Data Collection, data processing and	10
4	Analysis and statistical interpretation of data	10
5	Presentation of Data in Graphical Form	10
6	Summary, conclusion and recommendations	10
7	Referencing and /or Bibliography (Use of APA Method)	5
8	Open Defense / Viva Voce	40
	Total	**100**

Learning Outcomes:

1. To develop independent thinking and problem-solving skills.
2. To inculcate soft skills to be a successful LIS professional.
3. Creating successful, skilled and smart managers for modern libraries in information age.

MLI 3L3: Soft skills for Library Professionals Marks- 50

Unit-I : Skills for Library and Information Science Professionals

- Professional Skills: Concept, Need, Advantages
- Communication Skills
- Administrative, Managerial, Interpersonal, Human Relation Skills, Soft Skills, Legal Skills, Decision Making Skills, Analytical Skills, Team Building, Time Management Skills, Motivation Skills, Leadership Skills, Negotiation Skills, Problem Solving Skills
- Information Technology Skills, Computer and Network Literacy
- Stress Management, Innovative and Recreational Skills

Unit-II : Presentation and Interview Skills

- Presentation, Preparing Curricular Vitae
- Online Application, Job Portals for LIS
- Interview Types, Preparation (Job based)
- Panel and Board, Group Discussion, Personal Interview, General Awareness
- Extra-curricular activities
- Personality Development, Positive Attitude, Body Language

Unit-III : Drafting Letters in LIS context and Writing Skills

- Types of Letter: Formal, Informal
- Drafting Rules, Agenda, Minutes, Recommendations
- Confidential Reports of the Staff
- Report Writing: Progress, Annual Reports, Budget, User Statistics
- Files Records: Management and Maintenance
- RTI Skills and Answering Queries
- Drafting Project Proposals, Writing Research Papers

Unit-IV: Teaching and Learning Skills

- LIS Education: Aim and Objectives, Problems and Prospects
- Teaching Method: Lecture, Tutorial, Seminar, Symposium, Panel Discussion, Simulation Approach, Role Playing, Case Studies, Practical Work, Training, Oral Test, Written Test, Assignments, Poster Presentation
- E-learning Tools, Courseware, Software, Content Management
- Student Teacher Relations
- Student Performance, Feedback Mechanism, Curriculum Development, Innovative Assessment Method, Use of Teaching Tools

Recommended Books for Study

1. Bardi,U.(2019). SustainabilityonUniversityCampuses:Learning,SkillsBuildingandBestPractices. Germany:SpringerInternational Publishing.
2. Chipman,S.F.,Segal,J.W.,&Glaser,R.(Eds.).(2013).Thinkingandlearningskills:Volume2: Researchandopenquestions. Routledge.
3. India(2020).National Education Policy 2020. Ministryof Education.
4. James, N., Busher, H. (2018). Improving Opportunities to Engage in Learning: A Study oftheAccessto HigherEducation Diploma. UnitedKingdom: Taylor & Francis.
5. Knapper, C., &Cropley, A. J. (2000). Lifelong learning in higher education.

PsychologyPress.
6. McDaniel,M.A.,Brown,P.C.,&RoedigerIII,H.L.(2014).MakeItStickTheScienceofSuccessful Learning.Cambridge, MA HarvardUnivPr.
7. Nilson, L. (2013). Creating self-regulated learners: Strategies to strengthen students? self-awarenessand learning skills. Stylus Publishing,LLC..
8. Northup, J,,Peno, K. and Mangiante, E. M. S., Eds.(2021). Teaching and Learning forAdultSkillAcquisition:ApplyingtheDreyfusandDreyfusModelinDifferentFields. (2021). UnitedStates:Information Age Publishing, Incorporated.
9. Segal, J. W., Chipman, S. F., & Glaser, R. (Eds.). (2014). Thinking and learning skills:Volume1: relating instruction toresearch. Routledge.
10. Wang, V. C. (Ed.). (2015). Handbook of research on learning outcomes and opportunitiesin the digital age. IGIGlobal.
11. Westerberg, C., McBride, T. (2020). AcquiringLearningSkillswith DigitalTechnology.United States: Information Science Reference.
12. Zima, B. (2021). Mindsets and Skill Sets for Learning: A Framework for Building StudentAgency.United States:Marzano Resources.

MASTER OF LIBRARY AND INFORMATION SCIENCE (CBCS)
SEMESTER- IV

MLI 4T1
Major

SYSTEM ANALYSIS AND BIBLIOMETRICS

Learning Outcomes:

1. Understanding the value of library systems in Library and information Science.
2. Remembering the process of System Analysis, System Design and Development.
3. Applying system development life cycle to the existing library system.
4. Creating the ability of designing effective and efficient systems and evaluating to redesign the systems.

Unit-I : System Study

- Concepts, Types of System
- Library as a System
- Computerized Information System
- Automated sub-system of a library
- Planning and Development of Computerized Information System
- Database Management System (DBMS)
- Management Information System (MIS)

Unit-II : System Analysis, System Design and Development

- System Analysis
- Role of System Analyst
- Professional skills for System Analyst
- System Development Life Cycle (SDLC)
- Structured System Development
- Methodology for System Development
- Flowcharts

Unit-III : Bibliometric Studies

- Definitions, Concepts, Growth and Development of Bibliometrics
- Application of Bibliometrics
- Bibliometric Laws: Bradford's Law, Zipf's Law, Lotka's Law
- Citation Analysis
- Bibliographic Coupling
- Obsolescence of Literature
- Ethics of Citations

Unit-IV: Futuristic Approaches

- Trends in Bibliometrics
  - Scientometrics
  - Informetrics
  - Cybermetrics
  - Webometrics,
- Almetrics
- Cyber Laws

Recommended Books for Study

1. Awad, E.M. System Analysis and Design 2nd Ed. New Dwlhi. Golgatia Publications (P) Ltd. 2000.
2. Curtis, G. Business Information Systems: Analysis Design and Practice, London: Wisley Publishing Company, 1990.
3. Gerald, J.F. and Gerald, A.F. Fundamentals of System Analysis: Using Structured Analysis and Design, 3rd ed. New York: John Wiley & Sons, 1987.
4. Hirwade, M.A. and Anil W. Hirwade. Chicago Style Manual. Nagpur, Payal Publication, 2008.
5. Hussain, K.M. and Hussain, D. Information Systems: Analysis, Design and Implementation, New Delhi: Tata McGraw Hill, 1995.
6. Rowley, J. The Basics of System Analysis and Design for Information Managers, London: Clive Bingley, 1990.

MASTER OF LIBRARY AND INFORMATION SCIENCE (CBCS)
SEMESTER-IV

MLI 4T2
Major

EMERGING TRENDS IN LIBRARY & INFORMATION CENTRES

Learning Outcomes:

1. Understanding the concepts of modern libraries in context to implementation of sophisticated web based tools and techniques to the libraries.
2. Designing digital libraries.
3. Evaluating the digital libraries in context to digital copy right.
4. Analyzing various library initiatives at national and international level

Unit-I : Content Management System

- CMS: Concept, Definition and Scope, Benefit, Principals, Architecture
- CMS Tools/Software: Features and Functionalities of Drupal, Joomla, Wordpress, Moodle: Selection, Implementation and Evaluation.
- E-learning Platforms :
  MOOCS : Concept, Features and Functionalities
  SWAYAM Course: Concept, Features and Functionalities

Unit-II : Legal Issues

- IPR in Digital Libraries and LMS
- Copyright infringement, Licensing
- Fair use of Digital Information
- Creative Commons
- Plagiarism : Definition, Concept, Types, Rules
- Plagiarism Software : Urkund, Turnitin, iTenticate, OSS

Unit-III : Technological Trends

- Ontology – Tools (RDF, RDFS, Protégé)
- Semantic Web
- Linked data, Big data
- Data Mining and Harvesting
- Internet of Things
- AI Tools

Unit -IV : Application and Implementation

- Web-Scale Discovery Services
- Library Apps, Mobile based Library Services and Tools
- Application of Artificial Intelligence
- Application of Expert System
- Assistive/Disruptive Technologies
- Virtual Reality (VR), Augmented Reality (AR), Mixed Reality (MR), Extended Reality (ER)

Recommended Books for Study

1. Alemu,G.,Stevens,B.(2015). AnEmergentTheoryofDigitalLibraryMetadata:EnrichThenFilter.Netherlands:ElsevierScience.
2. Andrews,J. (2017).Digital Libraries: Policy, Planning and Practice. UnitedKingdom:Taylor & Francis.
3. Banerjee,K., Reese, T.(2018).Building Digital Libraries: Second Edition. UnitedStates:AmericanLibraryAssociation.
4. Blaney,J.,Milligan,S.,Steer,M.,&Winters,J.(2021).Doingdigitalhistory:Abeginner's guide to working with text as data.ManchesterUniversity Press.
5. Boczkowski,P.J.andMitchelstein,E.(2021).Thedigitalenvironment:Howwelive,learn,work and playnow, MIT Press
6. Chowdhury,G.G.&Foo,Schubert.(2012).DigitalLibrariesandInformationAccess:Research Perspectives. London: facetpublishing
7. Evans,W.& DavidB. (2013). AHandbook ofDigital LibraryEconomics:Operations
8. Frazier,A.(Eds.)(2017).ManagingDigitalCulturalObjects:Analysis,DiscoveryandRetrieval.
9. Fritz, A. I. (2021). Sustainable Enterprise Strategies for Optimizing Digital Stewardship: AGuidefor Libraries, Archives, and Museums. Rowman & Littlefield.
10. Hughes,L.M.(2004).DigitizingCollections:strategicissuesfortheinformationmanager.New York: NealSchuman.
11. Lawson,N. (2018). DigitalLibraryPreservation Strategies. UnitedKingdom:EDTECH.
12. Miller,S.J.(2014).Metadatafordigitalcollections:Ahow-to-do-itmanual.NewYork:Neal-Schuman
13. Naidu, Shraddha & Lihitkar, Shalini "E-learning Programmes for Library and Information Science Education"published by Scholars Press ISBN-13:978-3-639-70732-8 ISBN-10: 363970732X EAN:9783639707328, Pages: 284 ,2015
14. Oleck,J. (2012). Creatingthedigitallibrary.New York: Primary ResearchGroup,Inc.
15. Papy,Fabrice.(2016).Digital Libraries. London:ISTE Press
16. Pedley, P. (2009). DigitalCopyright. 2nded. London:FacetPublishing.
17. Pomerantz,J.(2015).Metadata.Massachusetts:MITPress
18. Purcell,A.D.(2016).Digitallibraryprogramsforlibrariesandarchives:Developing,managing, andsustainginguniquedigital collections.Massachusetts:MIT Press
19. Tabakova,V.(2020).E-learninginmedicalphysicsandengineering:buildingeducationalmoduleswith Moodle. CRCPress.
20. TomDieck,M.C.(2021).AugmentedRealityandVirtualReality:NewTrendsinImmersiveTechnology. SpringerNature.
21. Bishop, L., VandenEynden, V., Corti, L., Woollard, M. (2019). ManagingandSharingResearchData:AGuidetoGoodPractice. UnitedKingdom: SAGEPublications.
22. Cox,A.,&Verbaan,E.(2018). *Exploringresearchdatamanagement*.Facetpublishing.

23. Griffey, J.(2019). AI and Machine Learning:The challenges of artificial intelligenceinlibraries.*American Libraries*, *50*(3),4.
24. Khan, H. R., Du, Y. (2020).Data Sciencefor Librarians. UnitedStates: ABC-CLIO.
25. Kruse, F., &Thestrup, J. B. (Eds.). (2017). *Research data management-A Europeanperspective*.Walter deGruyter GmbH & CoKG.
26. Kumar,K.(2018).IdentificationoflibrarylocationthroughArcGISsoftware:Geographical information system. *IJAgri.L. Inf. Serv*, *34*(3),227.
27. Singh, A., Rai, P., & Singh, S. (2019). Scaling Bots in Libraries: Trending Aptness ofArtificialIntelligenceinInformation System.*Available at SSRN3861818*.
28. Slayton,E.,&Benner,J.(2020).TheRoleofLibrariesinGeographyandGISEducation: Report on a series of conversations about libraries, geography, GIS, andeducationin 2020.
29. Soares,L.(2020).ArtificialIntelligence inCanadianLaw Libraries. *Can.L.Libr.Rev.*,*45*, 16.
30. Stoddart,R.,&Godfrey,B.(2020).GatheringEvidenceofLearninginLibraryCurriculum Center Spaces with Web GIS. *Evidence Based Library and InformationPractice*, *15*(3),21-35.
31. Strasser, C. A., Krier, L. (2014). Data Management for Libraries: A LITAGuide.UnitedStates: American Library Association.
32. Tian,Z.(2021,June).ApplicationofArtificialIntelligenceSysteminLibrariesthroughData MiningandContentFilteringMethods.In *JournalofPhysics:ConferenceSeries*(Vol.1952, No. 4, p. 042091).IOP Publishing.
33. Wheatley, A., & Hervieux, S. (2019). Artificial intelligence in academic libraries: Anenvironmentalscan.*Information Services&Use*,*39*(4),347-356.\

MASTER OF LIBRARY AND INFORMATION SCIENCE (CBCS)
SEMESTER-IV

MLI 4T3
Major

INTELLECTUAL PROPERTY RIGHTS

Learning Outcomes:

1. Understanding the Fundamentals of Intellectual Property Rights.
2. Analyzing the facets of industrial property i.e. Patents, Industrial Designs, Trademark and Geographical Indications.
3. Remembering the concept ofCopyright and applying the concept of Plagiarism in practical.
4. Creating an ability to evaluate and formulation of search strategy for information retrieval through online IPR database.

Unit-I : Fundamentals of Intellectual Property Rights (IPR)

- IP- Concept, Intellectual Property Rights, Industrial Property
- Facets of Intellectual Property Rights: Patents, Industrial Design, Trademark, Geographical Indication, Trade Secret
- IPR System in India
- World Intellectual Property Organization (WIPO)

Unit-II : Patents

- Patents: Concept, Definition, Need
- Patent as a Primary Source of Information
- Patenting System in India, Registration Process
- Patent Databases: Indian, International (USPTO, Espacenet)

Unit-III : Industrial Design, Trademarks and Geographical Indication

- Industrial Design: Need and Advantages, Industrial Design System in India
- Trademark: Need, Advantages, Types, Trademark System in India, Trademark Databases
- Geographical Indication: Need, Advantages, Registration Process in India, Indian Geographical Indication Database

Unit-IV : Copyright and Traditional Knowledge

- Copyright System in India, Indian Copyright Act, Fair Use and Copyright Infringement
- Traditional Knowledge: Concept, Definition, Need for Protection, Biopiracy, Cases of Biopiracy in India, Traditional Knowledge Digital Library

Recommended Books for Study

1. Nithyananda, K V. (2019). Intellectual Property Rights: Protection and Management. India, IN: Cengage Learning India Private Limited. (Text book)
2. Neeraj, P., & Khusdeep, D. (2014). Intellectual Property Rights. India, IN: PHI learning Private Limited. (Text book)
3. Hirwade Mangala & Hirwade Anil , Fundamentals of Intellectual Property Rights, Himalaya Publishing House. (Reference book)
4. Ahuja, V K. (2017). Law relating to Intellectual Property Rights. India, IN: Lexis Nexis. (Reference book)
5. Subramanian, N., & Sundararaman, M. (2018). Intellectual Property Rights – An Overview. Retrieved from http://www.bdu.ac.in/cells/ipr/docs/ipr-eng-ebook.pdf (E-resource)
6. World Intellectual Property Organisation. (2004). WIPO Intellectual property Handbook. Retrieved from https://www.wipo.int/edocs/pubdocs/en/intproperty/489/wipo_pub_489.pdf (E-resource)
7. Journal of Intellectual Property Rights (JIPR): NISCAIR (Reference Journal)
8. Cell for IPR Promotion and Management (http://cipam.gov.in/) (Useful Website)
9. World Intellectual Property Organisation (https://www.wipo.int/about-ip/en/) (Useful Website)
10. Office of the Controller General of Patents, Designs & Trademarks (http://www.ipindia.nic.in/) (Useful Website)

MASTER OF LIBRARY AND INFORMATION SCIENCE (CBCS)
SEMESTER- IV

MLI 4T4
(Disciplinary Elective Course)
(Choose anyone)

ARCHIVALS, MUSEUMS AND ARCHEOLOGICAL INFORMATION SYSTEM
(Elective-1)

Learning Outcomes:

1. Understanding the purpose, role and importance of Archrivals and Museums
2. Analyzing the library scenario in general and in Indian scenario in particular.
3. Evaluating the modern trends in Archeological Information Systems

Unit-I: History and Development

- Archives:
  - History and Development of Archives in India
  - Objectives and Functions
  - Types of Archival Centers
- Museums
  - History and Development of Museums in India
  - Objectives and Functions
  - Types of Museums

Unit-II: Collection, Organization and Management

- Collection of Archival and Museum
- Acquisition, Classification, Cataloguing and Indexing of Archival Material
- Source Material on archives, Manuscripts
- Machine Readable and Microfilming if Archival Records
- Databases and Digitization of Archives
- Building Design, Planning and furniture and fillings

Unit-III: Preservation of Archives

- Objectives and Purpose
- Causes of Deterioration
- Environmental Pollution: Physical, Chemical and Atmospheric
- Biological Enemics of materials: Moulds, Fungi, Insects and Rodents

Unit-IV: Rehabilitation of Documents

- Cleaning, removal of stains
- Fumingation and Deacidification
- Repair and Restoration Techniques
- Lamination
- Standards for Storage condition

Recommended Books for study

1. Chakrabarti, B and Mahapatra, P.K. Library Collection: Selection and preservation, Calcutta: World Press, 1991.
2. Cook, M. The Management of Information from Archives. Hauts, UK.Gower, 1986.
3. Hedson, J.H. The Administration of Archives, New York: Pergamon Press, 1972.
4. Henderson, K.L and Henderson, W.T. Eds: Conserving and preserving Library Materials. Illinois, University Graduate School of Library and Information Science, 1983.
5. Kumar, P.S.G. Archival Librarianship MLISc Elective paper: Kumar's C urriculum series in Library & Information Science 12, 2008, x , 368, 23cm, B.R. Publication, New Delhi.
6. Lihitkar, Shalini, R. Libraries and Information centres in Maharashtra. Pimplapure Publication . Nagpur, 2012.
7. Peace, Nancy E Ed: Archival Chains: Managing the Historical Records in the Age of abundance. Laxington. Mss. Laxington Books, 1984.
8. Winger, H.W. Deterioration and Preservation of Library materials, Chicago: University of Chicago Press, 1970.

MASTER OF LIBRARY AND INFORMATION SCIENCE (CBCS)
SEMESTER- IV

MLI 4T4
(Disciplinary Elective Course)
(Choose anyone)

BIOTECHNOLOGY INFORMATION SYSTEM
(Elective-2)

Learning Outcomes:

1. Understanding the purpose, role and importance of Biotechnological libraries
2. Analyzing the library scenario in general and in Indian scenario in particular.
3. Evaluating the modern trends in Biotechnology information Systems.

Unit-I: Biotechnology Growth and Development

- Growth and development of Biotechnology Education in India
- Growth and development of Biotechnology Research in India
- Role of Libraries in Biotechnology Research and extension
- Development of Biotechnology Institutes and their libraries in India
- Biotechnology Information Systems and Networks **:** Biotechnology and allied Information Systems in India – BTIS: Structure and Organization
- Networking and Resource Sharing in Biotechnology Information Systems

Unit-II: Information Sources and Services, Products and Centres in Biotechnology

- Information Sources in Biotechnology:
  - Documentary
  - Non-Documentary
  - Electronic Resources
  - Biotechnology Databases
- Biotechnology Services and Products:
  - Information Services rendered to faculty and research scholars
  - Web based Services
  - Advanced Information Services and Products
- Biotechnology Information Centres
  - National
  - International

Unit-III: Organisation and Management of Resources

- Biotechnology Information: Collection, Organization, Processing and Dissemination
- Developing Skills of Personnel
- Managing the finance: Funds, Generation of extra financeaa, Programmes and Projects

Unit-IV: Information Needs of the Users and Professional Associations

- Special information needs of Biotechnology faculty
- Special information needs of Biotechnology Research workers
- User studies of Local Biotechnology Research Organizations

- Preparing a report on user needs (survey)
- Professional associations and their Role in Biotechnology

Recommended Books for study

1. Allent Kent. Encyclopaedia of Library and Information Science Vo. Mercel, New York.
2. Annual Report of Biotechnology Information System, 1998.
1. Annual Reports. Department of Biotechnology. Govt. of India, New Delhi.
2. Annual Reports of National Environmental Engineering Research Institute, (NEERI) Nagpur.
3. Biotechnology: Research Development and Demonstration: Thrust Areas. Department of Biotechnology Annual Report 1993-94, Ministry of Science and Technology, Government of India. Department of Biotechnology (2001)
4. Chathurvedi, Sachin. Asian Biotechnology Market. Emerging investment trends. Ag.Biotech. Net, CAB International, Vol. 1. March.
5. Chaturvedi, Sachin . Biosafety policy and implicative in India. Biotechnology andDevelopment Monitor No.30 March, 1997.
6. Directory of Biotechnology Equipments in India, DISC, NEERI, Nagpur, 1997.
7. Dubey, R.C. A Text Book of Biotechnology : New Delhi, S.Chand, 2004. P480.
8. Gangreddiwav, A.P. Information consolidation on Biotechnology, MLISc Project Report,RTM Nagpur University. Supervisor: D.Rajyalakshmi, Co-guide: Mangala Hirwade, 2009.
9. Gilbirt, C.R. Biotech laboratories, Experiments, equipments and institutions . Anmol Publications, New Delhi, 2008. P. 245-295.
10. Jeevan, V.J. bioinformatics Resources on Internet, Library Herald Vo.40, N2, 2002, p271-287.
11. Kedar, A, Rajyalakshmi, C.D., and Gupta , Activities of Distributed Information sub centresof BTIS: An Overview. Proceedings of Environmental Biotechnology Symposium. 28-29 March, 1994, DISC, NEERI, Nagpur.
12. Lihitkar, S. Information Systems and Networks in India Today and Tomorrow Pub. New Delhi, 2012.
13. Lihitkar, Shalini, R. Libraries and Information centres in Maharashtra. PimplapurePublication . Nagpur, 2012.
14. McGraw Hill Encyclopaedia of Science & Technology.
15. Padole, K. Directory of Biotechnology Educational and Research Institutions in India. MLISc project report, RTM Nagpur University, Supervisor: D.Rajyalakshmi. (2005)
16. Pental, Deepak . Plant molecular biology and biotechnology in India. Plant molecularbiology reporter Vol.16, p.93-97.
17. Rajyalakshmi, D, Kedar, A and Gupta, A. Biotechnology Databases and their Access facilities in India. In International Conference BIOCHEM'97. Dean 26-28, Dept. ofBiotechnology, Nagpur University, (DISC, NEERI, Nagpur).
18. Sharma, K.H. A study of biotechnology related research institution libraries in Nagpur city. MLISc project report. RTM Nagpur University. Supervisor: Nikose, S.M. (2005).
19. Shewale, J.G. Biotechnology in Healthcare (No.6) National Institute of Science Communication CSRR, Govt. of India. Dissemination of biotechnology of information DBT. 2000 p. 33-37.
20. Sugdev, S.S. Study of Distributed Information sub centres of BTIS. MLISc project report RTM Nagpur University. Supervisor D.G. Kapde.(2005).

MASTER OF LIBRARY AND INFORMATION SCIENCE (CBCS)
SEMESTER- IV

MLI 4T4
(Disciplinary Elective Course)
(Choose anyone)

ENGINEERING AND TECHNOLOGICAL LIBRARY AND INFORMATION SYSTEM
(Elective-3)

Learning Outcomes:

1. Understanding the purpose, role and importance of Engineering and Technological libraries
2. Analyzing the library scenario in general and in Indian scenario in particular.
3. Evaluating the modern trends in Library and Information Science

Unit-I : Engineering and Technological Education and Research

- Growth and development of engineering and technology education and research in India.
- Development of Engineering and Technology Libraries in India
- Role of Engineering and Technology Libraries in India
- Role of Agencies in growth and development of Engineering and Technology Libraries in India

Unit-II : Engineering and Technological Sources, Services and Product

- Information Sources : Engineering and Technology
- Documentary and Non-documentary Sources
- Electronic resources : Open Access and Commercial
- Databases : offline and online
- Web based Services
- Information services rendered to faculty and research scholars
- Resource sharing, networks and consortia

Unit-III : Organization and Management of Resources

- Organisational Structure
- Collection, Processing and Dissemination
- Managing the finance, sources of finance, budget
- Programmes and Projects
- Developing skills and competency of personnel, responsibility and duties

Unit-IV : Information needs of users and Professional Associations

- Information needs of faculty members and students
- User studies of engineering and technology libraries (one report)
- Preparing a report of one engineering and technology libraries
- Professional associations
- Engineering and technological centers
- Information Literacy Programme
- Norms and Standards

Recommended Books for study

1. Allent Kent. Encyclopaedia of Library and Information Science Vo. Mercel, New York.
2. Jeevan, V.J. bioinformatics Resources on Internet, Library Herald Vo.40, N2, 2002, p271-287.
3. Kedar, A, Rajyalakshmi, C.D., and Gupta , Activities of Distributed Information sub centresof BTIS: An Overview. Proceedings of Environmental Biotechnology Symposium. 28-29 March, 1994, DISC, NEERI, Nagpur.
4. Lihitkar, S. Information Systems and Networks in India Today and Tomorrow Pub. New Delhi, 2012.
5. Lihitkar, Shalini, R. Libraries and Information centres in Maharashtra. PimplapurePublication . Nagpur, 2012.
6. McGraw Hill Encyclopaedia of Science & Technology.
7. Chakrabarti, B and Mahapatra, P.K. Library Collection: Selection and preservation, Calcutta: World Press, 1991.
8. Henderson, K.L and Henderson, W.T. Eds: Conserving and preserving Library Materials. Illinois, University Graduate School of Library and Information Science, 1983.
9. Lihitkar, Shalini, R. Libraries and Information centres in Maharashtra. Pimplapure Publication . Nagpur, 2012.
10. Peace, Nancy E Ed: Archival Chains: Managing the Historical Records in the Age of abundance. Laxington. Mss. Laxington Books, 1984.
11. Winger, H.W. Deterioration and Preservation of Library materials, Chicago: University of Chicago Press, 1970.

MASTER OF LIBRARY AND INFORMATION SCIENCE (CBCS)
SEMISTER –IV

PRACTICAL

Learning Outcomes:

1. Students will be able to gain the knowledge of selection to topic, searching literature, research design
2. Students will understand how to collect data, coding of data, analyze and interpretation,
3. Students will to gain knowledge of drafting report and representation of report.

MLI 4L1: Project Work (Major) **Marks: 150**

The project work to be prepared by students and report should be submitted, it consists of 100 marks and viva-voce will be conducted which consist of 50 marks.