महात्मा गाँधी केन्द्रीय विश्वविद्यालय

MAHATMA GANDHI CENTRAL UNIVERSITY

[Established by an Act of Parliament]

2-Year Integrated
Master of Library and Information Science

Syllabus
(Under NEP - 2020 w.e.f. 2024 - onwards)

DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE

महात्मा गाँधी केन्द्रीय विश्वविद्यालय

MAHATMA GANDHI CENTRAL UNIVERSITY

(Established by an Act of Parliament)
Dr. Ambedkar Administrative Building, Near OP Thana, Raghunathpur, Motihari,
District: East Champaran, Bihar – 845401

DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE

2 Year Integrated
Master of Library and Information Science

A two-year full-time course divided into four semesters leading to the degree of Master of Library & Information Science (M. Lib. I. Sc.).

A. Program Details

Name of the Department: Department of Library and Information Science

School: School of Computational Sciences, Information and Communication Technology (SCSI&CT)

Subject: Library & Information Science

Duration of the Programme: 2 Year divided into 4 Semesters (NEP 2020 System)

B. Objectives of the Programme

1. To revamp curriculum, pedagogy, assessment, and student support, increased access, equity, and inclusion
2. To acquaint students with the activities and service of different information source, system and programme
3. To develop in critical thinking and analytical skills
4. To promote flexibility, so that learners have the ability to choose their learning trajectories and programmes and thereby choose their own path in life according to their talent and interests
5. To introduce modern management technique to students to manage Library and Information Centres effectively

C. Programme Outcomes

After the completion of this programme the student will be in a position to work at middle and top managerial positions in all types of libraries, viz. academic, public, or special. It involves competencies relating to drafting and getting approval for the library policy, delegation, recruitment, conflict resolution, etc. They will have competencies to design and develop innovative library services such as integrated library management systems, digital library, institutional repositories and for the specific needs of the community of users. Additionally, they will be able to conduct studies to evaluate the impact, effectiveness and efficiency of library services and library collection among the users. Another outcome of the programme is to develop a strong subject foundation for doctoral-level courses in library and information science.

C. Details of Course Credit Scheme and Scheme of Examination:

2-Year Integrated Master's Programme in Library and Information Science (2024-25 onwards) Intake: 33 **Total Semester: 4 Credit: 88 Level: 6.5 and 7**			
Level	**Programme**	**Qualification Titles**	**Total Credits**
Level 6.5	2-Year Integrated Master Programme in Library and Information Science **Ist Year**	**Minimum Eligibility:** 3-year Bachelor's degree in any discipline from Central/State Government recognized university having minimum 50% marks or equivalent grade (5% marks relaxation for SC/ST/OBC (Non-creamy layer)/PwD Candidates)	**Semester I: 20 Credits** **Semester II: 20 Credits** **Total: 40 Credits**
		Type of Qualification Students on exit shall be awarded **Post Graduate Diploma in Library and Information Science equivalent to Bachelor of Library and Information Science** after securing the requisite 44 credits (Including 4 Credits Internship) on completion of Semester II	**Exit student: 44 credits**
Level 7	2-Year Integrated Master Programme in Library and Information Science **IInd Year**	**Minimum Eligibility:** 4-year Bachelor (Honours with Research) in Library and Information Science degree from Central/State Government recognized university having minimum 50% marks or equivalent grade. Or, 4-year Bachelor (Honours) in Library and Information Science in any discipline from Central/State Government recognized university having minimum 50% marks or equivalent grade. Or, 3-year Bachelor's degree in any discipline and Post Graduate Diploma in Library and Information Science or, 3-year Bachelor's degree in any discipline and One Year Bachelor of Library and Information Science from Central/State Government recognized university having minimum 50% marks or equivalent grade (5% marks relaxation for SC/ST/OBC (Non-creamy layer)/PwD Candidates)	**Semester III: 20 Credits** **Semester IV: 28 Credits** **Total: 40+48 = 88 Credits**
		Type of Qualification Students shall be awarded **2-Year Integrated Master's Degree in Library and Information Science** after securing the requisite 88 credits on completion of Semester IV.	

2-Year Integrated Master's Programme in Library and Information Science

Ist Year, Semester I, Level 6.5

Course Code	Course Title	Broad Category of Course	Credit Distribution				Duration	IA	ESE	Total
			L	T	P	Total				
Discipline Specific Core Course (DSC) (Compulsory)										
MLIS4101	Foundation of Library and Information Sciences	DSC	3	1	0	4	60 HRS	40	60	100
MLIS4102	Knowledge Organization I: Classification (Theory)	DSC	3	1	0	4	60 HRS	40	60	100
MLIS4103	Content Management System	DSC	3	1	0	4	60 HRS	40	60	100
MLIS4104: Open Elective Course (OEC) (Opt any one course from the following or, choose from MOOCs/SWAYAM/ Multi-disciplinary from other departments of University) (Select Any One)										
MLIS4104A	Computer and Communication Technology	OEC	3	1	0	4	60 HRS	40	60	100
MLIS4104B	Database Design and Management	OEC	3	1	0	4	60 HRS	40	60	100
MLIS4104C	Library and Information Services	OEC	3	1	0	4	60 HRS	40	60	100
Skill Enhancement Course/Practical (Compulsory)										
MLIS4105	Knowledge Organization I: Classification (Practical)	PC/SEC	0	1	1	2	30 HRS	40	60	100
MLIS4106	Information Technology (Practical)	PC/SEC	0	1	1	2	30 HRS	40	60	100
MLIS4107: Mandatory Elective Non-Credit Course (MENC) equivalent to 2 credits (Opt any one course from the following) (Select Any One)										
MLIS4107A	Preservation and Conservation of Library Resources	MENC					30 HRS			
MLIS4107B	ICT and Digital Skills	MENC					30 HRS			
						Total Credit	20			

Abbreviations:
DSC: Discipline Specific Core Course (Compulsory), **OEC**: Open Elective Course, **PC**: Practical Course, **SEC**: Skill Enhancement and **MENC**: Mandatory Elective Non-Credit Courses equivalent to 2 credits.

2-Year Integrated Master's Programme in Library and Information Science

Ist Year, Semester II, Level 6.5

Course Code	Course Title	Broad Category of Course	Credit Distribution				Duration	IA	ESE	Total
			L	T	P	Total				
Discipline Specific Core Course (DSC) (Compulsory)										
MLIS4201	Research Methodology	DSC	3	1	0	4	60 HRS	40	60	100
MLIS4202	Knowledge Organisation II: Cataloguing (Theory)	DSC	3	1	0	4	60 HRS	40	60	100
MLIS4203	Information Communication Technology: Application (Theory)	DSC	3	1	0	4	60 HRS	40	60	100
MLIS4204: Discipline Specific Elective Course (DSE) (Select Any One)										
MLIS4204A	Collection Development and Management of E-Resources	DSE	3	1	0	4	60 HRS	40	60	100
MLIS4204B	Institutional Repository	DSE	3	1	0	4	60 HRS	40	60	100
MLIS4204C	Intellectual Property Rights and Copyrights	DSE	3	1	0	4	60 HRS	40	60	100
Skill Enhancement Course/Practical (Compulsory)										
MLIS4205	Knowledge Organisation II: Cataloguing (Practical)	PC/SEC	0	1	1	2	30 HRS	40	60	100
MLIS4206	Information Communication Technologies: Application (Practical)	PC/SEC	0	1	1	2	30 HRS	40	60	100
MLIS4207: Mandatory Elective Non-Credit Course (MENC) equivalent to 2 credits (Opt any one course from the following) (Select Any One)										
MLIS4207A	SWAYAM approved Courses	MENC					30 HRS			
MLIS4207B	Internet of Things	MENC					30 HRS			
					Total Credit	20				
MLIS4208	Internship* (Exit Module)	Internship	0	1	3	4	60 HRS	40	60	100

Abbreviations:
DSC: Discipline Specific Core Course (Compulsory), **DSE**: Discipline Specific Elective Course, **PC**: Practical Course, **SEC**: Skill Enhancement Course and **MENC**: Mandatory Elective Non-Credit Course, equivalent to 2 credits.

***If any students want to exit shall be awarded Post Graduate Diploma in Library and Information Science equivalent to Bachelor of Library and Information Science after securing the requisite 44 credits (Including 4 Credits Internship) on completion of Semester II.**

2-Year Integrated Master's Programme in Library and Information Science

IInd Year, Semester III, Level 7

Course Code	Course Title	Broad Category of Course	Credit Distribution				Duration	IA	ESE	Total
			L	T	P	Total				
Discipline Specific Core Course (DSC) (Compulsory)										
MLIS4301	Management of Library and Information Centre	DSC	3	1	0	4	60 HRS	40	60	100
MLIS4302	Digital Library (Theory)	DSC	3	1	0	4	60 HRS	40	60	100
MLIS4303: Discipline Specific Elective Course (DSE) (Select Any One)										
MLIS4303A	Web Based Information Systems and Services (Theory)	DSE	0	1	3	4	60 HRS	40	60	100
MLIS4303B	Academic Library and Information System	DSE	0	1	3	4	60 HRS	40	60	100
MLIS4304: Open Elective Course (OEC) (Opt any one course from the following or, from MOOCs/SWAYAM/ Multi-disciplinary from other departments of University) (Select Any One										
MLIS4304A	Public Library and Information System	OEC	0	1	3	4	60 HRS	40	60	100
MLIS4304B	Research and Technical Library and Information System	OEC	0	1	3	4	60 HRS	40	60	100
MLIS4304C	Health Science Library and Information System	OEC	0	1	3	4	60 HRS	40	60	100
MLIS4304D	Agricultural Sciences Library and Information System	OEC	0	1	3	4	60 HRS	40	60	100
MLIS4304E	Indian Culture and Tradition	OEC	0	1	3	4	60 HRS	40	60	100
Skill Enhancement Course/Practical (Compulsory)										
MLIS4305	Web Based Information Systems and Services (Practical)	PC/SEC	0	1	1	2	30 HRS	40	60	100
MLIS4306	Digital Library (Practical)	PC/SEC	0	1	1	2	30 HRS	40	60	100
MLIS4307: Mandatory Elective Non-Credit Course (MENC) equivalent to 2 credits (Opt any one course from the following) (Select Any One)										
MLIS4307A	Cloud Computing in LIS	MENC					30 HRS			
MLIS4307B	Indian Knowledge System	MENC					30 HRS			
					Total Credit	20				

Abbreviations:

DSC: Discipline Specific Core Course (Compulsory), **DSE**: Discipline Specific Elective Course, **PC**: Practical Course, **SEC**: Skill Enhancement Course and **MENC**: Mandatory Elective Non-Credit Course, equivalent to 2 credits.

2-Year Integrated Master's Programme in Library and Information Science

IInd Year, Semester IV, Level 7

Course Code	Course Title	Broad Category of Course	Credit Distribution				Duration	IA	ESE	Total
			L	T	P	Total				
Discipline Specific Core Course (DSC) (Compulsory)										
MLIS4401	Information Retrieval System	DSC	3	1	0	4	60 HRS	40	60	100
MLIS4402	Information Literacy in LIS	DSC	3	1	0	4	60 HRS	40	60	100
MLIS4403: Discipline Specific Elective Course (DSE) (Select Any One)										
MLIS4403A	Media and Publishing Technology	DSE	3	1	0	4	60 HRS	40	60	100
MLIS4403B	Library Automation and Networking	DSE	3	1	0	4	60 HRS	40	60	100
MLIS4403C	Disaster Management in Information Centres	DSE	3	1	0	4	60 HRS	40	60	100
MLIS4403D	Marketing of Library and Information Products and Information Services	DSE	3	1	0	4	60 HRS	40	60	100
MLIS4403E	Technical Writing	DSE	3	1	0	4	60 HRS	40	60	100
Skill Enhancement Course/Practical (Compulsory)										
MLIS4404	Dissertation/Project Work	PC/SEC	0	1	7	8	120 HRS	40	60	100
Internship										
MLIS4405	Internship* (Exit Module)	Internship	0	1	7	8	120 HRS	40	60	100
MLIS4406: Mandatory Elective Non-Credit Course (MENC) equivalent to 2 credits (Opt any one course from the following) (Select Any One)										
MLIS4406A	Information and Digital Literacy for Social Groups	CEC/ MENC					30 HRS			
MLIS4406B	Biographies of Famous Librarians	MENC					30 HRS			
						Total Credit	28			
						Grand Total Credit	**88**			

Abbreviations:
DSC: Discipline Specific Core Course (Compulsory), **OEC**: Open Elective Course, **PC**: Practical Course, **SEC**: Skill Enhancement Course, SEC: Skill Enhancement, **CEC**: Community Elective Course and **MENC**: Mandatory Elective Non-Credit Courses equivalent to 2 credits.

*****Students shall be awarded **2-Year Integrated Master's Degree in Library and Information Science** after securing the requisite 80 credits on completion of Semester IV.

I[st] Year, Semester- I

Course Code	**MLIS4101**
Course Title	Foundation of Library and Information Sciences
Type of Paper	DSC (Discipline Specific Core Course) Compulsory
Credit	4
Teaching Hours	60

Objectives: *To acquaint the students with the basic concepts of Foundations of Library and Information Science and how to deal with it.*

Outcome: *After completion of the course, students will be able to understand the concept of Library, types of Libraries, Library Legislation and Policy and their application in information science.*

Unit I: Library and Information

- Role of Library and Information Centres in Modern Society; Growth & Development of Libraries in UK, USA, and India
- Role of library in formal and informal education
- Five Laws of Library Science and their implications,
- Information: Characteristics, Nature, Value and Use of Information Conceptual difference between Data, Information and Knowledge

Unit II: Types of Libraries, Professional Associations and Organizations

- National Library of India, Public Libraries, Academic Libraries and Special Libraries
- Professional Associations: ILA, IASLIC, CILIP, ALA, ASLIB
- National and International Organizations: RRRLF, UNESCO and IFLA
- Resource Sharing and Library and Information Profession: Resource sharing and library networking. Role of INFLIBNET.

Unit III: Library Legislation

- Library Legislation: Need, Purpose, Objectives, and essential features.
- Library legislation in India, Model Act: Madras, Andhra Pradesh Karnataka.
- Press and Registration Act, Delivery of Books (Public Libraries) Act
- Right to Information Act; IPR and Copyright

Unit IV: Library and Information Policy and Profession

- National Information Policy
- National Knowledge Commission
- Professional Ethics,
- Role of Library and Information Professionals in Digital Era

RECOMMENDED BOOKS

1. BHATT (R K): History &Development of Libraries in India (1995), Mittal Publications, New Delhi.

2. CHAPMAN (EA) and LYNDEN (FC): Advances in Librarianship (2000), Academic Press, San Diego.

3. CHOWDHURY (GG), BURTON (PF) and McMENEMY(D): Librarianship: the complete introduction (2008), Neal-Schuman Publishers, New York.

4. FEATHER (J): The Information Society: a study of continuity and change (Ed. 2008), Facet Publishing, London.

5. KHANNA (JK): Library and Society (1955), Research Publication, Kurukshetra.

6. KRISHAN KUMAR: Library Organization (1993), Vikas, New Delhi.

7. MARTIN (W J): The information Society (1988) Aslib, London.

8. PRASHER (R G): Information and its Communication (1991), Medallion Press, New Delhi.

9. RANGANATHAN (S R): Five laws of Library Science (Ed. 2,1989), Sarada Ranganathan Endowment for Library Science, Bangalore.

10. SINGH (S P): Special Libraries in the Electronic Environment (2005), Bookwell, New Delhi. Department of Library & Information Science, University of Delhi

11. VENKTAPPAIAH (V) and MADHUSUDHAN (M): Public Library Legislation in the new Millennium (2006), Bookwell, New Delhi.

Course Code	**MLIS4102**
Course Title	Knowledge Organization I: Classification (Theory)
Type of Paper	DSC (Discipline Specific Core Course) Compulsory
Credit	4
Teaching Hours	60

Objectives: *To apprise the students with the organization of knowledge with different basic concepts and philosophies of library classification.*

Outcome: *After completion of the course, students will understand the basic concept and philosophies of library classification, functions of different classification schemes available; and recent trends and developments in the subject.*

Unit I: Elements of Library Classification

- Concepts, Terminology, Need, Purpose, and Functions
- Library Classification: Historical Perspectives
- Mapping of Universe of subjects in major schemes of Library classification
- Species of Classification Schemes

Unit II: Classification Theory and Approaches

- General Theory of Classification: CC
- Normative Principles; Modes of Formation of Subjects
- Postulation Approach, Fundamental Categories, Facet Analysis and Facet Sequence
- Phase Relation, Common Isolates and Devices in Library Classification

Unit III: Notation and Construction of Classification Number

- Notation: Definition, Need, Purpose, Types and Qualities
- Call Number: Class Number, Book Number and Collection Number
- Construction of Class Numbers: CC 6th edition, DDC Latest
- Relative Index

Unit IV: General and Special Classification

- Dewey Decimal Classification
- Universal Decimal Classification
- Colon Classification
- Current Trends in Library Classification

RECOMMENDED BOOKS

1. Broughton, Vanda. (2004). Essential Classification. London: Facet Publishing.

2. Dhiman, A. K. & Yashoda Rani. (2005). Learn Library Classification. New Delhi: EssEss.

3. Husain, Sabahat. (2004). Library Classification: Facets and Analysis. Delhi: B. R. Publishing.

4. Jennex, Murray E. (2008). Knowledge Management: Concepts, Methodologies, Tools and Applications. New York: Information Science Reference.

5. Kao, Mary L. (2003). Cataloguing and Classification for Library Personnel. Mumbai: Jaico.

6. Kumar, P. S. G. (2003). Knowledge Organization, Information Processing and Retrieval Theory. Delhi: B. R. Publishing.

7. Pathak, L. P. (2000). Sociological Terminology and Classification Schemes. New Delhi: Mittal Publications.

8. Ranganathan, S. R. (2006). Philosophy of Library Classification. Bangalore: Ess Ess.

9. Singh, Sonal. (1998). Universe of Knowledge: Structure & Development. Jaipur: Raj Publishing.

10. Sood, S. P. (1998). Universe of Knowledge and Universe of Subjects. Jaipur:

    G. Star Printers.

11. Taylor, A. G. (2007). Introduction to Cataloguing and Classification (10thed.). New Delhi: Atlantic.

Course Code	MLIS4103
Course Title	Content Management System
Type of Paper	DSE (Discipline Specific Elective Course)
Credit	4
Teaching Hours	60

Objectives- *To make the students aware with content management concepts, content management and related software.*

Outcome- *After completion of the course, students will be in a position to understand the content management, content developing strategies, data integration and community information System*.

Unit I: Introduction to CMS

- Introduction of CMS, Benefits
- Concept and Content Creation, Types of contents
- Challenges and real-world application
- Document Management, Record Management

Unit II: Content Management

- Concept, Content creation and Principles of CMS
- CMS Architecture
- Creating and managing Web Page and Content on Web Page
- Fundamentals of Planning Dynamic Websites

Unit III: Content Management Software and Application

- Overview of CMS software such as WordPress, Drupal, Joomla, and others to create Dynamic and flexible Websites.
- Evaluation of CMS.
- Application of CMS; CMS and Community Information Systems
- Document Management, Records Management, Digital Assets Management

Unit IV: Integration and Community Information System (CSI)

- System and data integration in CMS
- CMS Application
- CSI: Concept
- CSI: Conceptual Framework, Purpose & Technology

RECOMMENDED BOOKS

1. Arthur, M.H. (2006). Expanding a digital content management system for the growing digital media enterprise. Boston: Elsevier Focal Press.
2. Barrie, M. N. (2009). Joomla! 1.5: a user's guide: building a successful Joomla!Powered website. Upper Saddle River, NJ: Prentice Hall.
3. Bishop, A. P. et al. (eds.). (2005). Digital Library Use: Social Practice in Design and Evaluation. Delhi: Ane Books.
4. Bradford, L. E. (2008). Content management systems in libraries: case studies. Lanham, MD: Scarecrow Press.
5. Chowdhury, G. G. & Chowdhury, Sudatta. (2003). Introduction to Digital Libraries. London: Facet.
6. Cooper, Michael D. Design of Library Automation Systems: File Structure, Data Structures and Tools, New York: John Wiley, 1996.
7. Deegan, Marilyn & Tanner, S. (2006). Digital Preservation. London: Facet Publishing.
8. Hal Stern, Brad Williams and David Damstra. (2010). Professional WordPress: design and development. Indianapolis, IN: Wiley Pub., Inc.
9. Janet Majure. (2010). Teach yourself visually WordPress. Indianapolis, IN: Wiley Pub., Inc.
10. Jason, C. and Helen, F. (2008). Using Moodle. Sebastopol, CA: O'Reilly Community Press.
11. Jen, K.P. and Sarah, E. (2010). Joomla! Start to finish. Indianapolis, IN: Wiley Pub., Inc.
12. Jennifer Marriott and Elin Waring. (2011). The official Joomla! Book. Upper Saddle River, NJ: Addison-Wesley.
13. John M. Cohn, Ann L. Kelsey and Keith Michael Fiels, Planning for Library automation: A Practical Handbook London: Library Association, 1998.
14. Jones, Richard et al. (2006). The Institutional Repository. Oxford: Chandos Publishing.
15. Judith, Andrews & Derek, Law. (2004). Digital Libraries. Hants: Ashgate.
16. Kausik Bose Information Networks in India: Problems and Prospects / New Delhi: Ess Ess Publications, 1994.

Course Code	**MLIS4104A**
Course Title	Computer and Communication Technology (Theory)
Type of Paper	OEC (Open Elective Course)
Credit	4
Teaching Hours	60

Objectives: *To familiarize the students with the basics structure of computer and Communication Technology.*

Outcome: *After completion of the course, students will be able to understand the development of computers and CT, the different software and hardware components, devices, operating systems, and programming languages etc.*

Unit I: Introduction to Computers

- Basic Components of a Computer; Arithmetic Logic Unit - Half-adder, Full-adder, Multiplier; Control Unit
- Memory Unit - Static and Dynamic RAM, ROM, Cache memory.
- Input/Output devices – Keyboards, Monitors, Printers, Scanners, Secondary Storage Elements.
- Generations of Computer

Unit II: Data Representation and Computer Software

- Data Representation in Computers: Logic Gates and Circuits, Binary Number System, Character encoding standards ASCII, ISCII and UNICODE
- Computer Software: System Software and Application Software
- Programming Concepts: Open Source and Propriety
- Operating Systems: Windows, DBMS & LINUX. Working with windows.

Unit III: Introduction of Communication Technology

- Communication Technology: Components, Impact on society
- Communication Technology and Internet
- Overview of Internet security, E-mail threats and secure E-mail
- Viruses and antivirus software, Firewalls, Cryptography, Digital signatures
- Copyright issues
- Digital Initiatives: SWAYAM, Swayam Prabha, National Academic Depository, National Digital Library of India, E-Shodhsindhu, Virtual labs, e-acharya, e-Yantra and NPTEL.

Unit IV: Telecommunication and Networks

- Tele-communication: Transmission Media, ISDN, Multiplexing, Switching Technique
- Networking: Topology and Types of Networks, Standards & Protocols, Network Models(OSI), Networking Devices
- Retrieval Standards: Z39.50, SRU/SRW, Bibliographic Management Software: ENDNOTE, REFWORK

RECOMMENDED BOOKS

1. Arora, Ashok & Bansal, Shefali. (2000). Computer Fundamentals. New Delhi: Excel Books.
2. Basandra, Suresh K. (1999). Computer Today. New Delhi: Galgotia Publications.
3. Chandrasekaran, M.; Govindaraju, S.; Huq, A. Abdul & Narayanan, T. R.(1996). Elements of Computer Science. New Delhi: New Age International.
4. Date, C. J. (2003). An Introduction to Database Systems. Pearson Education. New Delhi: BPB Publications,
5. Jain, Madhulika& Jain, Satish. (2007). Introduction to Database Management Systems. New Delhi: BPB Publication.
6. Kumar, P. S. G. (2004). Information and Communication. Delhi: B. R. Publication.
7. Leon, Alexis & Leon, Mathews. (2006). Fundamentals of Database Management Systems. Chennai: Vijan Nicole.
8. Matthew, Neil & Stones, Richard. (2008). Beginning Linux Programming. New Delhi: Wiley India.
9. Prasher, R. G. (2003). Information and its Communication. Ludhiana: Medallion Press.
10. Ramesh Babu, B. &Gopalakrishnan, S. (2004). Information, Communication, Library and Community Development. Delhi: B. R. Publishing.
11. Sinha, Pradeep Kumar & Sinha, Priti. (2007). Computer Fundamentals. New Delhi: BPB Publication.
12. Stallings, William. (2007). Computer Networking with Internet Protocols and Technology. Delhi: Pearson Education.
13. Sybex. (2007). Linux Complete. BPB Publications, 2007: New Delhi.

Course Code	**MLIS4104B**
Course Title	Database Design and Management
Type of Paper	OEC
Credit	4
Teaching Hours	60

Objectives- *To make the students aware of the d*atabase design and management *concepts and other issues related to d*atabase.

Outcome- *After completion of the course, students will be aware of IPR & copyright, copyright database design and management.*

Unit I: Database Design and Management

- Database: Concept, Genesis, Development and Categories
- Entity and Column, Entity in Detail, Column in Detail
- The Three-Levels of ER Model, Key and Relationship
- Database View, Triggers and Stored Procedures

Unit II: Database Engineering

- Database Engineering: Meaning and Scope
- Generate Database
- Patch Database
- Reverse Database to ERD

Unit III: Database Software

- Microsoft SQL server, Oracle
- MySQL, PostgreSQL
- MongoDB
- Amazon Web Services

Unit IV: Database Programming

- SQL
- Python, R
- PHP
- C#

RECOMMENDED BOOKS

1. Hansen, Gary W. & Hansen, James V. (1992). Database Design and Management. Los Angeles: Pearson.
2. Captain, Fidel (2013). Six-Step Relational Database Design™ (Second Edition): A step by step approach to relational database design and development. Kindle Edition.
3. Reis, Joe & Housley, Matt (2022). Fundamentals of Data Engineering. O'Reilly Media, Inc.
4. Campbell, Laine & Majors, Charity (2017). Database Reliability Engineering. O'Reilly Media, Inc.
5. Eagar, Gareth (2021). Data Engineering with AWS: Learn how to design and build cloud-based data transformation pipelines using AWS. Kindle Edition.
6. Petkovic, Dusan (2020). Microsoft SQL Server 2019: A Beginner's Guide. McGraw Hill.

Course Code	**MLIS4104C**
Course Title	Library and Information Services
Type of Paper	OEC (Open Elective Course)
Credit	4
Teaching Hours	60

Objectives: *To familiarize the students with the basic library and information services & systems*

Outcome: *After completion of the course, students will be able to understand the various information services provided by libraries and information centres and they will get knowledge about national and international information systems.*

Unit I: Introduction to Information Services

- Concept, Meaning, Definitions
- Scope and Types of Information Services
- Traditional Library Services
- Web enabled Library and Information Services
- Need and Importance of Library Services

Unit II: Types of Information Services

- Reference Service, Abstracting Service
- Indexing Service, Current Awareness Service, and Alerting Service
- Document Delivery Service; Planning and Development of Information Services.
- Electronic Information Services- e-CAS, e-SDI, Electronic Document Delivery Services

Unit III: Study of Information System

- Concepts, Objectives, Functions
- Name of Information Systems
- Types of Information Systems: Planning, Design and Evaluation of Information Systems
- Study of National Information Systems- NISCAIR, DESIDOC, and NASSDOC

Unit IV: Study of Global Information System

- Objective and Functions of Global Information Systems
- Study of Global Information Systems: INSPEC,
- MEDLARS, BIOSIS, COMPENDEX, AGRIS

RECOMMENDED BOOKS

1. Carmel, Maguire., Weir, Anthony D., Kazlauskas, Edward J. (2013). Information Services for Innovative Organizations. Emerald Group Publishing Limited,
2. Krishan Kumar: Reference service, New Delhi: Vikas, 1990.
3. Lucas, Amy (Ed): Encyclopaedia of Information Systems and Services, Detroit: Gale Research, 1989.
4. Parida, Baman: Studies on information systems, services and programs in India and abroad. Delhi: Ajantha, 1993.
5. Ryan, Brendan. (2014). Optimizing Academic Library Services in the Digital Milieu: Digital Devices and their Emerging Trend 1st ed. Chandos Publishing:
6. Rawley, Jennifer: Abstracting and Indexing services, 1988.
7. Sandra Hirsh. (2015). Information Services Today: An Introduction/ 1st ed., Rowman & Littlefield,
8. Smith, Linda C., & Wong, Melissa A.. (2010). Reference and Information Services: An Introduction, / 5th ed., Libraries Unlimited,
9. Vickery, B: Information Systems, London: Butterworths, 1987.

Course Code	**MLIS4105**
Course Title	Knowledge Organization I: Classification (Practice)
Type of Paper	PC/SEC (Skill Enhancement Course/ Practical) Compulsory
Credit	2
Teaching Hours	30

Objectives: *To familiarize the students with the practical experience of library classification.*

Outcome: *After completion of the course, students will be able to classify library resources by using CC & DDC scheme.*

Unit I: Colon Classification (6th Edition)

- Classification of Documents with Compound and Complex Subjects

Unit II: Dewey Decimal Classification (Latest Edition)

- Classification of Documents with Compound and Complex Subjects

(B) Assigning Class Numbers representing Simple, Compound, Complex Subjects according to CC 6th ed. And DDC (Latest available edition) **- 40 marks**

(C) Viva Voce – 20 marks

Course Code	**MLIS4106**
Course Title	Information Technology (Practice)
Type of Paper	PC/SEC (Skill Enhancement Course/ Practical) Compulsory
Credit	2
Teaching Hours	30

Objective: *To provide hands on practice on computer operating systems, Library Automation and Digital Library Software*
Outcome: *After completion of the course, students will be able to work on Application software, Library Automation Software, database creation and Digital Library software for various Digital Library works.*

Unit I: Operating Systems

- Windows - Installation and Functions
- Linux Setting of Desktop
- Library Server and its Maintenance

Unit II: Hands on experience of Application Software

- MS-Word
- MS-Excel
- MS-Power Point

(A) Assigning Operating Systems, Hands on experience of Application Software - 40 marks

(B) Viva Voce- 20 marks

Course Code	**MLIS4107A**
Course Title	Preservation & Conservation of Library Resources
Type of Paper	MENC (Mandatory Elective Non -Credit Course)
Credit	2
Teaching Hours	30

Objectives- *To appraise need and techniques of preservation and conservation of library materials.*

Outcome- *After completion of the course, students will be able to understand various preservation and conservation techniques of library materials.*

Unit I: Basics of Preservation and Conservation: Overview

- Preservation and Conservation: Historical Development, Need and Purpose
- Preservation of Print Materials: Books, Periodicals, Pamphlets, Digital Preservation
- Preservation of Non-Print Materials: Palm Leaves, Manuscripts, Films, Pen Drive, DVD

Unit II: Hazards and Control Measures to Library Materials

- Environmental Factor (Temperature, Humidity, Water, Light, Air Pollution, Smoke, Dust, etc.)
- Chemical Factors
- Biological Factors

RECOMMENDED BOOKS

1. Casey, J. P. (1982). Paper making. New York: Inter science Publishers
2. Corduroy, John. (1978). Book binding for beginners. London: Thomas and Hudson
3. Dasgupta, Kalpana, ed. (1988). Conservation of library materials. Calcutta: National Library
4. Durean, J. M. & Clements, D. W. G. (1986). Principles of the preservation of library materials. Hague: IFLA
5. Gabriel, M. & Ladd, D. (1980). The microfilm revolution in libraries. Greenwich: JAI Press Harvey, Poss. (1993). Preservation in libraries: a reader. London: R R Bowker
6. Hans, K. J. (1958). Sign, symbol and script. London: George Allen & Unwin
7. Sharma, R. G. (1979). Pandulipi Sampadan Kala. Delhi: Prabhat Prakashan
8. Singh, R. S. (1993). Conservation of documents in libraries, archives, and museums. Delhi

Course Code	**MLIS4107B**
Course Title	ICT and Digital Skills
Type of Paper	MENC (Mandatory Elective Non -Credit Course)
Credit	2
Teaching Hours	30

Objectives- *To appraise need and techniques of ICT and Digital Skills in digital* era.

Outcome- *After completion of the course, students will be able to understand various ICT and digital Skills of digital materials.*

Unit I: ICT Skills

- Digital foundation skills, Communication skills, Information and content handling
- Desktop publishing, Web publishing, Multimedia presentation
- Use of dedicated software for analytics, Social media analytics
- Use of spreadsheets and digital graphics, Database record treatment
- Digital project management, Digital marketing

Unit II: ICT and Digital Skills

- Software Development, Programming, web design and app development
- Enterprise architecture design, Network and system administration, Information system and network security
- Database and data pipeline automation, DevOps dexterity
- Artificial intelligence, Machine learning, IoT, Big data analytics, Fin-tech, Block-chain, Robotic process automation, Virtual and augmented reality
- Quantum computing, 3D printing, Cloud computing, Cybersecurity, Mobile applications, Drones

RECOMMENDED BOOKS

1. Deursen, Alexander J. A. M. van, Dijk, Jan A. G. M. van (2014). Digital Skills: Unlocking the Information Society (Digital Education and Learning). New York: Palgrave Macmillan
2. Cohen, Sandee (2012). Best Practices for Desktop Publishing.California. Peachpit Press
3. Kautish, Sandeep, Brar, Simrat Kaur and Ahmed, Rana Khudhair Abbas (2017). Social Media Analytics: A Primer. London. LAP Lambert Academic Publishing
4. Henneberry, Russ and Deiss, Ryan (2017). Digital Marketing For Dummies. For Dummies
5. Hunt, Andrew and Thomas, David (1999). The Pragmatic Programmer: From Journeyman to Master. Pearson Addison-Wesley Professional
6. Fowler et.al. (2002). Patterns of Enterprise Application Architecture. Addison-Wesley Professional
7. Kim et.al. (2016). The DevOps Handbook. IT Revolution Press
8. Mueller, John Paul and Massaron, Luca (2021). Artificial Intelligence for Dummies. For Dummies
9. John D. Kelleher, Brian Mac Namee and Aoife D'Arcy (2015). Fundamentals of Machine Learning for Predictive Data Analytics. The MIT Press

Ist Year, SEMESTER II

Course Code	**MLIS4201**
Course Title	Research Methodology
Type of Paper	DSC (Discipline Specific Core Course) Compulsory
Credit	4
Teaching Hours	60

Objectives-*To make the students aware of the research methodology concepts, definitions, and various techniques used for data analysis in research.*

Outcome- *After completion of course, students will be aware of implications of research and confident to take up research work.*

Unit I: Foundations of Research and Research Design

- Concept, Meaning, Need and Process of Research
- Types of Research: Fundamental and Applied
- Research Design, Types of Research Design
- Designing Research Proposal, Literature Search and Literature Review

Unit II: Research Methods

- Types of research: Qualitative and quantitative method of LIS research
- Scientific Method
- Historical Method, Survey and Case Study Method
- Experimental Method

Unit III: Data Analysis and Interpretation

- Data Collection Techniques: Questionnaire, Interview, Observation, Sampling and Delphi
- Presentation of Data-Tables, Charts and Graphs
- Interpretation of Data: Frequency Distribution, Measures of Central Tendency, Analysis of Time Series, Co-relation Studies and Analysis of Variance
- Use of Statistical Packages

Unit IV: Statistics and its Applications

- Descriptive Statistics – Measures of Central Tendency: & Dispersion, Correlations and linear regression, Chi-Square test, t-test, z-test, f-test
- Presentation of Data: Tabular, Graphic, Bar Diagram and Pie Chart, etc. Report Writing Statistical Packages – MS-Excel, SPSS, and Web-based Statistical Analysis Tools, etc.
- Plagiarism- Self plagiarism, anti-plagiarism guidelines and software
- Metric Studies - Scientometrics, Infometrics and Webometrics
- Style Manuals- Manual Structure, Style, Contents- MLA, APA, CHICAGO.

RECOMMENDED BOOKS

1. Booth, W. C., Williams, J. M. and Colomb, G. G. (2003). The Craft of Research. University of Chicago Press.
2. Borgman, Christie L., ed. (1990). Scholarly Communication and Bibliometrics. Newbury Park, CA: Sage Publications, Inc.
3. Brady, John. (1997). The Craft of Interviewing. New York: Vintage.
4. Busha, Charles H. and Harter, Stephen P. (1980) Research Methods in Librarianship. New York: Academic Press.
5. Davis, GB (1997) Management Information System: Concept, Foundation Structure and Development. New York: McGraw Hill.
6. Gillham, Bill. (2000). The Research Interview. London: Continuum Press.
7. Gupta, B. M. (1996). Bibliometrics, Scientometrics and Infometrics. New Delhi: Segment Books.
8. Khanna, J K (2000) Documentation and Information Services, Systems and Techniques. Agra: YK Publishers.
9. Kish, Leslie. (1995). Survey Sampling. New York: Wiley.
10. Marshall, Catherine and Rossman, Gretchen B (2006). Designing Qualitative Research. Sage USA.
11. Nielsen, Jakob. (2000). Designing Web Usability. New Riders, USA.
12. Payne, Stanley. (1951). The Art of Asking Questions. Princeton University Press.
13. Raju, Nemani Govinda. (2009). Bibliometric Applications: Study of Literature Use Patterns
14. Rea, Louis M and Parker, Richard A. (2005). Designing and Conducting Survey Research, San Francisco: Jossey-Bass.
15. Reinard , John C. (2006). Communication Research Statistics. Sage, USA.
16. Rowntree, Derek. (2003). Statistics without Tears: A Primer for Non-Mathematicians. London: Penguin.
17. Rubin, Herbert and Irene. (2004). Qualitative Interviewing: The Art of Hearing Data. Sage, USA.
18. Sudman, Seymour (1976). Applied Sampling. New York: Academic Press.

Course Code	**MLIS4202**
Course Title	Knowledge Organization II: Cataloguing (Theory)
Type of Paper	DSC (Discipline Specific Core Course) Compulsory
Credit	4
Teaching Hours	60

Objectives: *To accustom the students with the organization of knowledge with different basic concepts and philosophies of library cataloguing.*

Outcome: *After completion of the course, students will understand the basic concept and philosophies of library cataloguing, rules of filing entries and subject headings in cataloguing and different bibliographic standards.*

Unit I: Cataloguing Principles

- Catalogue: Definition, Objectives, Functions
- Types of Catalogue and Physical Forms of Catalogue
- Principles of Cataloguing: Ranganathan's Cannon
- Introduction to Catalogue Codes: CCC, AACR-IIR

Unit II: Types of Catalogue Entries

- Kinds of Entries and their Elements of Description in CCC and AACR-IIR
- Elements of Bibliographic Description of Non-Book Material (AACR-IIR)
- Rules for Choice and Rendering of Headings in AACR –IIR
- Subject Heading Lists: Sears List & LCSH

Unit III: Standards of Bibliographic Description and Record Formats

- ISBD, FRAD (Functional Requirements for Authorized Description), GARR (Guidelines for Authority Records and References)
- RDA (Resource Description and Access)
- ISBN, ISSN

Unit IV: Current Trends in Library Cataloguing

- Metadata: meaning, purpose, use, & types.
- Metadata: MARC 21, DUBLINCORE, TEI (Text Encoding Initiative), METS, EAD, VRA Core.
- Preparation of Bibliographic Records for different kinds of documents with emphasis on e-resources using appropriate standards (such as AACR2 / RDA, MARC 21, LCSH,
- Authority Files) and software (KOHA)

RECOMMENDED BOOKS

1. Andrew, P. G. (2003). Cataloguing Sheet Maps. Landon: Haworth Press.
2. Aswal, R. S. (2004). MARC 21: Cataloging Format for 21st Century. New Delhi: Ess Ess.
3. Dhawan, K. S. (1997). Online Cataloguing Systems. New Delhi: Commonwealth Publication.
4. Dhiman, Anil K. (2004). Cataloguing of Non-book Materials. New Delhi: Ess Ess.
5. Girija Kumar & Krishan Kumar. (2004). Theory of Cataloguing. New Delhi: Vikas
6. Gredley, Ellen & Hopkinson, Alan (1990). Exchanging Bibliographic Data: MARC andother International Formats. Ottawa: ALA.
7. Hagler, Ronald & Simmons, Peter. (1991). The Bibliographic Record and Information.
8. J. S. C. ed. (2002). Anglo-American Cataloguing Rules. London: Canadian LibraryAssociation.
9. Kao, Mary L. (2003). Cataloguing and Classification for Library Personnel. Mumbai:Jaico.
10. Leigh, Gernert. (2003). A Text Book of Cataloguing. New Delhi: Dominant Publishers.
11. Mitchell, Anne M. & Surratt, Brian E. (2005). Cataloguing and Organizing DigitalSources. London: Facet Publishing.
12. Roe, Sandra K (2002) The Audio-Visual Cataloguing. New York: Haworth Press.
13. Sharma, Pandey S. K. (2001). Library Cataloguing Theory. New Delhi: Sahitya Prakashan
14. Singh, S. N. & Prasad, H. N. (1985). Cataloguing Manual AACR-II. New Delhi: B. R.Publishers.
15. Sood, S. P. (1999). Theory of Library Cataloguing. Jaipur: Raj Publishing House.
16. Taylor, A. G. (2007). Introduction to Cataloguing and Classification (10thed.). NewDelhi: Atlantic.

Course Code	**MLIS4203**
Course Title	Information Communication Technology: Application (Theory)
Type of Paper	DSC (Discipline Specific Core Course) Compulsory
Credit	4
Teaching Hours	60

Objectives: *To make the students aware collection development and different types of e-resources and their use.*

Outcome: *After completion of the course, students will be able to differentiate and utilize e-resources for their learning and research activities.*

Unit I: Introduction to Information Communication Technologies

- Overview of ICTs and their significance
- Evolution of Technology and Impact on Society
- Digital Literacy and Technology Skills

Unit II: Productivity and Collaboration Tools

- Using Office Suites (e.g., Microsoft Office, Google Workspace)
- Collaborative Document Editing and Cloud Storage
- Project Management Tools and Techniques

Unit III: Web and Multimedia Applications

- Creating and maintaining Websites (e.g., WordPress, Wix)
- Graphic Design and Image Editing Tools
- Introduction to Audio and Video Editing

Unit IV: Data Management and Analysis

- Introduction to Data Management
- Spreadsheet Applications (e.g., Microsoft Excel, Google Sheets)
- Basic Data Analysis and Visualization Tools

RECOMMENDED BOOKS

1. Frank Rennie & Robin Mason. (2011). e-Learning and Social Networking Handbook: Resources for Higher Education. Routledge
2. James E. Bobick and G. L. Berard (2011). Science and Technology Resources: A Guide for Information Professionals and Researchers (Library and Information Science Text Series). Libraries Unlimited
3. Karin Wikoff. (2011). Electronic Resources Management in the Academic Library: A Professional Guide. Libraries Unlimited
4. Peter Clayton and G. E. Gorman. (2001). Managing Information Resources in Libraries: Collection Management in Theory and Practice. Facet Publishing
5. Ruth C. Clark & Richard E. Mayer. (2011). e-Learning and the Science of Instruction: Proven Guidelines for Consumers and Designers of Multimedia Learning (Essential Knowledge Resource). wiley publishing

Course Code	**MLIS4204A**
Course Title	Collection Development and Management of Electronic- Resources
Type of Paper	DSE (Discipline Specific Elective Course)
Credit	4
Teaching Hours	60

Objectives: *To make the students aware collection development and different types of e-resources and their use.*

Outcome: *After completion of the course, students will be able to differentiate and utilize e-resources for their learning and research activities.*

Unit I: Electronic-Resources: An Overview

- E-Resources: Introduction, Advantages, Disadvantages
- E-Resources Life Cycle
- Standards for E-Resources
- Open Access Initiatives

Unit II: Types of Electronic-Resources

- E-Journals & E-Books
- Databases, CD-ROM databases
- Internet Resources
- Library Consortium, Criteria Evaluation of E-Resources

Unit III: Web Resources

- Web Resources – Introduction, Needs
- Science & Technology
- Humanities & Social Sciences
- Evaluation of Web Resources

Unit IV: Collection development and Management of Electronic Resources

- Collection development of E-Resources
- Policy for E-Resources
- License and agreement for procurement of E-Resources
- Case study of Digital Library

RECOMMENDED BOOKS

1. Frank Rennie & Robin Mason. (2008). e-Learning and Social Networking Handbook: Resources for Higher Education. Routledge
2. James E. Bobick and G. L. Berard (2011). Science and Technology Resources: A Guidefor Information Professionals and Researchers (Library and Information Science Text Series). Libraries Unlimited
3. Karin Wikoff. (2011). Electronic Resources Management in the Academic Library: A Professional Guide. Libraries Unlimited
4. Peter Clayton and G. E. Gorman. (2006). Managing Information Resources in Libraries: Collection Management in Theory and Practice. Facet Publishing
5. Ruth C. Clark & Richard E. Mayer. (2007). e-Learning and the Science of Instruction: Proven Guidelines for Consumers and Designers of Multimedia Learning (Essential Knowledge Resource). Pfeiffer

Course Code	**MLIS4204B**
Course Title	Institutional Repository
Type of Paper	DSE (Discipline Specific Elective Course)
Credit	4
Teaching Hours	60

Objectives- *To make the students aware of the institutional repository & copyright concepts and other issues related to patents.*

Outcome- *After completion of the course, students will learn institutional repository software, implementation maintenance.*

Unit I: Introduction of Institutional Repository

- Importance of Institutional Repository
- Role of institutional Repository in scholarly communication
- Structure of Institutional Repository

Unit II: Implementation and Maintenance of Institutional Repository

- Software requirement
- Hardware requirement
- Technical Skills
- Difficulties in implementation & maintenance

Unit III: Digital Repository Management

- Digital Right Management
- Copyright & License Issues
- Creative Commons
- Institutional Repository Initiatives in India

Unit IV: Institutional Repository Software

- DSpace & Eprints
- DSpace Introduction
- DSpace Administration: Content Organization; E-people, Workflow
- Harvesting: OAI-PMH and OAI-ORE

RECOMMENDED BOOKS

1. Marianne A. Buehler (2014). Demystifying the Institutional Repository for Success. Chandos Publishing.
2. Jones, Richard et al. (2006). *The Institutional Repository*. Oxford: Chandos Publishing.
3. Judith, Andrews & Derek, Law. (2004). *Digital Libraries*. Ashgate.
   198. Lucy A. Tedd & Andrew Large. (2004). *Digital Libraries: Principles and Practice in a Global Environment*. G.G. Saur.
4. Purcell, Aaron. (2016). *Digital Library Programs for Libraries and Archives: Developing, Managing, and Sustaining Unique Digital Collections*. ALA

Course Code	**MLIS4204C**
Course Title	Intellectual Property Rights & Copyrights
Type of Paper	DSE (Discipline Specific Elective Course)
Credit	4
Teaching Hours	60

Objectives- *To make the students aware of the intellectual property & copyright concepts and other issues related to patents.*

Outcome-*After completion of the course, students will be aware of IPR & copyright, copyright violation and infringement.*

Unit I: Intellectual Property and Rights

- Intellectual Property: Concept, Genesis, Development and Categories
- Enforcement of Intellectual Property Rights
- Role of WIPO
- Emerging Issues in Intellectual Property Rights

Unit II: Copyright

- Copyright: Meaning and Scope
- Rights to Copyright Owner
- Licensing of Copyright
- Copyright Laws and Related Issues

Unit III: Patents

- Patent: Concept and Scope
- Patent Laws in India
- Patent Laws in Abroad
- Violation and Infringement, Violation and Infringement - India - USA - UK

Unit IV: Copyright& Patent in Digital Era

- Intellectual Property Digital Era: Meaning and Development
- IPR Acts
- Application of IPR in Electronic Environment
- Copyright of Electronic Resources

RECOMMENDED BOOKS

1. Ajit Parulekar and Sarita D' Souza, Indian Patents Law – Legal & Business Implications; Macmillan India Ltd, 2006.
2. Andrew Murra. (2010). Information Technology Law: The law and society. OUP Oxford
3. B. L. Wadhera; Law Relating to Patents, Trade Marks, Copyright, Designs & Geographical Indications; University Law Publishing Pvt. Ltd., India, 2000
4. Bourgagaize, Jewell and Buiser, Biotechnology: Demystfying the Concepts, Wesley Longman, USA, 2000
5. Carlos M. Correa and Abdulqawi A. Yusuf. (2008). Intellectual Property and International Trade: The TRIPS Agreement (Second Edition). Kluwer Law International
6. D. Balasubramaniam, C.F.A. Bryce, K. Dharmalingam, J. Green and K. Jayaraman, Concepts in Biotechnology, University Press (Orient Longman Ltd.)., 2002
7. Deborah E. Bouchoux. (2012). Intellectual Property: The Law of Trademarks, Copyrights, Patents, and Trade Secrets. Delmar Cengage Learning.
8. Federico Munari and Raffaele Oriani. (2011). The Economic Valuation of Patents: Methods and Applications (New Horizons in Intellectual Property Series). Edward Elgar Publishing
9. Fishman, Stephen. (2008). The copyright handbook: what every writer needs to know.Berkeley, CA: Nolo.
10. Freeman, Lee & Peace, A. Graham. (2005). Information ethics : privacy and intellectual property. Hershey, PA : Information Science Pub.
11. Jessica Litman. (2001). Digital Copyright: Protecting Intellectual Property on the Internet. Prometheus Books
12. John Grant, Charlie Ashworth and Henri J. A. Charmasson. (2008). Patents, Registered Designs, Trade Marks and Copyright for Dummies. Wiley
13. Jude C. Umeh. (2008). The World beyond Digital Rights Management. BCS, The Chartered Institute for IT
14. P.Narayanan; Law of Copyright and Industrial Designs; Eastern Law House, Delhi, 2010 P.N. Cheremisinoff, R.P. Ouellette and R M Bartholomew, Biotechnology Applications and Research, Technomic Publishing Co., Inc. USA, 198

Course Code	**MLIS4205**
Course Title	Knowledge Organisation II: Cataloguing (Practice)
Type of Paper	PC/SEC (Skill Enhancement Course) Compulsory
Credit	2
Teaching Hours	30

Objectives: *To acquaint the students with the cataloguing practical of various types of library resources.*

Outcome: *After completion of the course, students will be able to catalogue library resources by using CCC and AACR IIR and use of subject headings.*

Unit I: Classified Catalogue Code (5th edition)

Works of Single and Shared Authorship Works of Mixed Responsibilities Editorial Publications Series Publications Multi-volume, Works & Pseudonymous, Works of Corporate Authorship Works of Conflict of Authorship Periodical Publications Ordinary and Artificial Composite Books

Unit II: Anglo American Cataloguing Rules (Latest Edition)

Works of Single and Shared Authorship Works of Shared Responsibilities Editorial Publications Multivolume and Pseudonymous, Works of Corporate Bodies Serial Publications Works of Editorial Direction

A) Assigning Classified Catalogue Code (5th edition), Anglo American Cataloguing Rules(Latest Edition)- 40 Marks.

B) Viva Voce- 20 Marks

Course Code	**MLIS4206**
Course Title	Information Communication Technology: Application (Practical)
Type of Paper	PC/SEC
Credit	2
Teaching Hours	30

Objectives- *To provide hands on experience of library automation software and website designing tools.*

Outcome- *After completion of the course, students will be skilled enough to automate the library as well as design a library website.*

Unit 1: Hands-on experience on Library Automation Software

Integrated Library Software: Koha / SOUL

Unit 2: Hands-on experience on Website Designing HTML / Dreamweaver

A) A practical written test on Library Software and Website Designing- **40 Marks**

B) Viva Voce- **20 Marks**

Course Code	**MLIS4207A**
Course Title	SWAYAM approved Course
Type of Paper	MENC
Credit	-
Teaching Hours	30

List of SWAYAM Courses

SN	*Course*	Institution
01	*Python For Data Science*	*Indian Institute of Technology Madras* **Link**: *https://onlinecourses.nptel.ac.in/noc23_cs99/preview*
02	*Data Science For Engineers*	*Indian Institute of Technology Madras* **Link:** *https://onlinecourses.nptel.ac.in/noc23_cs97/preview*
03	*Data Analysis & Decision Making – III*	*Indian Institute of Technology Kanpur* **Link:** *https://onlinecourses.nptel.ac.in/noc23_mg78/preview*
04	*Big Data Computing*	*Indian Institute of Technology Patna* **Link:** *https://onlinecourses.nptel.ac.in/noc23_cs112/preview*
05	*Social Network Analysis*	*Institute of Information Technology Delhi* *Link: https://onlinecourses.nptel.ac.in/noc23_cs106/preview*
06	*Research Methodology*	*Indian Institute of Technology Madras* *Link: https://onlinecourses.nptel.ac.in/noc23_ge36/preview*
07	*Research Methodology and Statistical Analysis*	*Indira Gandhi National Open University* *Link: https://onlinecourses.swayam2.ac.in/nou23_cm17/preview*
08	*Body Language: Key To Professional Success*	*Indian Institute of Technology Roorkee* *Link: https://onlinecourses.nptel.ac.in/noc23_hs146/preview*
09	*Soft Skills*	*Indian Institute of Technology Roorkee* *Link: https://onlinecourses.nptel.ac.in/noc23_hs145/preview*
10	*Stress Management*	*Indian Institute of Technology, Kharagpur* *Link: https://onlinecourses.nptel.ac.in/noc23_hs138/preview*
11	*Soft Skill Development*	*Indian Institute of Technology, Kharagpur*
12	*Developing Soft Skills And Personality*	*Indian Institute of Technology Kanpur* *Link: https://onlinecourses.nptel.ac.in/noc23_hs116/preview*
13	*Public Speaking*	*Indian Institute of Technology Roorkee* *Link: https://onlinecourses.nptel.ac.in/noc23_hs151/preview*
14	*Foundations Of R Software*	Indian Institute of Technology Kanpur Link: https://onlinecourses.nptel.ac.in/noc23_ma96/preview
15	*Human Resource Development*	Indian Institute of Technology, Kharagpur Link: https://onlinecourses.nptel.ac.in/noc23_hs141/preview
16	*Organizational Behaviour – II*	Indian Institute of Technology, Kharagpur Link: https://onlinecourses.nptel.ac.in/noc23_mg90/preview
17	*Business Analytics & Data Mining Modeling Using R Part II*	Indian Institute of Technology Roorkee Link: https://onlinecourses.nptel.ac.in/noc23_mg103/preview
18	*Business Analytics & Text Mining Modeling Using Python*	Indian Institute of Technology Roorkee Link: https://onlinecourses.nptel.ac.in/noc23_mg104/preview
19	*Introduction To Marketing Essentials*	Indian Institute of Technology Roorkee Link: https://onlinecourses.nptel.ac.in/noc23_mg122/preview
20	*Knowledge Management*	Indian Institute of Technology, Kharagpur Link: https://onlinecourses.nptel.ac.in/noc23_mg96/preview
21	*Intellectual Property*	Indian Institute of Technology, Kharagpur

	Rights And Competition Law	Link: https://onlinecourses.nptel.ac.in/noc23_mg68/preview
22	*Patent Search For Engineers And Lawyers*	Indian Institute of Technology, Kharagpur Link: https://onlinecourses.nptel.ac.in/noc23_mg99/preview
23	*National Education Policy-2020:Professional Development Programme*	IGNOU
24	*Research Ethics using Research Methodology: Creating a New Global Education Curriculum*	All India Council For Technical Education Link: https://onlinecourses.swayam2.ac.in/aic21_ge02/preview
25	*Communication Technologies in Education*	https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_pg/704
26	*Research Ethics*	https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_ug/272
27	*Research Methodology*	https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_ug/330
28	*Artificial Intelligence*	https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_ug/338
29	*Bibliometrics and Scientometrics*	https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_ug/350
30	*Intellectual Property Law*	https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_ug/370
31	*Information and Communication Technology*	https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_pg/1168
32	*Discrete Data Analysis*	https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_pg/1016
33	*Digital Library*	https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_ug/341
34	*Knowledge Society*	https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_ug/343
35	*Management Concept and Organizational Behavior*	https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_pg/384
36	*Introduction to R*	https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_pg/1851
37	*Quantitative Methods*	https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_pg/673
38	*Digital Marketing*	https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_ug/269
39	*Research Ethics*	https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_ug/272
40	*e-ASSESSMENT*	https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_ug/301
41	*Academic Writing*	https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_ug/333
42	*Information Sources System and Services*	https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_ug/345
43	*Management of Libraries and Information Centres and Knowledge Centres*	https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_ug/347
44	*Information Storage and Retrieval*	https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_ug/349
45	*Data Mining*	https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_ug/31
46	*Foundations of Mathematical Statistics*	https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_ug/313
47	*IT Fundamentals*	https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_ug/320
48	*Communication Theory Models & Processes*	https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_ug/58

Course Code	**MLIS4207B**
Course Title	Internet of Things
Type of Paper	DSE (Discipline Specific Elective Course)
Credit	4
Teaching Hours	60

Objective: *The Internet is evolving to connect people to physical things and also physical things to other physical things all in real time. It's becoming the Internet of Things (IoT). The course enables student to understand the basics of Internet of things and protocols. It introduces some of the application areas where Internet of Things can be applied.*

Outcome: *Students will learn about the middleware for Internet of Things. To understand the concepts of Web of Things.*

Unit I: IOT

- Concept, meaning, definition.
- Elements of an IoT ecosystem, Technology drivers, Business drivers,
- Trends and implications,
- Overview of Governance, Privacy and Security Issues.

Unit II: IOT PROTOCOLS

- Protocol Standardization for IoT – Efforts – M2M and WSN Protocols – SCADA and RFID Protocols –
- Issues with IoT Standardization – Unified Data Standards –
- Protocols – IEEE802.15.4–BAC Net Protocol– Modbus – KNX – Zigbee– Network layer – APS layer – Security

Unit III: IOT ARCHITECTURE

- IoT Open-source architecture (OIC)- OIC Architecture & Design principles
- IoT Devices and deployment models-
- IoTivity: An Open source IoT stack - Overview-
- IoTivity stack architecture- Resource model and Abstraction.

Unit IV: WEB OF THINGS

- Web of Things versus Internet of Things
- Two Pillars of the Web – Architecture Standardization for WoT, Platform Middleware for WoT
- Unified Multitier WoT Architecture: WoT Portals
- Business Intelligence.

RECOMMENDED BOOKS

1. Honbo Zhou (2012). The Internet of Things in the Cloud: A Middleware Perspective. CRC Press.
2. Dieter Uckelmann, Mark Harrison, Michahelles, Florian (2011). Architecting the Internet of Things. Springer.
3. David Easley and Jon Kleinberg (2010). Networks, Crowds, and Markets: Reasoning About a Highly Connected World. Cambridge University Press.
4. Olivier Hersent, David Boswarthick, Omar Elloumi (2012). The Internet of Things – Key applicationsand Protocols. Wiley.
5. Vijay Madisetti and ArshdeepBahga (2014). Internet of Things (A Hands-on-Approach). VPT.
6. Francis daCosta (2013). Rethinking the Internet of Things: A Scalable Approach to ConnectingEverything. Apress Publications.
7. CunoPfister (2011). Getting Started with the Internet of Things. O"Reilly Media. ISBN: 978-1-4493-9357-1

Course Code	**MLIS4208**
Course Title	Internship
Type of Paper	Internship
Credit	4
Teaching Hours	60

Objectives:

i) to train the students in practical librarianship in the working environment of the library by deputing them in different types of libraries for a period of one month; and

ii) to train them in preparing the Internship Report in a prescribed format based on their practical training and learning.

Outcome: *After completion of the course, students will be able to works in Library without any hesitation.*

The Work for Paper shall start in the beginning of the second semester for which each student will be allotted a topic for writing the Project Report. The Project Report will be submitted at the end of second semester on the date to be decided by the Department.

A. Report on Internship Programme – 40 Marks

B. Viva-Voce – 20 Marks

IInd Year, SEMESTER III

Course Code	**MLIS4301**
Course Title	Management of Library and Information Centers
Type of Paper	DSC (Discipline Specific Core Course) Compulsory
Credit	4
Teaching Hours	60

Objective: *To make the students understand the management techniques in organization of library& information centers.*
Outcome: *After completion of the course, students will be able to manage the library & information centers effectively.*

Unit I: Principles of Library Management

- Management: concept, definitions, scope, and functions
- Principles of Management
- Schools of Management thought: classical management theory, Neo-classical theory, modern management theory, problems, and conflicts in management theories.
- Management functions: planning, organizing, staffing, leading, Budgeting and controlling.

Unit II: Physical Resource Management and Library House Keeping Operations

- Library Building: Site, Selection, Planning; Furniture, Fittings and Equipment: Standards and Specifications
- Collection Development and Management
- Acquisition Section, Technical Section, Circulation Section, Maintenance Section, Periodical Section and Reference Section; Stock Verification and Rectification: Policies and procedures
- Preservation and Conservation

Unit III: Financial Source and Human Resource Management

- Library Finance and Sources of Finance, Library Budgeting techniques. Cost effectiveness and Cost benefit analysis. Library Statistics and Annual Report
- Human Resource Management: Organizational Structure, Job Description and Analysis
- Personal Relations: Selection, Recruitment, Training, Development, Performance Appraisal Motivation: Group Dynamics, Training and Development
- Resource Mobilization and Outsourcing

Unit IV: Project Management

- TQM -- Definition, concept, elements, Quality audit
- LIS related standards,
- Technology management, Library software, building, furniture: BIS, ISO 900 series.

RECOMMENDED BOOKS

1. Bryson Jo. (1996). Effective Library and Information Management. Bombay: JaicoPub. House
2. Beardwell, Ian and Holden, Len (1996). Human Resource Management: A contemporary perspectives. London: Longman.
3. Chabhra, T N et. al. (2000). Management and Organization. New Delhi: Vikas Publication.
4. Drucker Peter F. (2002). Management Challenges for the 21st century. Oxford;Butterworth Heinemann.
5. Evans, G. Edward and Layzell, Patricia. (2007). Management Basics for InformationProfessionals, Second Edition.Londn: Libraries Unlimited.
6. Johnson, Peggy. (2009). Fundamentals of Collection Development and Management,2nd ed. ALA
7. Kotler, Philip (2003). Marketing Management. 11thed. New Delhi: Pearson.
8. Narayana, G J. (1991). Library and Information management. New Delhi: Prentice Hallof India.
9. Paton, Robert A. (2000). Change Management. New York: Response Books.
10. Rowley, Jennifer (2001). Information Marketing. Aldershot: Ashgate Publishing Limited.
11. Smith, Judith Read, Mary Lea Ginn and Kallaus Norman, F. (2010). Records Management.7th ed. Southwestern, Division of Thomson Learning.
12. Stueart, Robert D and Moran (Barbara B. Moran).(2007). Library and Information Centre Management. 7th ed. London: Libraries Unlimited.
13. Stoner, James A F (et.al). (1996). Management: Global Perspectives. 10thed. New York: MC Graw Hill Inc.

Course Code	**MLIS4302**
Course Title	Digital Library (Theory)
Type of Paper	DSC (Discipline Specific Core Course) Compulsory
Credit	4
Teaching Hours	60

Objectives- *To make the students aware with content management concepts, content developing strategies and digitization in library.*

Outcome- *After completion of the course, students will be in a position to understand the content management, content developing strategies and digitization of information resources*.

Unit I: Digital Library

- Definitions, Fundamentals and Theoretical Aspects; Characteristics of Digital Libraries and nature of Digital Library collections
- Major Digital Library Initiatives
- Design and Organization of Digital Libraries: Architecture, Interoperability, Protocols, and Standards; User Interfaces

Unit II: Digital Resource Management

- Digital content creation: Electronic documents, files & formats & conversion to PDF
- Digital Resources Management; Access to and Use of Digital Libraries
- Digital Storage, Archiving and Preserving Digital Collections

Unit III: Digital Library Architecture

- Digital Library: Elements
- DOI, Open URL, Cross reference and other aspects, Metadata, MARC 21, Dublin Core, Access control and DRM, Security, and parameter issues

Unit III: Digital Library & Institutional Repository Software

- Digital Library Software: concept, definition, types, characteristics
- Installation and developing collection using DSpace, GSDL
- Copyright issues in development of digital library software

RECOMMENDED BOOKS

1. Arthur, M.H. (2006). Expanding a digital content management system for the growing digital media enterprise. Boston: Elsevier Focal Press.
2. Barrie, M. N. (2009). Joomla! 1.5: a user's guide: building a successful Joomla! Powered website. Upper Saddle River, NJ: Prentice Hall.
3. Bishop, A. P. et al. (eds.). (2005). Digital Library Use: Social Practice in Design and Evaluation. Delhi: Ane Books.
4. Bradford, L. E. (2008). Content management systems in libraries: case studies. Lanham, MD: Scarecrow Press.
5. Chowdhury, G. G. & Chowdhury, Sudatta. (2003). Introduction to Digital Libraries. London: Facet.
6. Cooper, Michael D. Design of Library Automation Systems: File Structure, Data Structures and Tools, New York: John Wiley, 1996.
7. Deegan, Marilyn & Tanner, S. (2006). Digital Preservation. London: Facet Publishing.
8. Hal Stern, Brad Williams and David Damstra. (2010). Professional WordPress: design and development. Indianapolis, IN: Wiley Pub., Inc.
9. Janet Majure. (2010). Teach yourself visually WordPress. Indianapolis, IN: Wiley Pub., Inc.
10. Jason, C. and Helen, F. (2008). Using Moodle. Sebastopol, CA: O'Reilly Community Press.
11. Jen, K.P. and Sarah, E. (2010). Joomla! Start to finish. Indianapolis, IN: Wiley Pub., Inc.
12. Jennifer Marriott and Elin Waring. (2011). The official Joomla! Book. Upper Saddle River, NJ: Addison-Wesley.
13. John M. Cohn, Ann L. Kelsey and Keith Michael Fiels, Planning for Library automation: A Practical Handbook London: Library Association, 1998.
14. John M. Colon, Annl Kelsey, Keith Michael Fiels. Planning for Automation: A How-to-do-it for Librarian. 2nd ed.(S.I.): Neal-Schuman, 1997.

Course Code	**MLIS4303A**
Course Title	Web Based Information System and Services (Theory)
Type of Paper	DSE (Discipline Specific Elective Course)
Credit	4
Teaching Hours	60

Objectives*-To make the students aware of the objectives, development, collection development, organizational structure, services, financial and HRM of Academic Library.*

Outcome*-After completion of the course, students will be aware of objectives, development, collection development, organizational structure, services, financial and HRM of Academic Library*

Unit I: Web Based Information Systems

- Web Based Information System: Objectives, Drawbacks, Advantages
- Software Requirements, System Architecture
- Module: Admin Module, User Module
- HTML Basics: tags, attributes, text/paragraph formatting, hyperlinks
- CSS Basics: Inline vs global CSS, CSS selectors, Box-model

Unit II: XML

- XML Concepts: Markup vs semantics, rules for well-formed XML
- XML DTD: valid vs well-formed, element and attributes definitions, validation tools (xmllint)
- XML Schema: data types, data facets and patterns, XML namespaces, Simple vs Complex types
- XML Styling: CSS vs XSL, XSLT/XPATH/SQuery, xsltproc tool
- XSLT advanced: XPATH Primer, advanced XSLT templates, lists, if-else, loops
- Crosswalk using XSLT: MARCXML to DC/MODS and DC to MODS
- YAML/JSON Primer: Basics of JSON, YAML standard and JSON, XML vs JSON

Unit III: Web Based Services and Networking

- Modern web patterns: Templating, MVC pattern, CGI vs WSGI, Security, Flask framework (Python)
- Database abstraction: OS-level abstraction (ODBC), Language-level (JDBC/PDO/DBI), Object Relational Mapping (ORM)
- JavaScript: Client-side script concept, Browser/DOM events, jQuery, asynchronous programming (AJAX)
- Web skills practical: use custom jQuery and CSS in Koha/DSpace
- Search engine components: Spider/crawler, Indexer, Searcher, Tokenizer, Filters, Ranking algorithms (TF-IDF scores)

Unit IV: Web Based Services Protocols

- Z39.50 Protocol Operations, Type-1 Query (RPN)
- Z39.50 server setup using Index Data Zebra software, Index MARC records, Record Id de-duplication
- Z39.50 Application Profiles

RECOMMENDED BOOKS

1. Anderson, Paul. (2012). *Web 2.0 and beyond: principles and technologies*. CRC, Press
2. Bates, Chris. (2006). *Web Programming: Building Internet Applications*. 3rd Ed. Wiley-India.
3. Duckett, Jon. (2011). *HTML and CSS: Design and Build Websites Paperback*. Wiley
4. Kalbach, James. (2007). *Designing Web Navigation: Optimizing the User Experience.* O'Reilly Media.
5. Macdonald, Matthew (2015). *Creating a website: The Missing Manual*. O'Reilly Media. 406.
6. Morville, Peter & Rosenfeld, Louis. (2006). *Information Architecture for the World Wide Web: Designing Large-Scale Web Sites*. 3rd Ed. O'Reilly Media.
7. Robbins, Jennifer Niederst. (2012). *Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics*. 4th Ed. O'Reilly Media.
8. Stallings, William. (2007). *Computer Networking with Internet Protocols and Technology*. Pearson Education.

Course Code	**MLIS4303B**
Course Title	Academic Library and Information System
Type of Paper	DSE (Discipline Specific Elective Course)
Credit	4
Teaching Hours	60

Objectives*-To make the students aware of the objectives, development, collection development, organizational structure, services, financial and HRM of Academic Library.*

Outcome*-After completion of the course, students will be aware of objectives, development, collection development, organizational structure, services, financial and HRM of Academic Library.*

Unit I: Academic Libraries and their Development

- Objectives and Functions
- History and Development of Academic Libraries in India
- History and Development of Academic Libraries in Abroad
- UGC and its Role in the Development of College and University Libraries

Unit II: Collection Development and Management

- Books and Periodicals
- Conference Literature, Grey Literature and Government Publications
- Non-Book Materials: Electronic-Resources and Databases

Unit III: Library Organization and Services

- Organizational Structure of Academic Library
- Staff Manual, Library Surveys, Statistics and Standards, etc.
- CAS, SDI, Abstracting and Indexing Services, Library Bulletin, Newspaper Clipping Services
- Resource Sharing and Networking

Unit IV: Financial and Human Resource Management

- Determination of Finance, Sources of Finance
- Types of Budgets
- Nature, Size, Selection, Recruitment, Qualification and Training
- Responsibilities and Duties
- Competency Development Case Study of Academic Library in India

RECOMMENDED BOOKS

1. BAKER (David), Ed. Resource management in academic libraries (1997) Library Associations, London.
2. BROPHY (Peter): The academic library (2000) Library Association, London.
3. BUDD (J M): The academic library: the context, its purpose and its operation (1988) Libraries Unlimited, London.
4. CHAPMAN (Liz): Managing acquisitions in library and information Services (2001) Library Association, London.
5. DOWLER (L): Ed. Gateways to knowledge: the role of academic libraries in teaching, learning and research (1998) The MIT Press, London.
6. JORDON (Peter): The academic library and its users (1998) Gower Publishing Limited, London.
7. LINE (Maurice B), Ed. Academic library management (1990) Library Association, London.
8. RANGANATHAN (S R): School and college libraries (1942) Madras Library Association, Madras.
9. WEBB (Sylvia P): Personal development in information work (Ed2.1991) Aslib, London.
10. WHITE (Carl M): Survey of university of Delhi (1965) Planning Unit, University of Delhi, Delhi

Course Code	MLIS4304A
Course Title	Public Library and Information System
Type of Paper	OEC (Open Elective Course)
Credit	4
Teaching Hours	60

Objectives- *To make the students aware of the objectives, development, collection development, organizational structure, services, financial and HRM of Public Library.*

Outcome- *After completion of the course, students will be aware of objectives, development, collection development, organizational structure, services, financial and HRM of Public Library.*

Unit I: Public Libraries and their Development

- Objectives and Functions
- History and Development of Public Libraries in India
- History and Development of Public Libraries in Abroad
- Role of Government and agency for the promotion and development of Public Libraries in India

Unit II: Collection Development and Management

- Books and Periodicals
- Conference Literature, Grey Literature and Government Publications
- Non-Book Materials: Electronic-Resources and Databases
- Manuscripts

UNIT III: Library Organization and Services

- Organizational Structure of Public Library
- Staff Manual, Library Surveys, Statistics and Standards, etc.
- CAS, SDI, Abstracting and Indexing Services, Library Bulletin, Newspaper Clipping Services
- Resource Sharing and Networking

UNIT IV: Financial and Human Resource Management

- Determination of Finance, Sources of Finance
- Types of Budgets
- Nature, Size, Selection, Recruitment, Qualification and Training
- Responsibilities and Duties
- Competency Development Case Study of Public Library in India

RECOMMENDED BOOKS

1. BARUA (B P): National policy on library and information systems and services for India: perspectives and projections (1992) Popular Bombay
2. BATT (Chris): Information technology in public libraries (1998) London Library Association Publishing, London.
3. BHATT (R K): UNESCO: development of libraries and documentation centres in developing countries (2004) KK Publications, New Delhi.
4. HIGGINS (S E): Youth services and public libraries (2007) Chandos Publishing, Oxford.
5. IFLA: Guidelines for public libraries (revised 2000) The Hague, IFLA.
6. INDIA: Advising committee for libraries (Ed. 2, 1958) Manager of Publications, Delhi.
7. JAGANAYAK (S S): Role of libraries in socio-economic, cultural and educational development. (1997) Classical Publication, New Delhi.
8. PATEL (Jashu) and KRISHAN KUMAR: Libraries and librarianship in India (2001) Greenwood Press, Westport, Connecticut.
9. THOMAS (V K): Public libraries in India: development and finance (1997) Vikas Publication, New Delhi.
10. WOODRUM (Pat), Ed. Managing public libraries in 21st century (1989) The Hawork Press, New York.

Course Code	**MLIS4304B**
Course Title	Research and Technical Library and Information System
Type of Paper	OEC (Open Elective Course)
Credit	4
Teaching Hours	60

Objectives- *To make the students aware of the objectives, development, collection development, organisational structure, services, financial and HRM of Research and Technical Library and Information System.*
Outcome- *After completion of the course, students will be aware of objectives, development, collection development, organisational structure, services, financial and HRM of Research and Technical Library and Information System.*

Unit I: Research and Technical Libraries and their Development

- Objectives, Functions, and Development of Research and Technical Library in India
- History and Development of Research and Technical Library in Abroad
- Promotion and Development of Research and Technical Library in India
- Research and Technical Libraries and its Relationship with Parent Organization

Unit II: Collection Development and Management

- Books and Periodicals
- Conference Literature, Grey Literature and Government Publications
- Non-Book Materials: Electronic-Resources, Databases

Unit III: Library Organization and Services

- Organizational Structure of Research and Technical Library
- Staff Manual, Library Surveys, Statistics and Standards, etc.
- CAS, SDI, Abstracting and Indexing Services, Library Bulletin
- Resource Sharing and Networking

Unit IV: Financial and Human Resource Management

- Determination of Finance, Sources of Finance
- Types of Budgets
- Nature, Size, Selection, Recruitment, Qualification and Training
- Responsibilities and Duties
- Competency Development Case Study of Research and Technical Library in India

RECOMMENDED BOOKS:

1. AUGER (C P): Information sources in grey literature (Ed. 3, 1994) Bowker, London.
2. CHAPMAN (Liz): Managing acquisitions in library and information services (2001) Library Associations, London.
3. GROGAN (N): Science and technology: an introduction to the literature (Ed. 4, 1982)Clive Bingley, London.
4. HERNON (Peter) and WHITMAN (John R): Delivering satisfaction and service quality: a customer-based approach for libraries (2001) American Library Association, Chicago.
5. LAWES (Ann), Ed. Management skills for the information manager (19930 Gower Publishing, London.
6. RAITT (David): Ed. Libraries for the new millennium (1997) Library Association, London.
7. SAHA (J): Special libraries and information services in India and the USA (1969) Scarecrow, New York.
8. SCAMMELL (AW): Ed. Handbook of special librarianship and information work (Rev. Ed. 7, 1997) ASLIB, London.
9. SINGH (S P): Special libraries in the electronic environment (2005) Book well, New Delhi.
10. STRAUSS (L J): Scientific and technical libraries: their organization and administration (Ed. 2, 1972) Beckey and Hayes, New York.

Course Code	**MLIS4304C**
Course Title	Health Science Library and Information System
Type of Paper	OEC (Open Elective Course)
Credit	4
Teaching Hours	60

Objectives-*To make the students aware of the objectives, development, collection development, organisational structure, services, financial and HRM of Health Science Library and Information System*

Outcome-*After completion of the course, students will be aware of objectives, development, collection development, organisational structure, services, financial and HRM of Health Science Library and Information System.*

Unit I: Health Science Libraries and their Development

- Objectives and Functions
- History and Development of Health Libraries with Special Reference to India
- History and Development of Health Libraries with Special Reference to Abroad
- Medical Libraries Information Policies in India

Unit II: Collection Development and Management

- Books and Periodicals
- Conference Literature, Grey Literature and Government Publications
- Non-Book Materials: Electronic-Resources
- Databases

Unit III: Library Organization and Services

- Organizational Structure of Medical Libraries
- Staff Manual, Library Surveys, Statistics and Standards, etc.
- CAS, SDI, Abstracting and Indexing Services, Library Bulletin
- Resource Sharing and Networking

nit IV: Financial and Human Resource Management

- Determination of Finance, Sources of Finance
- Types of Budgets
- Nature, Size, Selection, Recruitment, Qualification and Training
- Responsibilities and Duties
- Competency Development Case Study of Health Libraries in India

RECOMMENDED BOOKS

1. Baker, P.G. (1997). Electronic libraries of the future. Encyclopedia of library and information science, Volume 50, supplement 22. Edited by Allan Kant and Hall, CM. New York, Marcel Dekker, p. 119-153
2. Dixit, R.P. (1995). Information management in Indian medical libraries. New Delhi, New Concept, p. 227-238.
3. Godlee, F., et al. Can we achieve health information for all by 2015. The Lancet, 295- 300.
4. Money, P.K. and Nagaraj, C. (2007). Health information management: an introduction to disease classification and coding. National Medical Journal of India. 20(6), p. 307- 310
5. Planning Commission. Government of India 11th Five Year Plan (2007-2012). Report of the working group on health systems research, biomedical research & development and regulation of drugs and therapeutics. Government of India, 2006.
6. Ramani, K.V. and Mavalankar, D. (2006). Health system in India: opportunities and challenges for improvements. Journal of Health Organisation and Management. 20(6),p. 560-572.
7. Sanyal, S. (2005). ICT, e-health & managing healthcare: exploring the issues & challenges in Indian railway medical services. Studies in Health Technology Informatics. 114, p. 157-163.
8. Singh, Surya Nath and Garg, B.S. (2002). Impact of information technology (Reprography) on biomedical information centres and libraries (ICLs) in India: a critical evaluation. Annals of Library and Information Studies. 49(3), p. 113-118.
9. Theo, Lippeveld; Sauerborn, R. & Bodart, C. 2000. Design and implementation of health information systems. WHO, Geneva
10. Wadhwa, S, Saxena, A and Wadhwa, B. (2007). Hospital information management system: an evolutionary knowledge management perspective. International Journal of Electronic Healthcare. 3(2), p. 232-260

Course Code	**MLIS4304D**
Course Title	Agricultural Sciences Library and Information System
Type of Paper	OEC (Open Elective Course)
Credit	4
Teaching Hours	60

Objectives-*To make the students aware of the objectives, development, collection development, organisational structure, services, financial and HRM of Agricultural Sciences Library and Information System*

Outcome-*After completion of the course, students will be aware of objectives, development, collection development, organisational structure, services, financial and HRM of Agricultural Sciences Library and Information System.*

Unit I: Agricultural Science Libraries and their Development

- Objectives and Functions
- History and Development of Agricultural Libraries with Special Reference to India
- History and Development of Agricultural Libraries with Special Reference to Abroad
- Role of ICAR, Committees and Other Agencies in the Development of Agricultural Libraries in India

Unit II: Collection Development and Management

- Books and Periodicals
- Conference Literature, Grey Literature and Government Publications
- Non-Book Materials: Electronic-Resources, Databases

Unit III: Library Organization and Services

- Organizational Structure of Agricultural Library
- Staff Manual, Library Surveys, Statistics and Standards, etc.
- CAS, SDI, Abstracting and Indexing Services, Library Bulletin
- Resource Sharing and Networking

Unit IV: Financial and Human Resource Management

- Determination of Finance, Sources of Finance
- Types of Budgets
- Nature, Size, Selection, Recruitment, Qualification and Training
- Responsibilities and Duties
- Competency Development Case Study of Agricultural Library in India

RECOMMENDED BOOKS

1. BHATT (V S): Information resources in agricultural research in 40years of agricultural research in India (1989) ICAR, New Delhi.
2. CHOTEY LAL (C): Agricultural libraries and information systems: a hand book for users (1998) R K Techno Science Agency, New Delhi.
3. DAYMATH (Y) and RUTTAN (V W): Agricultural development: an international perspective (1979) John Hopkins, Baltimore.
4. DESHMUKH (P P): Standardization of library and information services with special reference to scientific and agricultural libraries (1990) ABC, New Delhi.
5. KUMAR (P S G): Agricultural librarianship: M.L.I.Sc. elective paper (2008) B.R. Publication, New Delhi.
6. SHARMA (R D): The agricultural information network for India (1989) Society for Information Science, New Delhi.
7. SUBBAIHA (R): Agricultural librarianship in India: an overview (1988) Metropolitan, New Delhi.
8. SWAMINATHAN (M S): Report of the working group on agricultural research and education for the formulation of the eighth plan (1989) Planning Commission, ICAR, New Delhi.

Course Code	**MLIS4304E**
Course Title	Indian Culture and Tradition
Type of Paper	OEC (Open Elective Course)
Credit	4
Teaching Hours	60

Objectives- *To make the students aware with the Indian culture and tradition, its meaning, sources of study of Indian culture etc.*

Outcomes- *After completion of the course, students will be able to understand about Indian culture and traditions in detail. It will also help them to develop an understanding towards pre-historic cultures, proto-historic cultures, Vedic & Post-Vedic periods, etc.*

Unit I: Indian Culture: An Introduction

- Characteristics of Indian Culture, Significance of Geography on Indian Culture.
- Society in India through Ages- Ancient Period- Varna and Jati, Family and Marriage in India, position of Women in Ancient India, Contemporary period; Caste System and Communalism.
- Religion and Philosophy in India: Ancient Period: Pre-Vedic and Vedic Religion, Buddhism and Jainism, Indian Philosophy – Vedanta and Mimansa School of Philosophy.

Unit II: Indian Languages and Literature

- Evolution of Script and Languages in India: Harappan Script and Brahmi Script.
- Short History of the Sanskrit Literature: The Vedas, The Brahmanas and Upanishads & Sutras, Epics: Ramayana and Mahabharata & Puranas.
- History of Buddhist and Jain Literature in Pali, Prakrit and Sanskrit, Sangama Literature & Odia Literature.

Unit III: A Brief History of Indian Arts and Architecture

- Indian Art & Architecture: Gandhara School and Mathura School of Art; Hindu Temple Architecture, Buddhist Architecture, Medieval Architecture and Colonial Architecture.
- Indian Painting Tradition: Ancient, Medieval, Modern Indian Painting and Odishan Painting Tradition
- Performing Arts: Divisions of Indian Classical Music: Hindustani and Carnatic, Dances of India: Various Dance forms: Classical and Regional, Rise of Modern Theatre and Indian Cinema.

Unit IV: Spread of Indian Culture Abroad

- Causes, Significance and Modes of Cultural Exchange - Through Traders, Teachers, Emissaries, Missionaries and Gypsies
- Indian Culture in South East Asia
- India, Central Asia and Western World through Ages

RECOMMENDED BOOKS

1. https://egyankosh.ac.in/bitstream/123456789/47224/1/Unit-1.pdf
2. https://www.nios.ac.in/media/documents/SecICHCour/English/CH.02.pdf
3. https://ddceutkal.ac.in/Syllabus/MA_history/paper-8-N.pdf
4. Gore, M. S., Unity in Diversity: The Indian Experience in Nation-Building, Rawat Publication, Jaipur, 2002.
5. Malik, S. C., Understanding Indian Civilisation: A Framework of Enquiry, Indian Institute of Advanced Study, Shimla, 1975.
6. Mukerji, D. P., Sociology of Indian Culture, Rawat Publications, Jaipur,1948/1979.
7. Pandey, Govind Chandra, Foundations of Indian Culture, Books and Books, New Delhi, 1984.
8. Dube, S.C. 1990.Indian Society New Delhi: National Book Trust, India.
9. Majumdar, R.C. (ed.).1951. The Vedic Age, London.
10. Kochhar, Rajesh 2000. The Vedic people: Their history and geography. New Delhi: Orient Longman Limited.
11. Luniya, B.N., Evolution of Indian Culture. 4th Ed. Lakshmi Narain Agarwal, Agra, 1967.

Course Code	**MLIS4305**
Course Title	Web Based Information System and Service (Practical)
Type of Paper	PC/SEC (Skill Enhancement Courses/Practical) Compulsory
Credit	2
Teaching Hours	30

Objectives: *To acquaint the students with the HTML/CSS, Bootstrap, JS, practical of various types of library resources.*

Outcome: *After completion of the course, students will be able to develop Website Designing.*

Unit I: Designing with HTML/CSS

- HTML
- CSS
- Bootstrap
- jQuery

Unit II: Designing with Scripts

- JavaScript
- React JS
- Node JS
- Express JS

A) Hands on Practice Unit 1 and II ESE-40 Marks
B) Viva Voce- **20 Marks**

RECOMMENDED BOOK

1. DT Editorial Services. (2016). HTML 5 Black Book, Covers CSS 3, JavaScript, XML, XHTML, AJAX, PHP and jQuery. Dreamtech Press
2. Jake Spurlock. (2013). Bootstrap. O'Reilly Media, Inc.
3. Ryan Benedetti and Ronan Cranley (2011). Head First jQuery: A Brain-Friendly Guide. O'Reilly Media
4. Robin Wieruch. (2018). The Road to Learn React: Your Journey To Master Plain Yet Pragmatic React.Js. Zaccheus Entertainment
5. Greg Lim. (2020). Beginning Node.js, Express & MongoDB Development. Greg Lim

Course Code	**MLIS4306**
Course Title	Digital Library (Practice)
Type of Paper	PC/SEC (Skill Enhancement Courses/Practical) Compulsory
Credit	2
Teaching Hours	30

Objectives: *To acquaint the students with the cataloguing practical of various types of library resources.*

Outcome: *After completion of the course, students will be able to develop DSpace and GSDL.*

Unit I: Digital Library Software and Web Searching

- Digitization: Greenstone, DSpace
- Advanced Internet Searching, Search through Meta Search Engines

Unit II: W Blogs Designing

- Web blog designing for libraries.
- Web blog designing with WordPress.

A) ESE- 40 Marks
B) Viva Voce- **20 Marks**

Course Code	**MLIS4307A**
Course Title	Cloud Computing in LIS
Type of Paper	MENC
Credit	
Teaching Hours	30

Objectives- *To make the students aware of the intellectual property & copyright concepts and other issues related to patents.*

Outcome-*After completion of the course, students will be aware of IPR & copyright, copyright violation and infringement.*

UNIT - I: Cloud Computing Fundamentals, Architecture and Software Security

- Essential characteristics, Architectural Influences, Technological Influences, and Operational Influences.
- Cloud Delivery models, The SPI Framework, Cloud Software as a Service (SaaS) , Cloud Platform as a Service(PaaS), Cloud Infrastructure as a Service(IaaS),
- Cloud deployment models, Public Clouds, Community Clouds, Hybrid Clouds, Alternative Deployment models, Expected benefits.
- Cloud Computing Software Security fundamentals: Cloud Information Security Objectives, Confidentiality, Integrity, Availability, Cloud Security Services, Relevant Cloud Security Design Principles, Secure Cloud Software Requirements, Secure Development practices, Approaches to Cloud Software Requirement Engineering, Cloud Security Policy Implementation.

UNIT II: Cloud Computing Risk Issues

- The CIA Traid, Privacy and Compliance Risks, Threats to Infrastructure, Data and Access Control, Cloud Access Control Issues, Cloud Service Provider Risks.
- Cloud Computing Security challenges: Security Policy Implementation, Policy Types, and Computer Security Incident Response Team (CSIRT).
- Cloud Computing Security Architecture: Architectural Considerations, General Issues, Trusted Cloud Computing
- Secure Execution environments and Communications, Micro architectures, Identity Management and Access Control, Autonomic Security.

RECOMMENDED BOOK

1. Ronald L. Krutz, Russell Dean Vines, "Cloud Security a Comprehensive Guide to secure Cloud Computing". Wiley.
2. John W. itinghouse James F.Ransome, "Cloud Computing Implementation, Management and Security" , CRC Press.
3. Borko Furht. Armando Escalante, "Handbook of Cloud Computing", Springer
4. Buyya, Vecchiola and Selvi. (2017). MASTERING CLOUD COMPUTING. McGraw Hill Education

Course Code	**MLIS4307B**
Course Title	Indian Knowledge System
Type of Paper	MENC (Mandatory Elective Non-Credit Course)
Credit	2
Teaching Hours	30

Objective: *To make the student aware about Indian Knowledge System and broad classification of Indian philosophical System.*

Outcome: *After compilation of the course student will learn the historicity of Indian Knowledge System and broad classification of Indian Philosophical System.*

Unit 1: Introduction to Indian Knowledge System

- An overview of Indian Knowledge System (IKS)
- Classification Framework of IKS, Framework for establishing valid Knowledge
- The Vedic Corpus: Vedas & Vedangas, Role of Sanskrit in Natural Language Processing.
- Indian Philosophical System, Wisdom through the ages

Unit 2: Indian Numeral System

- Salient features of the Indian Numeral System
- Contribution of Mathematician in the area of Arithmetic, Algebra, Geometry and Trigonometry
- Binary Mathematics & Magic Squares in India
- Highlights of Indian astronomy

IInd Year, Semester IV

Course Code	**MLIS4401**
Course Title	Information Retrieval System
Type of Paper	DSC (Discipline Specific Course) Compulsory
Credit	4
Teaching Hours	60

Objectives-*To make the students aware of the indexing& vocabulary control techniques and searching of resources both through print and electronic medium.*

Outcome: *After completion of the course, students will be aware of using the indexing techniques to retrieve the useful resources for learning and research.*

Unit I: Basics of Information Retrieval Systems

- Definition, Components and Types of ISAR Systems
- Elements of File Organization
- Artificial Intelligence and Expert System
- Information Retrieval Models

Unit II: Subject Representation and Indexing Languages

- Alphabetical Subject Representation
- Contributions of Cutter, Kaiser, Ranganathan, and Coates
- Characteristics of Indexing Languages
- Vocabulary Control-List of Subject Headings and Thesaurus

Unit III: Indexing Systems and Techniques

- Assigned Indexing vs Derived Indexing
- Assigned Indexing Systems: Pre-Coordinate (PRECIS, POPSI and Chain Indexing) and Post-Coordinate Indexing System (Uniterm Index System)
- Derived Indexing Systems: Title based (KWIC, KWOC and KWAC), Citation based(SCI, SSCI, etc.) and Full-Text (STAIRS, LEXIS-NEXIS, etc.)
- Automatic Indexing: COMPass

Unit IV: Information Searching and Evaluation

- Search Methods and Search Strategy, Boolean Search
- Information Searching in different Media: Print and Electronic
- Need and Parameters of Evaluation - Retrieval Performance: Recall and Precision

RECOMMENDED BOOKS

1. Aitchison, Jean, Gilchrist, Alan; and Bawdown, David. (1990). Thesaurus Construction and Use: A practical manual. 4th Ed. ASLIB.
2. Becker, Joseph and Robert M Hayes. (1967). Information Storage and Retrieval tools Elements & Theories. New York: John Wiley.
3. Choudhury, G.G. (1993). Introduction to Modern Retrieval System. Calcutta: IASLIC,1993
4. Convey, John.(1992). Online Information Retrieval: An Introductory Manual to Principles and Practice. 4th ed. London.
5. Elis, David (1996). Progress and Problems in Information Retrieval. London: Library Association.
6. Fosket, A.C. (1992) Subject Approach to Information. London: Clive Bingley.
7. Fugman, Robert (1993). Subject Indexing and Analysis Theoretical Foundations &Practical Advice. Frankfurt: Index Verlag.
8. Grolier, Eric de.(1962). A Study of general Categories Applicable to Classification and Coding in Documentation UNESCO.
9. Lancaster, F.W. (1977). The Measurement and Evaluation of Library Science. Information Sources Press.
10. Losee, Robert M. (1998). Text retrieval and Filtering: Analytical Models of Performance. London: Kluwer.
11. Meadow, Charles T. (2000).Text Information retrieval system. Academic Press.
12. Sharp, Harold S. (1964). Readings in Information Retrieval. London: The Scarecrow Press.
13. Soergel, Dagobert. (1974). Indexing Languages & Thesaurus Construction & Maintenance. Los Angeles: Melville Pub. House.
14. Soergel, Dagobert. (1985). Organizing Information. Principles of Database & Retrieval Systems, Academic Press.

Course Code	**MLIS4402**
Course Title	Information Literacy in LIS
Type of Paper	DSC (Discipline Specific Core Course) Compulsory
Credit	4
Teaching Hours	60

Objectives-*To make the students aware of need and concepts of information literacy and its use in libraries.*

Outcome-*After completion of the course, students will be in a position to understand and use the information literacy for their academic work.*

Unit I: Fundamental of Information Literacy

- Information Society and Information Literacy
- Information Literacy: Definition, Models and Standards
- Information Literacy: Strategic Plan
- Information Literacy and Lifelong Learning

Unit II: Information Literacy Programmes and Methodology

- Scope of Information Literacy Programme
- National and International Programmes in Information Literacy
- Implementation of Information Literacy
- Information Literacy Products: Library Brochure, Database Brochure, Web based Access Instructions, Information Bulletin

Unit III: Application of Information Literacy

- Application of Information Literacy in Library and Information Centres
- Information Literacy for Users
- Information Literacy for Professionals
- Information Literacy for Research and Development

Unit IV: Trends in Information Literacy

- Web based Information Literacy System
- OPAC Information Literacy System
- Life Long Learning System
- Designing of Information Literacy Programme

RECOMMENDED BOOKS

1. Association of College and Research Libraries (ACRL) (2000). Information Literacy Competency Standards for Higher Education. Chicago: American Library Association. http://www.ala.org/ala/acrl/acrlstandards/informationliteracycompetency.htm
2. Australian Library and Information Association, Information Literacy Forum. (2006). Statement on Information Literacy for all Australians. Kingston: Australian Library and Information Association. http://www.alia.org.au/policies/information.literacy.html
3. Bawden, David. (2001). Information and Digital Literacies: a review of concepts. Journal of Documentation, V57(2), pp. 218-259.
4. Bruce, Christine. (1997). The Seven Faces of Information Literacy. Adelaide: ASLIB Press.
5. Council of Australian University Librarians. (2001). Information Literacy Standards. Canberra: Council of Australian University Librarians.
6. Presidential Committee on Information Literacy, American Library Association. (1989). Final Report. Chicago: American Library Association. http://www.ala.org/ala/acrl/acrlpubs/whitepapers/presidential.htm
7. Society of College, National and University Libraries (SCONUL). (1999). Information skills in higher education: a SCONUL Position Paper. London: SCONUL. http://www.sconul.ac.uk/activities/inf_lit/papers/Seven_pillars.html
8. Torras, M. C. & Saetre, T. P. (2009). Information Literacy Education. Oxford: Chandos Publishing.

Course Code	**MLIS4403A**
Course Title	Media and Publishing Technology
Type of Paper	DSE (Discipline Specific Elective Course)
Credit	4
Teaching Hours	60

Objectives-*To make the students aware of the concept, Print media OAI, formats, structure and issues of Electronic Publishing.*

Outcome- *After completion of course, students will be aware of concept of* Print media, *OAI, formats, structure and issues of Electronic Publishing.*

Unit I: Concept of Electronic Publishing & Print Media

- Concept, Scope Nature and Types of Electronic Publishing
- Evolution of Print Medium
- Invention of Printing Press

Unit II: Open Access Sources of Electronic Publishing

- Evolution of OAI
- Open Access Sources
- Pricing and Pricing models
- Current Trends in E-publishing

Unit III: Formats and Structure of E-Publishing

- Format of E-Publishing
- Structure of E-Publishing
- Languages of E-publishing

Unit IV: Issues of E-Publishing

- Socio issues in E-Publishing
- Economic issues in E-Publishing
- Legal issues in E-Publishing

RECOMMENDED BOOKS

1. Karen S. W. Marilynn B, Stone, T. A. (2003). Electronic publishing: The definitive guide. UK: Hard Shell Word Factory.
2. Klostermann, D. (2011). The e-book handbook - A thoroughly practical guide to formatting, publishing, marketing, and selling your e-book. Cambridge: Full Stop.
3. Loton, T. (2011). E-book publishing DIY: the do it yourself guide to publishing e-books, 2nd ed. United States: LOTONtech.
4. Meckler, L. (2011). E-book formatting, self-publishing, marketing tips updated. USA: Linda E meckler on smash words.
5. Sahida, f. k. (2010). Publishing e-book for dummies. USA: CreateSpace
6. Schuster, C. (2011). E-publishing for writers: Trends an opportunities/Fall 2011 (Kindle Edition ed.). UK: Books to Go Now

Course Code	**MLIS4403B**
Course Title	Library Automation and Networking
Type of Paper	DSE (Discipline Specific Elective Course)
Credit	4
Teaching Hours	60

Unit 1: Introduction to Library Automation and Management of Library Automation

- Library Automation: Need and Purpose, Approaches to Library Automation
- Management of Library Automation: Planning, Formats and Standards
- Retrospective Conversion

Unit 2: Implementation and Evaluation

- Automated Housekeeping Operations
- Automation of Acquisition
- Automation of Serials Control
- Automation of Cataloguing
- Automation of Circulation

Unit 3: Introduction to Networks

- Types of Networks
- Network Technology
- Data Networks
- Network Software

Unit 4: Library and Information Networks

- Resource Sharing
- Resource Sharing Technology
- Overview of Library and Information Networks
- Management of Library and Information Networks
- Network-based Information Services

RECOMMENDED BOOKS

1. Bierrnan, K. J (1974). Library Automation. In: Annual Review of lnformation Science and Technology. Vol. 9. Washington: American Society for Information Science.
2. Duval, B.K and Main, L. (1992). Automated Library Systems: A Librnrinns Guide and Teaching Manual. London: Meckler.
3. Kiinber, R. T. (1 970). Automation in Iihraries. Oxford: Pergamon Press. Lovecy, Ian (1 984). Automating Library Procedures --A Survivor S Handbook. New Delhi. D. K. Agencies (P) Ltd.
4. Nelson, N.M. (ed.) (1 990). Library Technology 1970-1 990: Shaping the Library of the Future. Research Contributions, from the 1990 Computers in Librnries Conference. London: Meckler.
5. Pitkin, G.M. (ed.) (1991). The Evolution of Library Automation: Management I,YSZIY and Future Perspectives. London: Meckler. Rowley, J.E. (1980). Computers for Libraries. 2nd ed. London: The Library Association.
6. Saffady, William (1983). Introduction to Automation for Libraries. Chicago: American Library Association.
7. Saffady, William (1989). Library Automation - An Overview. Library Trends. 37(3), 269-8 1. Salmon, Stephen. Library Automation. In: Encyclopedia of Library and Information Science. Vol. 14. New York: Marcel Dekker.
8. Sharma Pandey, S. K. (1995). Library Automation. In: Fundanzeals of library Automation. New Delhi: Ess Ess Publications.
9. Andrew S. Tanenbaum (1996). Computer Networks. New Delhi: Prentice Hall. Gilbert Held (1998). Data Communications Networking Devices. New Delhi: Wiley. Miller,
10. M. A. (1991). Internetworking: A Guide to Network Communications LAN to LAN; LAN to WAN. New York: M&T Books. Radia Perlman (1999). Interconnections, Bridges, Routers, Switches, and Internetworking Protocols. Addison Wesley.
11. Vineet Joshi: Networking and Cabling, Information Today, October, 1998. William Stallings (1997) "Data and Computer Communications", New Delhi: Prentice Hall of India.

Course Code	MLIS4403C
Course Title	Disaster Management in Information Centres
Type of Paper	DSE (Discipline Specific Elective Course)
Credit	4
Teaching Hours	60

Objectives- *To make the students aware of the information products, consolidation, repackaging, content analysis and marketing of library products.*

Outcome- *After completion of the course, students will be aware of information products, consolidation, repackaging, content analysis and marketing of library products.*

Unit: I Disaster Management

- Hazards and Disasters, Risk and Vulnerability in Disasters,
- Natural and Man-made disasters, earthquakes, floods drought, landslide, land subsidence, cyclones, volcanoes, tsunami, avalanches, global climate extremes.
- Man-made disasters: Terrorism, gas and radiations leaks, toxic waste disposal, oil spills, forest fires.

Unit: II Study of Important disasters

- Earthquakes and its types, magnitude and intensity, seismic zones of India, major fault systems of India plate,
- Flood Types and Its Management, Drought Types and Its Management, Landslide and Its Managements
- Case Studies of Disasters: Earthquakes, Landslide
- Social Economics and Environmental impact of disasters.

Unit: III Mitigation and Management techniques of Disaster

- Basic principles of disasters management
- Disaster Management cycle, Disaster management policy
- National and State Bodies for Disaster Management
- Early Warming Systems, Building design and construction in highly seismic zones, retrofitting of buildings.

Unit IV Training, awareness program and project on disaster management

- Training and drills for disaster preparedness,
- Awareness generation program,
- Usages of GIS and Remote sensing techniques in disaster management,
- Mini project on disaster risk assessment and preparedness for disasters

RECOMMENDED BOOKS

1. Disaster Management Guidelines, GOI-UND Disaster Risk Program (2009-2012)
2. Damon, P. Copola, (2006) Introduction to International Disaster Management, Butterworth Heineman.
3. Gupta A.K., Niar S.S and Chatterjee S. (2013) Disaster management and Risk Reduction, Role of Environmental Knowledge, Narosa Publishing House, Delhi.
4. Murthy D.B.N. (2012) Disaster Management, Deep and Deep Publication PVT. Ltd. New Delhi.
5. Modh S. (2010) Managing Natural Disasters, Mac Millan publishers India LTD.

Course Code	MLIS4403D
Course Title	Marketing of Library and Information Products and Information Services
Type of Paper	DSE (Discipline Specific Elective Course)
Credit	4
Teaching Hours	60

Objectives- *To make the students aware of the information products, consolidation, repackaging, content analysis and marketing of library products.*

Outcome- *After completion of the course, students will be aware of information products, consolidation, repackaging, content analysis and marketing of library products.*

Unit I: Information Analysis

- Information: Basic concepts
- Consolidation and Repackaging of Information: Concept, need and process.
- Guiding Principles for arrangement and presentation of idea in a helpful sequence.
- Packaging and Repackaging of Information products

Unit II: Information Products

- Information Products: Concepts, nature, definitions, design and types
- Information Newsletters, Handbooks, House Bulletins
- In-house Communication, Trade Bulletin, Product Bulletin, State-of-the-Art Report, Trend Report
- Technical Digests: Nature, concept, types, design; and development.

Unit III: Content Analysis

- Content Analysis: Concept types and processes.
- Abstract: Definition and types, Characteristics and Qualities of good abstracts.
- Abstracting: need, process. Computers and Abstracting.
- Abstracting organizations and Services.

Unit IV: Planning, Management and Marketing

- Planning and Management of Information Analysis and Consolidation
- Marketing of Information Concept, need and benefits.
- 5 Ps of Information Marketing; Marketing of profit and non- profit organization.
- Trends in marketing of Information Services; and Information Marketing in India.

RECOMMENDED BOOKS

1. BAKEWELL (K G): Managing user-centred libraries and information services (Ed. 2,1997) Maxwell, London.
2. BUTCHER (Helen): Meeting manager's information needs (1998) ASLIB, London.
3. CARPENTER (J) and DAVIES (R): Quantification of the overseas consulting market for professional consultancy services in librarianship and information science and information management (1992) Research and Development, British Library, London.
4. COOTE (Helen) and BATCHELOR (Bridget): How to market your library services effectively (Ed. 2, 1997) ASLIB, London.
5. GUPTA (D K): et al. Marketing library and information services: international perspectives (2006) K.G. Saur, Munich.
6. HELINSKY (Z): A short-cut to marketing the library (2008) Chandos Publishing, Oxford
7. JAIN (Abhinandan K): et al. Marketing information products and services: a primer for libraries and information professionals (1999) Tata McGraw-Hill, New Delhi.
8. KOTLER (Philip): L Marketing management (Ed.12, 2002) Prentice Hall, Delhi.
9. KOTLER (Philip) and ARMSTRONG (Gary): Principle of marketing (Ed. 7, 1996) Prentice- Hall of India, New Delhi.
10. ROWLEY (Jenifer): Information marketing (2001) Ashgate London.

Course Code	**MLIS4403E**
Course Title	Technical Writing
Type of Paper	DSE (Discipline Specific Elective Course)
Credit	4
Teaching Hours	48

Objectives- *To acquaint students with Communication Process, Planning and Organisation of Technical / Scientific Writing, Technical Editing and Editorial Tools, Publication Process and Ethics.*

Outcome- *After completion of the course, students will be confident about Communication Process, Planning and Organisation of Technical / Scientific Writing, Technical Editing and Editorial Tools, Publication Process and Ethics.*

Unit I: Communication Process

- Overview of Communication process
- Characteristic features of Technical Writing
- Target group in Written Communication
- Reader /Writer Relationship.

Unit II: Planning and Organisation of Technical / Scientific Writing

- Definition, Structure, Purpose, Characteristics, and functions.
- Aberrations in Technical Writing
- Collection, Organisation, and presentation of data including illustrations.
- Cast Studies: Preparation of Short Communications, Review Articles, Technical Report, Monographs, Project proposals, dissertations, and House Bulletins.

Unit III: Technical Editing and Editorial Tools

- Editor
- Editorial process
- Editorial Tools

Unit IV: Publication Process and Ethics

- Planning, Preparation, Production of Technical Information products.
- Dissemination of Technical Information products.
- Publication Ethics: Copy Right, IPR, Legal Issues and Professional Ethics

RECOMMENDED BOOKS

1. Elbow, Peter. Writing without teachers. New York. Oxford University Press. 1973.
2. Gowers, Sir. Ernest. The complete plane words. London: HMSO. 1954.
3. Holsinger, Donald C. A classroom laboratory for writing history. Social studies review.31(1), 1991. pp. 59 64.
4. Kapp, Ro. The presentation of technical information. London: Constable 1948.
5. Kirkman, John. Good style for scientific and engineering writing. London: Pitman.1980.
6. Parry, John. The psychology of human communication. London. University of London Press. 1967.
7. Ramage John D and Bean John C. The allyn and bacon guide to writing. 2ed. London, Allyn and Bacon. 2000. pp. 658.
8. Turk, Christopher and Kirkman, John. Effective writing: Improving scientific, technical and business communication. 2ed. London: Spon Press. 2007.
9. Winokur, Jon. Ed. Writers on Writing. Philadelphia running press: 1986.

Course Code	**MLIS4404**
Course Title	Dissertation/ Project Work
Type of Paper	PC/SEC (Skill Enhancement Courses/Practical) Compulsory
Credit	8
Teaching Hours	120

Objectives- *To make the students aware about writing a dissertation.*

Outcome- *After completion of the course, students will be aware about dissertation writing.*

Dissertation Work shall be start in the beginning of the second semester for which each student will be allotted a topic for writing the Dissertation. The Dissertation will be submitted at the end of second semester on the date to be decided by the Department.

A. Dissertation Evaluation by External and Internal Examiner: 25 X 2 = **50 Marks**

B. Viva-voce: 25 X 2 = **50Marks**

Total A+B = **100 Marks**

Course Code	**MLIS4405**
Course Title	Internship
Type of Paper	Internship
Credit	8
Teaching Hours	120

Objectives: *To train the students in practical librarianship in the working environment of the library by deputing them in different types of libraries for a period of one month; and to train them in preparing the Internship Report in a prescribed format based on their practical training and learning.*

Outcome: *After completion of the course, students will be able to works in Library without any hesitation.*

The Work for Paper shall start in the beginning of the four semesters for which each student will be allotted a library for internship. The Report will be submitted at the end of four semester on the date to be decided by the Department.

A. Report on Internship Programme – **40 Marks**

B. Viva-Voce – **20 Marks**

Course Code	**MLIS4406A**
Course Title	Information and Digital Literacy for Social Groups
Type of Paper	MENC (Mandatory Elective Non-Credit Course)
Credit	2
Teaching Hours	30

Unit 1: Information Basics

- Concept of Library, Information, Information Literacy Standard,
- Definition of Information, Characteristics of Information, Need of Information,
- Digital Information, Sources of Information Knowledge Society,
- Types of Information sources.

Unit 2: Digital literacy and Information Literacy

- Concept of Library literacy and Information Literacy,
- Digital Literacy, Significance of Library Literacy,
- Digital and Information Literacy, Continuous Education, Lifelong learning

Unit 3: Govt. Initiatives and People's participation

- Information Regarding Various Government Programmes, Campaigns, Yojanas,
- Digital Empowerment Digital Community Information Centers (DCIC),
- Collaboration and participation among masses

Unit 4: Project Work

- Library Literacy
- Digital Literacy
- Information Literacy
- Govt. Digital Library Initiatives

RECOMMENDED BOOKS

1. Ranganathan, SR (1988). The Five laws of Library Science. New Delhi
2. Choudhury, G.G. (2011). Information Users and usability in the digital age. New York: Neal-Schuman Publishers, Inc.
3. Nicholas, D. (2000). Accessing Information needs: Tools, techniques, and concepts for the internet age (2nd ed). London: ASLIB.
4. Rowley, JE (1993). Computers for Librarians. London: Clive Bingley
5. Ryan, J. Capra, S. (2001). Information Literacy Toolkit: ALA
6. Choudhury, GG. (2004). Introduction to modern information retrieval (3rd ed).

Course Code	**MLIS4406B**
Course Title	Bibliographies of Famous Librarians
Type of Paper	MENC (Mandatory Elective Non-Credit Course)
Credit	2
Teaching Hours	30

Objective: *To make the student aware about Bibliographies of Librarians (National & International).*

Outcome: *After compilation of the course student will learn the Bibliographies of Librarians (National & International) and their contribution in the field of Library & Information Science.*

Unit 1: Bibliographies of Librarians (National)

- Library Movement of India: Role of Individual & Committee
- Biography of Sayaji Rao Gaekwad
- Biography of S. R. Ranganathan
- Biography of B.S. Kesavan

Unit 2: Bibliographies of Librarians (International)

- Biography of Charles Ammi Cutter
- Biography of Melvil Dewey
- Biography of W. C. B. Sayers
- Biography of E. J. Coates

RECOMMENDED BOOKS

1. C. M. Esperanza (1994). Perspective of Library Movement in India. D.K. Publishers Distributors
2. Uma Balasubramaniam (2019) SAYAJIRAO GAEKWAD III. Rupa Publications India
3. Shiyali Ramamrita Ranganathan, Prithvi Nath Kaula (1992). A Librarian Looks Back: An Autobiography of Dr. S.R. Ranganathan. ABC Pub. House
4. P.Thankappan Nair (2005). B S Kesavan: First national librarian of India. Punthi Pustak
5. Charles A. Cutter (1977). Charles Ammi Cutter (The Heritage of librarianship series). Libraries Unlimited
6. Wayne A. Wiegand (1996). Irrepressible Reformer: Biography of Melvil Dewey. ALA Editions