Tata Institute of Social Sciences

2015-17

Master of Library and Information Science
MLISc
(Regular Fulltime Programme)

Centre for Library and Information Management Studies
Sir Dorabji Tata Memorial Library
Tata Institute of Social Sciences
(Deemed University)
V.N.Purav Marg
Deonar, MUMBAI—400 088
INDIA

Tel: 91-22-2552 5282
Fax:91-22-2552 5050

https://admissions.tiss.edu
http://library.tiss.edu/

Master of Library and Information Science (MLISc)

(REGULAR PROGRAMME)

Curriculum and Description of Courses

Centre for Library and Information Management Studies

Sir Dorabji Tata Memorial Library

TATA INSTITUTE OF SOCIAL SCIENCES

MUMBAI

www.tiss.edu

Master of Library and Information Science (MLISc)

(REGULAR COURSE)

"Libraries have a recognized social function in making knowledge publicly available to all. They serve as local centers of information and learning, and are local gateways to national and global knowledge"

National Knowledge Commission of India, 2007

The ability of a nation to use and create knowledge as capital determines its capacity to empower and enable its citizens by increasing human capabilities. India today stands poised to reap the benefits of a rapidly growing economy in rural as well as urban areas. The challenge and the opportunity is to galvanize our national potential into a dynamic resource: An informed, enlightened and capable Indian citizenry would not only enhance and enrich the process of national development, but could be a positive force in the world. In the words of Dr.Manmohan Singh, Honourable Prime Minister of India, "The time has come to create a second wave of institution building, and of excellence, in the fields of education, research and capacity building so that we are better prepared for the 21st century"

The development of Library has been parallel to the development of civilization, culture and education. Library is a manifestation of cultural maturity of society as it further enriches culture and civilization. It is repeatedly stated that library is pulsing heart of an educational institutions, the most intellectual resources to the academic community and an invaluable asset of the nation. The library is an agency that helps to carry out three objectives of an institution viz; teaching, research and dissemination of knowledge, to which it is attached.

Tata Institute of Social Science has a rich heritage of building its library system keeping pace with the development of emerging enabling technologies. As a recognized National Institute specialized in the field of social sciences, our library is coping well with the adoption of all available information technologies to expand its service points to provide faster access. Even in the field of digitization, our library has made headway by completing several such projects and subsequent building of the infrastructure for creating a National Digital Library for Social Sciences. As an added dimension to the available infrastructure and to make optimum use of the same, Director (TISS) was kind enough to initiate the Masters programme and constituted a committee to design the curriculum for the course. It is envisaged that this programme will be unique and cater to the growing need for organized training for the aspiring professionals and other information professionals.

1.1 Vision and Mission:

Vision Statement:

"To be an integral part of the TISS efforts in democratizing access to information by training the graduates from different backgrounds to become proactive knowledge workers in the process of collecting, organizing, consolidating, repackaging and disseminating the knowledge/ information for social transformation, scientific and technological growth and economic prosperity".

Mission Statement:

Preparing the manpower to be dynamic social change agents in managing, monitoring and disseminating the information by utilizing the ICT and related technologies. Training the manpower in capturing and preserving the tacit knowledge in the light of the emphasis on the importance of

traditional knowledge. Restructuring and reviewing LIS curriculum to cope up with changing socio-economic, cultural and technological environment.

1.2 Objectives:

After the completion of Master of Library and Information Science (MLISc) program, students are expected:

- To be an integral part of the institute's effort to build up an informed society and the citizenry working well in tune with the mission and vision of TISS
- To create an awareness of the evolution of knowledge society & its role in the social transformation & economic prosperity of the nation
- To analyse the complex issues of the access and use of knowledge and its productive utility in the social development.
- To educate & trains the learners to enable to empower the users community with different types of knowledge & information to function smoothly is the respective activities.
- To create understanding about the methods, techniques, skills as well as approaches in the information processing & management.
- To prepare the proactive LIS professionals to serve the cause of social justice, equity and to work as the partners in the progress of the nation by monitoring the ever growing information
- To train the manpower to create a development oriented, people friendly learning support system and serve the cause of social justice by rendering the information requirements of the disadvantaged group of users.

1.3 Career opportunities:

More and more organizations in India are embarking on new concepts in handling information with the changing times. Information formats have changed rapidly from print on paper to digital formats. There is need for qualified and trained Library and Information Science professionals to take the lead and guide developments in helping the end users in the changing environment.

2. Sir Dorabji Tata Memorial Library

The Sir Dorabji Tata Memorial Library at TISS is a unique Knowledge Center, which offers essential and specialized information resources and personalized information services to its research scholars. Its main objective is developing user - based resources, providing human and technologically moderated access to knowledge and facilitate users to identify, evaluate and access information. Library has in stock about 1,20,000 books covering the principal fields of interest in Social Sciences. More than 300 print journals and 6500 e-journals are currently subscribed. About 3500 thesis and dissertations submitted to various schools of TISS and various project reports, committee reports are also housed in library.

State of the art Cyber Library, a 24 X 7 centrally air conditioned facility exclusively for students is located on the first floor. This has provision of over 92 work stations, which have one gbps internet access and enough study space. Students can access digital as well as use print resources of the library. Remote Login to access e-Resources from outside the campus is provided.

Library has provision for over 300 study spaces spread across three floors. These floors are designated as Discussion Zone, Study Zone and Silence Zone. This is done to ensure that library provides support to all types of learning: from collaborative study to silent individualistic study.

Library conducts training sessions to help you locate, access and evaluate information for your use. Information Literacy Programmes are arranged periodically to educate research scholars about e-resources like online databases and e-journals. Library has initiated Liaison Librarian

facility, where one key library staff will be facilitating all your issues related to library support and services.

Some of the important information services provided are Current Awareness Service (New Additions List), Selective Dissemination of Information (SDI Bulletin) Document Delivery Services, Bibliography and Reference Services, Networking with DELNET, Inflibnet for effective Inter Library Loan services. Photocopying of library resources is permitted subject to copyright regulations at a price of Re.0.50 per exposure. Library has research tools/software like EndNote to manage your bibliographic references and Turnitin to detect plagiarism.

Digital Library and Institutional Repository facilitates to access electronic thesis and dissertations, faculty project reports, electronic version of Indian Journal of Social Work (IJSW) , Sociological Bulletin, etc.

M.K. Tata Memorial Learning Centre for the Visually Challenged within the Library is equipped with 20 multimedia computers, scanners for reading print materials, Prisma Magnification device for students with low vision, Kurzweil K1000 OCR Reading software, Zoom-Ex Instant Reader for conversion of print material into digital format for creating an e-Library.

Studying at TISS means that you are not restricted to one library for your research. Major libraries like IIT, IIPS, IGIDR, USIS, BCL, SNDT and University of Mumbai are open to our students. We help our students in accessing these libraries. For more details, please log on to *http://library.tiss.edu/*

3. Centre for Library and Information Management Studies

More and more organizations in India are embarking on new concepts in handling information. With the changing times, information formats also have changed rapidly from print on paper to digital. There is need for qualified and trained Library and Information Science professionals to take the lead and guide developments in helping the end users in the changing environment.

Tata Institute of Social Science has a rich heritage of building its library system keeping pace with the development of emerging enabling technologies. As a recognized National Institute specialized in the field of social sciences, Sir Dorabji Tata memorial Library has started several innovative initiatives in capacity building. Having organized several national and international conferences, workshops for capacity building, ***Centre for Library and Information Management Studies*** (CLIMS) offers following academic programmes

Master of Library and Information Science: a two year regular master's programme offered at Mumbai Campus. This programme has 20 courses with a total 66 credits. Selection is through an computer based entrance test and GD /PI and intake is limited to 15 seats.

Post Graduate Diploma in Digital Library and Information Management (PGDLIM)*:* This is One year, two semester dual mode course with 36 credits. It is being offered through a combination of contact classes and online learning thorough moodle learning platform. Selection is through interview process.

Doctor of Philosophy (PhD): Direct PhD in library and information science is being offered from 2012 April onwards. The selection is through Research Aptitude Test and personal Interview and the intake is limited to 5 seats.

Faculty

The faculty will comprise academic staff from Centre for Library and Information Management Studies (CLIMS), Sir Dorabji Tata Memorial Library. Faculty from other schools/centres of TISS and external resource persons also will be involved in teaching for various programmes.

Dr. Mallikarjun Angadi is serving as Chairperson, Centre for Library & Information Management Studies (CLIMS) & Deputy Librarian, SDTM Library. He is the recipient of SIS-Razaida Memorial Young Information Scientist Award (2008). His areas of specialization are: Web Designing, Digital Library Applications, Web Authoring, Network Based Information Services, Scientometric Studies. He has published 50 research papers in the conferences/seminars and national & international journals and has 4 edited books. Awarded USA-IVLP Fellowship 2007 and visited USA for one month 2007. He can be reached by email: mallikarjun@tiss.edu or by phone at 022-25525284

Dr. Satish Kanamadi is serving as Acting Librarian, SDTM Library. His areas of interest are Web Resources, Information Access, Information and digital Literacy, Training and Development. His research contributions include over 30 articles in national and international journals, edited volumes, etc. He was awarded the prestigious Commonwealth Professional Fellowship by the Commonwealth Scholarship Commission, UK and was in London School of Economics, London, UK during Sept –Dec 2010. He can be reached by email: satish@tiss.edu or by phone at 022-2552 5283

Dr. J. Shivarama, is serving as Assistant Professor. Earlier he was with Karnatak State Open University, Mysore where he coordinated the Bachelor and Masters programme of Library and Information Sciences. His areas of interests are information and digital literacy, ICT and Libraries, Information Organization, etc. He can be reached by email: j.shivarama@tiss.edu or by phone at 022-25525274

Dr. Akhilesh K.S. Yadav is serving as Assistant Professor. Prior to this, he worked with Guru Ghasidas Central University, Bilaspur, and "e-Granth" project in CCS Haryana Agriculture University. He has participated in several seminars and workshops. His interest areas are LIS education, ICT Skills, competencies, employability skills and open access. He can be reached by email: akhilesh.yadav@tiss.edu, or by phone at 022-25525274

Mr. Puttaraj Choukimath is serving as Asst. Librarian (SS) and faculty. He holds B.Sc., B.Ed., M.L.I.Sc. from Karnatak University (Dharwad), and PGDLIM from TISS. He has over thirteen years of professional experience and published seventeen papers in the international and national level conferences, seminars, festschrift volumes etc. He can be reached by: email: choukimath@tiss.edu; or by phone at 022-25525285

Mr. Prabhu B.Gaddimani is serving as Assistant Librarian and faculty. He has MLISc and MPhil from Gulbarga University, Gulbarga, where he was awarded Gold Medals for both. With over a decade of professional experience, he has published many research articles. He can be reached by email: prabhug@tiss.edu, or by phone at: 022-25525277

Mr. Anand Dodamani is serving as Assistant Librarian and faculty. With over eight years of rich experience in practice and teaching in the field of Library and Information Science, he has published several research articles in journals and conference proceedings. His areas of interest include Information Literacy; Online Information Services; Inclusive Libraries; Use of Assistive Technology. He was awarded "Highly Commended" citation for "2012 Emerald South Asia LIS Research Fund Award". He can be reached on his email: anand.dodamani@tiss.edu, or by phone at 022-25525274

Mr. Akhilesh Kumar Sankhwar is serving as Information Scientist and faculty. He worked with C-DAC Mumbai as Technical Officer. He has participated in several seminars and workshops. His interest areas are LIS education, ICT Skills, Linux/Windows System Administration, IT Infrastructure Planning and Management, Providing IT Consultancy, IT Security, Website hosting, website Development, Xen and KVM Virtualization, RHEL Cluster, Backup Administrator, Network Reviews, Network Management. He can be reached on his email: akhilesh.sankhwar@tiss.edu, or by phone at 022-25525273

Apart from this, external faculty and experts also will be engaged in delivering theory and practicals.

COURSE DETAILS

Semester	Course Code	Course Title	Credits
1	LIS 01	Knowledge Society	2
	LIS 02	Knowledge Organization I: Classification & Ontology (Theory and Practice)	4
	LIS 03	Knowledge Organization II: Cataloging and Metadata (Theory & Practice)	4
	LIS 04	Information Sources, Systems and Services	2
	LIS 05	Information Communication Technology and Libraries (Theory and Practice)	4
2	LIS 06	Management of Libraries and Information Centres	2
	LIS 07	Information Storage and Retrieval (Theory & Practice)	4
	LIS 08	Elements of Programming and Data Structures	2
	LIS 09	Research Methodology and Quantitative Techniques	2
	LIS 10	Internship in a Recognized Library/Information Centre	6
	LIS 11	Web Technologies and Web-based Information Services (Theory and Practice)	4
3	LIS 12	Informetrics and Scientometrics	2

	LIS 13	Digital Libraries (Theory and Practice)	**4**
	LIS 14	Knowledge Discovery and Data Management	**2**
	LIS 15	Elective-1* LIS-15.1: Community Information Systems LIS-15.2: Social Science Information Systems and Management LIS-15.3: Multi-Lingual Information Systems	**4**
	LIS 16	Knowledge Management Systems	**2**
4	LIS 17	Semantic Web Technologies	**2**
	LIS 18	Evaluation of Library & Information Services	**2**
	LIS 19	Elective-2* LIS-19.1: Information Analysis, Repackaging and Consolidation LIS-19.2 School Library and Information System and ICT	**4**
	LIS 20	Dissertation	**8**
		Total credits	**66**

(* One of the courses has to be chosen by a student as *electives*.)

Academic Units:

Each course in the curriculum will have the assigned units with the exception of Dissertation, which carries 8 credits. All courses have minimum 30 hours of teaching. Practicals are given equal practicing hours.

The Programme is for two academic years (four semesters). In the first year, students need to take 10 core courses, including Library Internship of 4 credits and the remaining courses in the second year. In the second year, they will have to take two electives in addition to the Dissertation.

Dissertation:

Harnessing the information, skills and attitudes acquired in the courses and applying them to solve the LIS related research problem, create new knowledge or new service. Students are required to select a topic for the dissertation in consultation with respective assigned guide and prepare the same during the Second year of the course. The dissertation should be written as an individual work. The dissertation can be in any of the topics in the LISc areas.

Unique Learning Environment

The courses are conducted through lectures, tutorials and laboratory sessions. They are held in the Library by the faculty members drawn from Sir Dorabji Tata Memorial Library, Centre for Media and Culture Studies, Computer Science, Centre for Research Methodology, Management Science, and external Library & Information Professionals. Several eminent persons from leading Research institutions will be invited to deliver lectures. The courses that require hands-on-experience are held at the Library. The library / terminal room lab is well equipped with the state-of-the-art systems with multimedia support including access to Internet.

Small-group discussions allow students to explore issues in some depth. Regular laboratory sessions give students hands-on practical experience. Students investigate a subject in depth or apply the technique they have learnt in classroom as part of course assignments. Interaction with staff and fellow students is an important part of the learning process. Students come from diverse backgrounds, which contribute to an exciting learning environment.

Semester-I

Name of the Programme	Master of Library and Information Science
Course Title	Knowledge Society
Course Number	LIS-01
Semester	1
Credits	2

Objectives of the Course:

- To introduce the basic concepts of knowledge and its formation
- To understand the influence of knowledge in the society
- To understand the process of communication

Course Content:

- Evolution of Knowledge Society, Components, Dimensions and Indicators of Knowledge Society. Data, Information and Knowledge-Conceptual Differentiation; Knowledge based Institutions: different kinds; objectives and functions; library as a social and knowledge institution
- Information and communication: Models, channels and barriers; Diffusion of Innovations; trends in scientific communication
- Legislative framework for library development and information provision; Public Library legislation; Delivery of Books Act; Right to Information Act; IPR and Copyright
- National Information Policy; Components; National Knowledge Commission, professional ethics, professional bodies and association (National and international). Information profession; Professional Ethics, Professional Bodies (national and international) and their activities.
- Information Literacy: Purpose, functions, objectives and models. Information Literacy – Global Perspectives

Method of Teaching: Lectures, Brainstorming Sessions, Case Studies, etc.
Method of Assessment and Weightage: Assignment, Written Exam

Recommended Readings

1. Duff, Alistair. 2001. *Information Society Studies*. London: Routledge
2. Harris, Michael H., Harris, Pamela C and Hannah, Stan A.1998. *Into the Future: The Foundations of Library and Information Services in the Post-Industrial Era*. 2nd ed. Greenwich, Conn.: Ablex Publishing
3. Jafferson, G. 1997. *Library Cooperation*. London: Andre Deutsch
4. Kent, Allen.1994. *Encyclopedia of Library and Information Science*. NY: Marcel Dekker
5. Ranganathan, S R. 1957. *Five Laws of Library Science*. 2nd ed. Mumbai: Asia.
6. Ranganathan, S. R. 1988. *The Five Laws of Library Science*. Bangalore: Sarada Ranganathan Endowment for Library Science.
7. Wiegand,WayneA. et al.(eds.).1994.*Encyclopedia of Library History*.NY:Garland Publishing.
8. Willinsky, John.2005. *The Access Principle: The Case for Open Access to Research and Scholarship.* (Digital Libraries and Electronic Publishing). Cambridge: MIT Press.
9. Bala, Harsha. (2010). *Towards building a knowledge society*.USA: Authorpress.
10. Dhavan, S.M. 2010.*Public Libraries in the Knowledge Society*. New Delhi: Serial

Name of the Programme	Master of Library and Information Science
Course Title	Knowledge Organization I: Classification & Ontology (Theory and Practice)
Course Number	LIS-02
Semester	1
Credits	4

Objectives of the Course:

- To be acquainted with the process of knowledge organization
- To train students about the tools and techniques of knowledge organization
- To develop acquaintance with the ontologies and folksonomies

Course Content:

- Universe of Subjects: structure and attributes, modes of formation of subjects.
- Library Classification: Historical Perspectives, Mapping of Universe of subjects in major schemes of Library classification
- General Theory of Classification; Normative Principles; Three planes of work, basic concepts, principles of helpful sequence; Facet Analysis and facet sequence. Postulates. Notation: Kinds, special features
- Trends in classification, Classaurus, automatic classification, Web Dewey
- Ontologies and Folksanomies: OWL and SKOS

Method of Teaching: Lectures, Brainstorming Sessions, Practical Sessions, Case Studies, etc.

Method of Assessment and Weightage: Assignment, Presentation, Written Exam, Practical

Recommended Readings

1. Foskett, A. C. 1996. *Subject Approach to Information*. 5th ed. London: Library Association
2. Krishan, Kumar. 1998. *Theory of Classification*. 4th rev. ed. Delhi: Vikas Pub. House.
3. Ranganathan, S. R. 1945. *Elements of Library Classification*. Poona: N.K. Publishing House
4. Ranganathan, S. R. 1962. *Elements of Library Classification*. 3rd ed. Bombay: Asia
5. Ranganathan, S. R. 1989. *Prolegomena to Library Classification*. Assisted by M. A. Gopinath. 3rd rep. ed. Bangalore: SRELS
6. Satija, M. P. 1993. *Colon Classification*. 7th edition. New Delhi: Sterling
7. Nath, M. 2008. *Universe of knowledge and development of subjects*. Jaipur: Pointer
8. Peters, Isabella. 2009. *Folksanomies, Indexing and Retrieval in Web 2.0*. Germany: Saur
9. Oggier, David. 2010. *Harnessing Folksonomies with a Web Crawler*. Germany: Verlag
10. Kumbhar, Rajendra. 2011. *Library Classification Trends in the 21st Century*. UK: Chandos

Name of the Programme	Master of Library and Information Science
Course Title	Knowledge Organization II: Cataloguing and Metadata (Theory & Practice)
Course Number	LIS-03
Semester	1
Credits	4

Objectives of the Course:

- To be acquainted with the process of Library Cataloguing and metadata and its standards
- To understand Bibliographic Formats and Standards, deriving subject headings
- To have hands on practice of cataloguing of different types of documents

Course Content:

Theory:

- Purpose, function and objectives of library catalogue, Bibliographic Records. Evolution of the Physical and Inner forms of bibliographic files. Standards for Bibliographic Organization, ISBDs, FRBR
- Catalogue Codes – CCC, AACR 2 and Resource Description and Access (RDA)
- Standards for Machine Readable Bibliographic Records – ISO 2709 and the MARC family of Formats, Authority Files; MARC XML; Retro conversion
- Design of indexing languages / vocabulary control devices. Subject Cataloguing: Tools and Techniques – Lists of Subject Headings, Thesauri. General theory of subject indexing languages (SIL)
- Concept of Metadata and metadata standards: Dublin Core, EAD, METS, VRA Core etc.

Practice:

- Preparation of Bibliographic Records for different kinds of documents using appropriate standards and software
- Cataloguing of Simple and complex documents (Using at least one Standard Cataloging Code), Filing of entries
- Cataloguing of Complex documents (Using at least one Standard Cataloging Code)
- Assigning Subject Headings (Using at least one Standard Subject Heading)
- Pre & Post Coordinate Indexing Systems and Citation Indexing
- Assigned indexing practice
- Derived indexing practice
- Tools of Vocabulary Control
- Structure and construction of Thesaurus

Method of Teaching: Lectures, Brainstorming Sessions, Practical Sessions, Case Studies, etc.

Method of Assessment and Weightage: Assignment, Presentation, Written Exam, Practical

Recommended Readings:

1. Foulonneu, M. 2008. *Metadata for Digital Resources*.UK: Chandos
2. Maxwell R. L. &. Connell T. H (eds.). 2000. *Future of Cataloging: The Lubetzky Symposium.* Chicago: American Library Association.

3. OCLC. 2002. *Bibliographic formats and standards*. 3rd ed. Dublin, Ohio: OCLC (Also available online at http://www.oclc.org/oclc/bib/toc.htm)
4. Ranganathan, S. R. 1974. *Cataloguing Practice.* Assisted by G. Bhattacharya. Bombay: Asia Pub. House
5. Ranganathan, S. R. 1988. *Classified Catalogue Code with additional rules for Dictionary Catalogue Code.* Assisted by A. Neelameghan. 5th rep. ed. Bangalore: SRELS.
6. Rowley, J., & Farrow, J. 2000. *Organizing knowledge: An introduction to managing access to information*. 3rd ed. Aldershot, Hampshire, England: Gower
7. Smiraglia, R.P. 2005.*Metadata: A Cataloger's Primer*. USA: Haworth
8. Srivastava, M .D. 2011.*Metadata Creation in Digital Libraries*. New Delhi: Pacific
9. Svenonius, Elaine. 2000. *The Intellectual Foundation of Information Organization*. USA: MIT Press
10. Wellisch, Hans H. 1995. *Indexing from A to Z.* 2nd ed. New York: H.W. Wilson

Codes / Standards

Anglo-American Cataloging Rules (most recent edition to be used)
Ranganathan, S. R. Classified Catalogue Code, etc. 5th ed. Bangalore: SRELS, 1964
MARC 21 and related standards for bibliographic records
Dublin Core and other relevant metadata standards for different kinds of objects / resources
Library of Congress Subject Headings
Sears List of Subject Headings

Codes / Standards:

1. Anglo-American Cataloging Rules (most recent edition to be used)
2. Ranganathan, S. R. Classified Catalogue Code, etc. 5th ed. Bangalore: SRELS, 1964
3. MARC 21 and related standards for bibliographic records
4. Dublin Core and other relevant metadata standards for different kinds of objects/ resources

Name of the Programme	**Master of Library and Information Science**
Course Title	**Information Sources, Systems and Services**
Course Number	**LIS-04**
Semester	**1**
Credits	**2**

Objectives of the Course:

- To understand the different types of information sources, systems and services
- To study various categories of Information systems
- To study Information Needs, use and user studies, information literacy
- Understand the significance of referral centres, information analysis centres, databanks etc

Course Content:

- Information sources –Documentary and Non-Documentary; Primary, Secondary and Tertiary Sources and their characteristics. Regional language information sources and services
- Different categories of information systems: libraries, documentation centres, information clearing houses, referral centres, information analysis centres, databanks etc; their structure, functions, products, and services; Different Kinds of information systems – Decision support systems, MIS, GIS, etc.
- Electronic Resources: e-Journals, e-Books, Online Databases and Institutional Repositories.

- Web Resources: Blogs, Portals, Wikies, Subject Gateways & Virtual Libraries, Social Book Marking etc.
- Information Needs, use and user studies, information literacy. Information Products and Services: Document Delivery, Current Awareness Sources and Services; Trend Reports, Information Analysis and Consolidation Products and services.

Method of Teaching: Lectures, Brainstorming Sessions, Case Studies, etc.

Method of Assessment and Weightage: Assignment, Written Exam

Recommended Readings

1. Delaney, Julie. 2000. *Geographical Information Systems: An Introduction*. USA: Oxford University Press
2. Holsapple, Clyde W. and Whinston, Andrew B. 1996. *Decision Support Systems: A Knowledge-Based Approach*. Minneapolis: West Publishing Company
3. Hurt, C.D. 1998. *Information Sources in Science and Technology*. 3rd ed. Westport Conn.: Libraries UnLISited
4. Longley, Paul A. and Others. (eds).2005. *Geographical Information Systems: Principles, Techniques, Management and Applications*. 2nd ed. Hoboken, N. J.: John Wiley and Sons
5. Marakas, George M. 2002. *Decision Support Systems*. 2nd ed. New Jersey: Prentice Hall.
6. Ranganathan, S. R. 1961. *Reference Service*. 2nd ed. Bombay: Asia Pub. House
7. Sprague, Ralph H. and Watson, Hugh J. (eds.).1993. *Decision Support Systems: Putting Theory into Practice*. 3rd ed. Englewood Cliffs, N. J.: Prentice Hall.
8. Stebbins, Leslie, F. 2005. *Student guide to research in the digital age: how to locate and evaluate information sources.* Santa Barbara: Libraries Unlimited
9. UNESCO: .1978. *Handbook of Information Systems*. PARIS: Unesco
10. Valecich, J. 2009. *Information Systems Today: Managing the Digital World*. New Delhi: PHI

Name of the Programme	**Master of Library and Information Science**
Course Title	**Information Communication Technology and Libraries (Theory and Practice)**
Course Number	**LIS-05**
Semester	**1**
Credits	**4**

Objectives of the Course:

- To introduce the students with the basics of ICT and related issues
- To study Hypertext, Hypermedia, Multimedia and File Formats
- To familiarise students with library automation, and retrieval process.
- To understand Open Source Software

Course content:

- Evolution of Digital Computers. Number systems: Binary, Octal, Hexadecimal, Representation of Numbers in Computers. Character Representation: ASCII and UNICODE Introduction to Boolean logic: AND, OR, NOT, NAND, NOR, EX-OR, Truth tables
- Operating Systems: Linux, Windows, Shell programming
- Hypertext, Hypermedia, Multimedia and File Formats, User Interfaces and data visualization
- Library operations - Acquisition and Collection Development: policy, procedures, Document Circulation – functions, procedures, and methods, Serials Control – functions, procedures and methods, Stock verification. Open Source Library automation software

- Retrieval Standards: Z39.50, SRU/SRW. Bibliographic Management Software like ENDNOTE, REFWORK

Method of Teaching: Lectures, Brainstorming Sessions, Practical Sessions, Case Studies, etc.

Method of Assessment and Weightage: Assignment, Presentation, Written Exam, Practical

Recommended Readings

1. Arthur, Lowell Jay and Burns, Ted. 1995. *Unix Shell Programming*. New Delhi: Galgotia
2. Date, C. and Darwen, H. 1994. *A Guide to the SQL Standard*. 3rd ed. Reading, MA: Addison-Wesley
3. Date, C.J. 2000. *An Introduction to Database Systems*. 7th ed. Boston, MA, USA: Addison-Wesley Longman
4. Elmasri, Ramez and Navathe, Shamakant B. 2007. *Fundamentals of Database Systems*. 5th ed. Boston: Pearson/Addison Wesley
5. Kochan, Stephen and Wood, Patrick. 2003. *Unix Shell Programming*, 3rd ed. USA: SAMS
6. Matthew, Neil and Others. 2001. *Professional Linux Programming.* Mumbai: SPD
7. Michael, Randal K. 2003. *Mastering UNIX Shell Scripting*. Canada: Robert Ispen
8. Peterson, Richard. 1996. *Linux: the Complete Reference*. New York: McGraw-Hill
9. Silberschatz, A., Korth, H.F. and Sudarshan, S. 2006. *Database System Concepts*. 5th ed. Boston: McGraw-Hill International Higher Education
10. Tranter, Jeff. 1996. *Linux Multimedia Guide*. Cambridge: O'Reilly.

Semester-II

Name of the Programme	**Master of Library and Information Science**
Course Title	**Management of Libraries and Information Centres**
Course Number	**LIS-06**
Semester	**2**
Credits	**2**

Objectives of the Course:

- To introduce the students with the basics of library and information science
- To create understanding about Human Resource and Financial and space Management
- To understand Performance parameters and Library reporting

Course Content:

- Library as a System; Components and subsystems of a Library and their inter-relationships; Acquisition and Collection Development: policy, procedures, Document circulation – functions, procedures, and methods, Serials control – functions, procedures and methods, Stock verification. Organizational structure, Library Authority and Library Committee.
- Management functions – planning, organizing, staffing, leading, Budgeting and controlling. Project Management: PERT, CPM, Management of change; Reporting: Types of reports: Annual Report-compilation, contents and style, Library statistics. Preservation of Library materials, Library Building
- Human Resource Management: Delegation, communication and participation, Job description and analysis; Job evaluation, Inter-personal relations, Recruitment procedures, Motivation; Group dynamics, Training and development, Discipline, grievances, performance appraisal.
- Financial Management: budgeting and different types of budgets- PPBS, ZBB, Line Budget; Costing, cost and benefit analysis, Resource mobilization. Outsourcing.
- Performance parameters: Measurement, Reengineering. Time and Motion Study, SWOT; TQM - Definition, concept, elements, Quality audit, LIS related standards, Technology management, ISO 9000 series

Method of Teaching: Lectures, Brainstorming Sessions, Case Studies, etc.
Method of Assessment and Weightage: Assignment, Written Exam

Recommended Readings

1. Abbot, Christine. 1994. *Performance Measurement in Libraries and Information Services*. London: ASLIB
2. Baker, F W and Baker, Sharon L. 1991. *The Measurement and Evaluation of Library Services*. Virginia: Information resource Press
3. Byrson, Jo. 1990. *Effective Library and Information Centre Management*. England: Gower
4. Coote, Helen. 1994. *How to market your library service effectively*. London: ASLIB
5. Hayss, Robert M. 2001. *Models for Library Management, Decision-Making and Planning.* New York: Academic Press
6. Osbone, Larry N and Nakamura, Margaret.1999. *System Analysis for Libraries and Information Professional*. Colorado: Libraries Unlimited.
7. Prytherch, Gower, ed. 1998. *Handbook of Library and Information Management*. England: Gower
8. Stueart, Robert D. and Moran, Barbara B.2004. *Library and Information Centre Management*. Colorado: Libraries Unlimited

Name of the Programme	Master of Library and Information Science
Course Title	Information Storage and Retrieval (Theory & Practice)
Course Number	LIS-07
Semester	2
Credits	4

Objectives of the Course:

- To understand the historical perspectives and significance of IPR in the present context.
- To study various models of Information Retrieval and search strategy
- Understand the significance of Data Security, evaluation of IR process for effectiveness.

Course Content:

- IR Systems: Historical Perspectives, Different types of storage- physical level of a DBMS – use of B-trees, Tries. Document Representation: Statistical Characteristics of Text, Basic Query Processing.
- Classic IR: Basic concepts. Boolean, Vector and Probabilistic model. Structured Text Retrieval Models: Model based on non-overlapping lists and proximal nodes. Text Operations: document pre-processing (word stemming, stop words, thesauri), document clustering
- IR Systems and the WWW, Heterogeneous Information Sources, Intelligent Web Agents. Cognitive IR modeling. Query: keyword based querying, pattern matching, structural queries, query protocols
- Introduction to DBMS - File management vs. Database Management, integrity and security issues.
- Database Security - models, security implementation, relationship to web databases. SQL, Implementation in MySql/ or PostgreSql

Methods of Teaching: Lectures, Brainstorming Sessions, Practical Sessions, Case Studies, etc.
Methods of Assessment: Assignment, Presentation, Written Exam, Practical

Recommended Readings

1. Baeza –Yates, Ricardo. 1999. *Modern Information retrieval*. Delhi: Pearson Education
2. Belew, Richard K. 2001. *Finding Out About: A Cognitive Perspective on Search Engine Technology and the WWW*. Cambridge, UK: Cambridge University Press
3. Date, C.J. 2000. *An Introduction to Database Systems.* Reading, MA: Addison-Wesley
4. Grossman, David A. and Frieder, Ophir. 1998. *Information Retrieval: Algorithms and Heuristics* (The Information Retrieval Series). 2nd Ed. Dordreent, The Netherlands: Springer
5. Korfhage, Robert R. 1997. *Information Storage and Retrieval*. New York: Wiley
6. Meadow, Charles T., Boyce, Bert R. and Kraft, Donald H. 2000. *Text Information Retrieval Systems*. (Library and Information Science). 2nd ed. California: Academic Press
7. Neelameghan, A. 1995. *Online Database searching and Retrieval: Strategies, Procedures, Commands and Problems – A brief guide*. Bangalore: SRELS
8. Silberschatz, A., Korth, H.F. and Sudarshan, S.1997. *Database System Concepts.* 3rd ed. New York: McGraw-Hill
9. Van Rijsbergen, C. J. 2004. *The Geometry of Information Retrieval*. Cambridge: Cambridge University Press
10. Voorhees, Ellen M. and Harman, Donna K. 2005. *TREC: Experiment and Evaluation in Information Retrieval* (Digital Libraries and Electronic Publishing). USA: MIT Press.

Name of the Programme	**Master of Library and Information Science**
Course Title	**Elements of Programming and Data Structures**
Course Number	**LIS 08**
Semester	**2**
Credits	**2**

Objectives of the Course:

- To familiarize students with the concept of programming and data structures for developing library applications
- To understand the sorting, searching , hashing process in programming
- To study the record structure like fixed/variable, pinned/unpinned, etc including Object Oriented programming and JAVA

Course Content:

- Fundamentals of programming techniques, flowcharting, Introduction to C programming language. Arrays.
- Linked Lists: Singly linked, doubly linked and circularly linked. Stacks and queues. Applications – Polish postfix conversion. Binary trees - Implementation, Traversal algorithms. Binary Search Tree, AVL tree. B-tree – application in database design.
- Recursive programming - Differences between recursion and iteration. Sorting, Searching and Hashing
- Graphs. Pointer-based and array-based representation. Breadth-first and depth-first traversals. Shortest path algorithms. Fixed length/ variable length records, pinned / unpinned record, indexed files
- Object oriented programming. Java or a similar language.

Methods of Teaching: Lectures, brainstorming sessions, practical sessions, etc.
Methods of Assessment: Assignment, Written Exam

Recommended Readings

1. Adamson. 1997. *Data Structures and Algorithms: A First Course*. USA: Springer-Verlag
2. Collins, William J. 2003. *Data structures and the standard template library*. Boston : McGraw-Hill
3. Drake, Peter. 2005. *Data structures and algorithms in Java*. Upper Saddle River, NJ : Pearson/Prentice Hall
4. Harold, E. R. 1997. *Java Secrets*. New Delhi: Comdex
5. Horowitz, S. and Sahani, D. M. 1995. *Fundamental of data structures*. USA: Computer Science Press
6. Koosis, D. J. and Koosis,D. 1997. *Java Programming for Dummies*. New Delhi: Comdex
7. Sintes, Anthony. 2004. *Teach Yourself Object Oriented Programming in 21 Days*. USA: SAMS
8. Slazberg, B. 1998. *File Structures: An analytical approach*. Englewood Cliffs. N. J.: PH
9. Tenenbaun, A. M., Langsam, Y. and Augenstein, M. J.1990. *Data structures using C.* Englewood Cliffs, N. J.: Prentice Hall
10. Wu C. Thomas.2004. *An Introduction to Object-Oriented Programming With Java*. 3rd ed. New York: McGraw-Hill

Name of the Programme	Master of Library and Information Science
Course Title	Research Methodology and Quantitative Techniques
Course Number	LIS-09
Semester	2
Credits	2

Objectives of the Course:

- To understand the research methods and process
- To understand on both quantitative techniques for data analysis and consolidation
- To develop the skills of report writing

Course Content:

- Research – concept, meaning, need and process of research; types of research: fundamental and applied including inter-disciplinary and multi-disciplinary approach. Research Design – conceptualization and operationalization; Identification and formulation of problems; Hypothesis: Nominal and operational definition, ethic aspects. Review of Literature, Writing research proposals.
- Research Methods – scientific, historical, descriptive, survey methods, case studies, Delphi & experimental methods.
- Research Techniques and Tools sampling and methods sampling. Tools for data gathering -- Questionnaire, interview, observation, methods of data analysis using statistical methods and techniques including Bibliometrics, Scientometrics, Informetrics and Webometrics
- Use of statistical package: SPSS or SAS or any other well-tested and proven packages.
- Research Reporting – structure, style, concepts, guidelines for research reporting, style manuals – Chicago, MLA, APA etc. and Current Trends in Library & information science Research.

Methods of Teaching: Lectures, brainstorming sessions, etc.
Methods of Assessment: Assignment, Written Exam
Recommended Readings:

1. Charles H. Busha & Stephen, P. Harter.1980. *Research Methods in Librarianship: Techniques and Interpretation*. New York: Academic Press
2. Goode, William J and Hatt, Paul K.1952. *Methods in Social Research*. New York: McGraw-Hill Book Company
3. Goon, A M. 2000. *Fundamental of Statistics*. Calcutta: World Press
4. Gopal , M.H : 1992. *An Introduction to Research Procedure in Social Sciences*. New Delhi, Vikas, Pub. House
5. Krishnaswami, O.R. 1993. *Methodology of Research in Social Sciences*. Bombay : Himalaya
6. Leo, Egghe and Rousseau, Ronald. 2001. *Elementary Statistics for Effective Library and Information Service Management*. London: Aslib
7. Marurice, B. Line.1982. *Library Surveys: an introduction to the use, planning procedure and presentation of surveys*. 2nd ed. London : Bingley
8. Mary Lee, Bundi. 1983. *Reader in Research Methods for Librarianship* USA: Greenwood Press.
9. Powell, Ronad, R. 1985. *Basic research methods for librarians*. Norwood: Ablex
10. Powell, Ronald R. and Connaway, Lynn Silipigni. 2004. *Basic Research methods for Librarians*. 4th ed. Westport: Libraries unlimited

Name of the Programme	Master of Library and Information Science
Course Title	Library Internship in a Recognised Library/Information Centre
Course Number	LIS 10
Semester	2
Credits	6

An internship is an individualized training program that combines learning new library skills outside the classroom and the demonstration of those skills according to a planned schedule of activities. An intern works with an advisor/supervisor selected for the purpose to develop a practical training program on a particular aspect of librarianship. The duration of the internship would be four weeks.

Objectives of the Course:
Any library internship training serves the purpose of both – the intern as well as the host library/institution. It is supposed to add value to both the parties. These objectives are:

- to increase the knowledge and skills of recent graduates;
- to upgrade their skills in a specific area of information service;
- to train them in order to boost their efficiency for crucial department/section;
- to train them to adopt to the existing working conditions in the home library;

Methods of Teaching: Brainstorming sessions with Guide/ Internship Supervisor
Methods of Assessment: Study Report, Assessment by Internship Supervisor
Recommended Readings

1. Choukimath, Puttaraj and others. 2006. Library Internship: A key to the development of sustainable professional competence. In: Karisiddappa, C.R. and Others (Ed.) '*Building Curriculum with a Difference: A Vision for LIS Education in the 21st Century'. Proceedings of the 23rd IATLIS Conference*, Punjabi University, Patiala, 2006, pp.381-389.
2. Dhanapal, A.; Sasikala, G. and Charles, P. 2006. "Internship Programme for LIS Students: A best tool for training the future professionals". In: N. Laxman Rao. & S. Sudarshan Rao. (Eds.) 'Quality Education in Library & Information Science'. .*Proceedings of XXII IATLIS National Conference*, 24-16 Nov 2005, Hyderabad: IATLIS, 2006, pp.253-255
3. Hanke, M.K. & Benzer, M.J. 1979. "Training at the postgraduate level for medical librarians: a review". *Bulletin of the Medical Library Association*, Vol.67 (1), pp.42–46.
4. Martin, Jess A. "Medical Library Internship at NIH". *Bulletin of the Medical Library Association*, Vol.55 (2), 1967, pp.207-208.
5. Martin, Jess A. "What Happens to Medical Library Interns?". *Bulletin of the Medical Library Association*, Vol.55 (4), 1967, pp.416–417.
6. Kaye, Dotson. 2009. *Developing Library Leaders*. Germany: Verlag
7. Myburgh, Sue. 2005. *New Information professional*.UK: Chandos
8. Lawson, Judy. 2010.*The New Information Professional: Your Guide to careers in the Digital Age*.UK: Neal Schuman
9. Heye, Denni. 2006. *Characteristics of the Successful Twenty-first Century Information professional*. UK: Chandos
10. Routledge. 1997. *Then Future Information Professional. Proceedings of conference*. USA: Routledge

Semester-III

Name of the Programme	Master of Library and Information Science
Course Title	Web Technologies and Web-based Information Services (Theory and Practice)
Course Number	LIS 11
Semester	3
Credits	4

Objectives of the Course:

- To introduce the concept of Web technologies, mark up languages and Network protocols
- To understand the process of web programming, database connectivity
- To study the implications of Web 2.0 technologies to library and information management.

Course Content:

- Web Technologies: Concepts and Principles. Markup Languages: HTML, XML, DHTML, XHTML
- Network Protocols: TCP/IP, FTP, SSHD, SOAP, etc. Web Programming: java scripts and JSP
- Database connectivity: ODBC, JDBC, Web servers: Apache etc.
- Open URL and Federated Search Engines, Relevant W3 Standards and Protocols. Search Engines, cluster based search engines and building search engines. Search Algorithms
- Web 2.0: RSS feeds, Blogs, Wikies etc.,
- CMS: Concept, Types and Principles, CMS Architecture, CMS Software

Methods of Teaching: Lectures, Brainstorming Sessions, Practical Sessions, Case Studies, etc.
Methods of Assessment: Assignment, Presentation, Written Exam, Practical

Recommended Readings

1. Adler, S. and others. *Extensible Stylesheet Language (XSL) Version 1.0*, (W3C Recommendation accessed at http://www.w3.org/TR/xsl)
2. Benz, B. and Durant, JR.2003. *XML 1.1 Programming Bible (Covers J2EE, Java, Datadases, Web Services and .NET)*. New Delhi: Wiley Publishing
3. Blood, Rebecca. 2002. *The Weblog Handbook: Practical Advice on Creating and Maintaining Your Blog*. Cambridge: Perseus Publishing
4. Bray, T., Hollander, D. and Layman, A. *Namespaces in XML*. (Accessed at http://www.w3.org/REC-xml-names/)
5. Bray, T.. 2000. *Extensible Markup Language (XML) 1.0*, 2nd ed. W3C Recommendation, http://www.w3.org/TR/REC-xml
6. Darnell, R. and others. 1999. *HTML 4 Unleashed: The Comprehensive Solution*. New Delhi: Techmedia
7. Goodman, D. 1998. *Dynamic HTML: Definitive Reference*. Cambridge: O'Reilly
8. Hjelm, J. and Stark, P. 2002. *XSLT: The Ultimate Guide to Transforming Web Data*. New York: John Wiley
9. Mercer, D. 2001. *XML: A Beginner's Guide.* New York: McGraw Hill (Osborne)
10. Willinsky, John. 2006. *Access Principle: Case for Open Access to Research and Scholarship*. Cambridge: MIT Press, Digital Libraries and Electronic Publishing.

Name of the Programme	Master of Library and Information Science
Course Title	Informetrics and Scientometrics
Course Number	LIS 12
Semester	3
Credits	2

Objectives of the Course:

- To familiarize students with the fundamentals of Bibliometrics, Scientometrics, Informetrics and Webometrics
- To study various indicators of publication productivity
- To understand the significance of scientific collaborations

Course Content:

- Concept and Definition of Bibliometrics, Scientometrics, Informetrics and Webometrics. Pioneers in Bibliometrics, Scientometrics, Informetrics and Webometrics Limitations of Bibliometrics, Scientometrics, Informetrics and Webometrics
- Bibliometrics Laws. Broadford's Law, Zipf s Law, Lotka's Law, 80/20 Rule, Ortega Hypothesis. Mathew effect in Reward System, Intellectual Epidemics as a model of Scientific Communication
- Indicators of publication productivity. Factors influencing publication productivity Publication Productivity of Institutions and National research activity. Publication productivity by discipline Publication productivity dynamics of institutions, regions or countries, journals and Individuals Scientific Collaboration. Co-authorship as a measure of scientific collaboration. Collaboration rate. International Collaboration
- Indicators of citation Impact .What is citation? Reasons for citing. Citation Indexes. Citation databases (Scopus, Web of Knowledge, Google Scholar etc.,). Application of citation indexes Factors that influence citation impact. Journal citation measures: the impact factor, immediacy index, half-life etc., Relative citation indicators Role of H-Index in evaluation .Co-Citation coupling and bibliographic Coupling analysis.
- Emerging Trends in Bibliometrics, Scientometrics, Informatics and Webometrics

Methods of Teaching: Lectures, Brainstorming Sessions, etc.
Methods of Assessment: Assignment, Written Exam
Recommended Readings:

1. E. Garfield. 1979. *Citation indexing: It's theory and application in science, technology and humanitiy*. New York: John Wiley and Sons
2. Egghe,. 2003. *Lectures on Informetrics and Scientometrics*. Bangalore: SRELS
3. F. Narin, 1976. *Evaluative Bibliometrics: The use of publication and citation analysis in the evaluation of scientific activities*. New Jersey, Computer Horizons Inc.
4. Gupta, B M. 1999. *Emerging trends in Scientometrics*. Mumbai: Allied
5. H. Zuckerman. 1977. *Scientific elite: Noble laureates in the United States*, New York, Free Press
6. R.K. Merton.1973. *Sociology of science: Theoretical and empirical investigations*. Chicago, University of Chicago Press
7. Sengupta, I.N. 1988. *Bibliometrics research: Growth of Bibliometrics literature*, Calcutta: SBA
8. Tiwari, Ashwini. 2006. *Bibliometrics, Informetrics and Scientometrics*. Delhi: RBSA
9. Vinkler, Peter. 2010. *The Evaluation of Research by Scientometrics Indicators*. UK: Chandos.
10. W. Goffman and K.S. *Warren.1980. Scientific information systems and principles of selectivity*, New York, Praeger

Name of the Programme	Master of Library and Information Science
Course Title	Digital Libraries (Theory & Practice)
Course Number	LIS 13
Semester	3
Credits	4

Objectives of the Course:

- To sensitize students with the important events in the Open Access Movement, Institutional repositories and Digital Libraries.
- To familiarize students with the Digital Rights management and Copyright issues
- To provide hands on experience with design, development and implementation of Digital Libraries as case studies

Course Content:

- Foundations of Digital Libraries: Open Access and Institutional Repositories. Digital Library Initiatives: National and International. Multilingual Digital Repositories
- Digitisation: Planning and Implementation, and Best Practices. Preservation of Digital Objects: PREMIS. Digital Rights Management (DRM), Copyright issues
- Standards and Protocols for Digital Libraries: Character Encoding Standards, Metadata Standards, Persistent Identifiers & DOI, OAI-PMH
- Users and Usage of Digital Libraries: Quantitative and Qualitative Evaluation
- Case Studies and Practice: Design and Development of a Digital Library using open source software like DSpace, GSDL, Fedora, eprints etc

Course content for Practicals:

- Digital Library: Tools and techniques and Software
- Digital Preservation and Selection of Materials for Digitisation
- Open Source Softwares for Digital Library Creation
- Creation of Digital Library using at least one Open Source Software

Methods of Teaching: Lectures, Brainstorming Sessions, Case Studies and Practical Sessions, etc.
Methods of Assessment: Assignment, Presentation, Written Exam, Practical
Recommended Readings

1. Andrews, J. 2010. *Digital Libraries.* London: Ashgate
2. Cornish, G. P. 1990. *Copyright interpreting the law for libraries and archives*. London: Library Association
3. Costantino Thanos, Maristella Agosti. 2002. *Research and Advanced Technology For Digital Libraries: 6th European Conference, ECDL 2002*, Rome. New York: Springer
4. Dahl, Mark et al. 2006.*Digital Libraries: Integrating content and systems* .London: Chandos.
5. Fenner, Audrey (ed.).2005. *Managing Digital Resources in Libraries*. New York: Haworth
6. Foster, Ian and Kesselman, Carl. 2004. *The Grid 2: Blueprint for a New Computing Infrastructure* (The Morgan Kaufmann Series in Computer Architecture and Design). 2nd ed. San Francisco: Morgan Kaufmann
7. Gopal, K. 2000. *Digital Libraries in Electronic Information Era*. New Delhi: Authors Press
8. Lesk, Michael. 1996. *Understanding Digital Libraries*, (The Morgan Kaufmann Series in Multimedia and Information Systems). 2nd ed. San Francisco: Morgan Kaufman.
9. Pitkin, G. M.(ed.).1996. *National Electronic Library*: *A Guide To The Future For Library managers*. London: Greenwood Press
10. William, Arms. 2005. *Digital Libraries*. New Delhi: Anne

Name of the Programme	Master of Library and Information Science
Course Title	Knowledge Discovery and Data Management
Course Number	LIS 14
Semester	3
Credits	2

Objectives of the Course:

- To familiarize students with principles and practice of knowledge discovery and data management
- To study the process , models and applications of Data warehousing , Data Mining, Web mining and Decision Classifiers
- To Study Information Extraction and Neural Networks

Course Content:

- Date Warehousing: Data Warehousing and Introduction to Data Mining (DM): Data Warehousing and OLAP; Why Data mining is needed; Stages of DM process; Overview of main DM Methods
- Decision-Tree based Classifiers: Information Gain; Decision Tree Learning; Classification; Classification and prediction - basic concepts, decision tree, Bayesian classification, rule-based classification. Classification by means of neural networks, SVM classifier, etc
- Data Mining: Association-Rule Mining: Association-Rule Mining methods; Multi-level association rules, association mining and correlation analysis, constraint-based association rules. Association Rules and Sequential Patterns.
- Web Mining: Main topic of the web mining: Web Content Mining, Web Structure Mining, and Web Usage Mining; Practical web mining applications overview;
- Networks: Information Extraction using Neural Networks: Supervised Neural Networks; Perception Back Propagation; Clustering: K-means; Hierarchical Clustering; Self Organizing Feature Maps; Principle Components; Cluster analysis - basic concepts, types of data in cluster analysis, partitioning and hierarchical methods. Statistical Methods: Probability for Data Miners; Maximum Likelihood methods; EM algorithm.

Methods of Teaching: Lectures, Brainstorming Sessions, Case Studies etc.
Methods of Assessment: Assignment, Written Exam

Recommended Readings

1. David J. Hand, Heikki M and Padhraic S. 2000. *Principles of Data Mining*. USA: MIT
2. Hand, D., Mannila, H., and Smyth, P. 2001. *Principles of Data Mining USA:* MIT
3. Tan, Steinbach, Kumar, 2006. *Introduction to Data Mining,* New York: Addison Wesley
4. Hastie, Tibshirani and Friedman. 2001. *The elements of Statistical Learning: Data Mining, Inference and Prediction*. New York :Springer
5. Hsinchun Chen. 2001. *Knowledge Management Systems: A Text Mining Perspective*. New York; Knowledge Computing Corporation
6. Jiawei Han and Micheline Kamber. 2005. *Data Mining: Concepts and Techniques*. 2nd edition. USA: Morgan Kaufmann
7. Jiawei Han, Micheline Kamber. 2000. *Data Mining: Concepts and Techniques*, USA: Morgan Kaufmann
8. Dunham, M H. 2003. *Data Mining. Introductory and Advanced*. New York: Prentice Hall
9. Roiger, R J and Geatz, M W. 2003.*Data Mining : A Tutorial-Based Primer,* USA: Addison Wesley
10. Chakraborty, Soumen. 2002. *Mining the Web*.USA: Morgan Kaufman.

Name of the Programme	**Master of Library and Information Science**
Course Title	**Community Information Systems (Elective 1)**
Course Number	**LIS 15.1**
Semester	**3**
Credits	**4**

Objectives of the Course:

- To familiarize students with the meaning, definition , use and implications of Community Information Systems
- To study various source of community information like invisible colleges, folklore, mass media, etc.
- To understand the significance of application of ICT in community information system set up

Course Content:

- Meaning, definition, need, scope, uses and implications of Community Information Systems
- Application of Information Communication Technologies – Radio (FM and other) TV, Computers, Mobile Technologies and other.
- Setting up of Community Information System – Needs analysis, planning, designing, application, executing, and evaluation. Invisible colleges; Folklore; Mass media etc.
- Sustainability studies – funding, executing, evaluation, reporting.
- Design and development of Information System for NGO's

Methods of Teaching: Lectures, Brainstorming Sessions, Case Studies etc.

Methods of Assessment: Assignment, Written Exam

Recommended Readings

1. Cater-Steel, A and Al-Hakim, Latif. 2008. *Information Systems Research Methods, Epistemology, and Applications*. USA: Information Science Reference
2. Dwivedi, Y K and Wade, M R. 2011. *Information Systems Theory: Explaining and Predicting Our Digital Society*, Vol. 2 (Integrated Series in Information Systems). USA: Springer
3. Hevner, Alan and Chatterjee, Samir. 2010. *Design Research in Information Systems: Theory and Practice*. New York: Springer
4. Quinn, H S. 2011. *Community Information Needs in a Broadband Media Age*. UK: Nova Science
5. Ward, J L and Peppard, Joe. 2002. *Strategic Planning for Information Systems*. New York: Wiley
6. Mukhopadhyay. P. *Digital Community Information System: A Framework for India*. Germany: Lap lambert
7. Kelkar, S A. 2009. *Information Systems: A Concise Study*. New Delhi: PHI
8. Sadagopan, S. 2009. *Management Information Systems*. New Delhi: PHI
9. Rajaraman, V: 2011. *Analysis and design of Information Systems*. New Delhi: PHI
10. Gordon, S.R and Gordon, J R. 1999. *Information Systems: A Management Approach.* NJ: Wiley

Name of the Programme	Master of Library and Information Science
Course Title	Social Science Information Systems Management (Elective 2)
Course Number	LIS 15.2
Semester	3
Credits	4

Objectives of the Course:

- To understand the structure and development of social sciences
- To study the various components of social science information systems
- To study the activities of national institutes of social sciences

Course Content:

- **Structure and Development of Social Sciences:** Definition Scope, Landmarks and research Trends in the disciplines of Political Science. Public Administration, Economics, management, Sociology History, Psychology and Education.
- **Social Science Information System: Components:** Sources: Types and Media: Print and Non-Print, Electronic and Web Based. Institutions connected with Social Science Information Generation and Dissemination.
- **Study of the activities of Social Science Institutes and Organisations:** ICSSR (NASSDOC), ICWA, Indian Institute of Management-Ahmedabad, Indian Institute of Public Administration, National Council for Applied Economic Research, National Institute of Public Finance and Policy, TISS, UNESCO, ICHR, London School of Economics and Political Science.
- **Planning of Social Science Research Libraries:** Evaluation of Existing Information Systems and Networks in Social Sciences at National and International Level.
- **Social Science Databases:** Critical study of Social Science Databases such as PROQUEST, JSTOR, POPLINE, PsychInfo, Emerald, Indev, Census India, IndiaStat, etc.

Methods of Teaching: Lectures, Brainstorming Sessions, Case Studies etc.
Methods of Assessment: Assignment, Written Exam

Recommended Readings:

1. Case, D. 2006. *Looking for Information, Second Edition: A Survey of Research on Information Seeking, Needs, and Behavior*. UK: Emerald Publishing
2. Dwivedi, Y K and Wade, M R. 2011. *Information Systems Theory: Explaining and Predicting*
3. Gordon, S.R and Gordon, J R. 1999. *Information Systems: A Management Approach*
4. Hevner, Alan and Chatterjee, Samir. 2010. *Design Research in Information Systems: Theory and Practice*. New York: Springer
5. Irani, Z and Lover, Peter. 2008. *Evaluating Information Systems: Public and Private Sector*. UK : Butterworth-Heneman
6. Kelkar, S A. 2009. *Information Systems: A Concise Study*. New Delhi: PHI
7. Leckie, G J et all. 2010. *Critical Theory for Library and Information Science: Exploring the Social from Across the Disciplines*. Colarado: Libraries Unlimited
8. Rajaraman, V: 2011. *Analysis and design of Information Systems*. New Delhi: PHI
9. Sadagopan, S. 2009. *Management Information Systems*. New Delhi: PHI
10. Ward, J L and Peppard, Joe. 2002. *Strategic Planning for Information Systems*. New York: Wiley

Name of the Programme	Master of Library and Information Science
Course Title	Multi-Lingual Information Systems (Elective 3)
Course Number	LIS 15.3
Semester	2
Credits	4

Course Content:

- Growth and Development of regional language literature in India
- Information Sources in the regional languages. Role of Academies, Parishads, Associations and Govt Departments and Universities. Social and religious organizations including publishing information sources in regional languages.
- Selective study of Web resources, Information Networks, Systems and Services with relevance to the coverage of regional languages. Multilingual interfaces in Digital Libraries
- National and Regional Translation Services. Abstracting and Indexing Services in regional languages
- Emerging trends in developing the multilingual information systems in India

Methods of Teaching: Lectures, Brainstorming Sessions, Case Studies etc.

Methods of Assessment: Assignment, Written Exam

Recommended Readings

1. Bates, M J. 2011. *Understanding Information Retrieval Systems: Management, Types, and Standards*. USA: Auerbach Publications
2. Braschler, Martin. 2003. *Advances in Cross-Language Information Retrieval: Third Workshop of the Cross-Language Evaluation Forum*, CLEF 2002.USA: Springer
3. Gey, F. 2006. *Accessing Multilingual Information Repositories: 6th Workshop Of The Cross-Language Evaluation Forum*. USA: Springer
4. Meadow, C T. 2007. *Text Information Retrieval Systems, Third Edition* (Library and Information Science).London: Emerald
5. Myaeng, S H. and Zhou, Ming. 2005. *Information Retrieval Technology: Asia Information Retrieval Symposium, AIRS 2004*, Beijing, China, October 18-20, 2004. Revised Selected Papers. Kindle edition.USA: Springer
6. Peters, Carole. 2012. *Multilingual Information Retrieval: From Research To Practice*.USA: Springer
7. Tripathy, Aditya. 2010. *Multilingual Information Retrieval System With Marc21*.Germany: VDM Verlag Dr. Müller
8. Sadagopan, S. 2009. *Management Information Systems*. New Delhi: PHI
9. Dwivedi, Y K and Wade, M R. 2011. *Information Systems Theory: Explaining and Predicting.* New York: Springer
10. Kelkar, S A. 2009. Information Systems: A Concise Study. New Delhi: PHI

Semester-IV

Name of the Programme	**Master of Library and Information Science**
Course Title	**Knowledge Management Systems**
Course Number	**LIS 16**
Semester	**4**
Credits	**2**

Objectives of the Course:

- To familiarize students with concepts, types and infrastructure of KM
- To understand the functioning of Knowledge Economy
- To plan and evaluate strategies for KM practices

Course Content:

- Knowledge Management: Concepts, types, theories and principles
- Knowledge economy – features / characteristics, national information infrastructure, complex nature of knowledge, taxonomy of knowledge & Knowledge Management (KM) strategies.
- KM Systems: infrastructure. Intellectual capital – components, measurement, KM measurement.
- Technology for KM -- KM enabling tools, knowledge portals and its characteristics, knowledge sharing and various sharing models, knowledge culture etc.
- Strategies for implementing KM practices. Case Studies

Methods of Teaching: Lectures, Brainstorming Sessions, Case Studies etc.

Methods of Assessment: Assignment, Written Exam

Recommended Readings

1. Al-Howamdeh, Suliman.2003.*Knowledge Management Cultivating: Knowledge Architecture. How to Implement Successful Knowledge Management Programs*. New Delhi: Sage Publishers
2. Becarra, F. 2010. *Knowledge Management Systems and Processes*. New Delhi: PHI
3. Benbya, Hind. 2008.*Knowledge management Systems Implementation*.UK: Chandos
4. Maier, R. 2004.*Knowledge Management Systems*. USA: Springer
5. Milton, Nick. 2005. *Knowledge Management for Teams and Projects*. Oxford: Chandos
6. Raman, A T.2004. *Knowledge Management*. New Delhi: Excel Books
7. Shukla, Archana and Srinivasan R. 2002. *Designing Knowledge Management.* New Delhi: Response
8. Steve, Ellis.2005. *Knowledge-based workers: Intelligent Operating for the Knowledge Age*. Oxford: Chandos
9. Suresh, K L and Mahesh, Kavi.2006. *Ten Steps to Maturity in Knowledge Management: Lessons in Economy*. Oxford: Chandos
10. Tiwana, Amrit. 2000. The Knowledge Management Tool kit. New Delhi: Pearson

Name of the Programme	Master of Library and Information Science
Course Title	Semantic Web Technologies
Course Number	LIS 17
Semester	4
Credits	2

Objectives of the Course:

- To understand the concept, key issues and problems of information retrieval of with respect to Semantic Web
- To study the knowledge organization and information resource discovery
- To study the knowledge Structure and human cognition, Ontology and Artificial Intelligence

Course Content:

- Semantics Web: Objectives, Key Issues and problems in information retrieval
- Knowledge Organization and Information Resource Discovery, Ontologies: OWL, DAML
- Knowledge structures – systems for knowledge organization, representation, relationships between classification, taxonomies, ontology, Human cognition and mental structures. Information Personalization and Visualization.
- Inference Engines and use of other Artificial Intelligence Techniques
- Beyond traditional authority files: Knowledge organization for digital libraries – natural languages processing: syntactic analysis, Universals and parsing algorithms; Data and text mining; Semantic Web, RDF. Enterprise Information Architecture.

Methods of Teaching: Lectures, Brainstorming Sessions, Case Studies etc.

Methods of Assessment: Assignment, Written Exam

Recommended Readings:

1. Antoniou, Grigoris and Harmelen, Frank Van. 2002. *A Semantic Web Primer*. England: MIT Press
2. Baader, F. and Others.2002. *The Description Logic Handbook: Theory, Implementation and Applications*. Cambridge: Cambridge University Press
3. Berners-Lee, T. *Semantic Web Road Map*. 1998 accessed at http://www.w3.org/DesignIssues/Semantic.html
4. Berners-Lee, Tim. 1999. *Weaving the Web*. San Francisco: Harper
5. Davies, J., Fensel, D. and Harmelen, F. Van. 2003. *Towards the Semantic Web*: *Ontology-Driven Knowledge Management.* New York: Wiley
6. Fensel, D. 2001. *Ontologies: A Silver Bullet for Knowledge Management and Electronic Commerce*. New York: Spinger
7. Hjelm, J. 2001. *Creating the Semantic Web with RDF*. New York: Wiley
8. Klyne, G. and Carroll, J. (ed.). *Resource Description Framework (RDF). Concepts and Abstract Syntext. Jan., 2003*. Accessed at http://www.w3.org/TR/rdf-concepts
9. McGuiness, D. 2003. *Ontologies come of age. In Spinning the Semantic Web.* England: MIT Press
10. Pal, Sankar K. and Mitra, Pabitra. 2004. *Pattern Recognition Algorithms for Data Mining*. Florida: CRC Press

Name of the Programme	Master of Library and Information Science
Course Title	Evaluation of Library and Information Services
Course Number	LIS 18
Semester	4
Credits	2

Objectives of the Course:

- To understand the need, scope, types and modes of information services: national International significance
- To study the provision of information services to the differently abled and marginalized persons
- To design methods to evaluate the effectiveness of library and information services

Course Content:

- Information Services – introduction, need, scope, types, modes
- Study of Information Services of Major Libraries/ Information Centres - National and International
- Study of Information Services of Library Networks – national and international
- Study of Information Service Programmes – national and international
- Information Services for Specially Able Persons, Marginalized and Under , Evaluation of Information services- use studies, user surveys etc.

Methods of Teaching: Lectures, Brainstorming Sessions, Case Studies etc.

Methods of Assessment: Assignment, Written Exam

Recommended Readings:

1. Baker, Sharon. And Lancaster, F W. 1991. *The Measurement and Evaluation of Library Services*. New York: Information Resources Press
2. Crawford, John. 2006. *The Culture of Evaluation in Library and Information Services*. Colarado: Neal-Schuman Publishers
3. George, Carole. 2008. *User-Centered Library Websites: Usability Evaluation Methods* (Chandos Information Professional). London: Chandose Publishing
4. Hernon, P and McClure, C R. *Evaluation and Library Decision Making (Contemporary Studies in Information Management, Policies, and Services)*. USA: Ablex Publishing
5. Kinnell, M and Usherwood, Bob. And Jones, K. 1999. *Improving Library and Information Services Through Self-Assessment: A Guide for Senior Managers and Staff Developers (British Library Research & Innovation Centre Report)* . UK: Library Association
6. Mathews, Joseph. 2007. *The Evaluation and Measurement of Library Services*. Santa Barbara: Libraries Unlimited
7. Iyer, V K. 1998. *Management of Library and Information Services*. Delhi: Rajat
8. Crawford, J.2006. *Culture of Evaluation in Library and Information Services*. UK: Chandos
9. Dewitt, D.2002. *Evaluating the 21st Century Library*. USA; Routledge
10. Bertot, J C. 2001.*Planning and Evaluating Library Networked Services and Resources*.UK: Libraries Unlimited.

Name of the Programme	Master of Library and Information Science
Course Title	Information Analysis, Repackaging and Consolidation (Elective 1)
Course Number	LIS 19.1
Semester	4
Credits	4

Objectives of the Course:

- To understand the concept of content analysis , consolidating and repackaging
- To study the process of design, development and dissemination of information products
- To study the standards needed for information work

Course Content: (Theory):

- Concept of Subject Analysis, Content Analysis, Restructuring, Packaging and Repackaging, and Consolidation.
- Arrangement of Ideas, Modes of Presentation. Types, Guidelines in preparing Abstract.
- Information Products: Types and Methodology for Preparation. Design and Development of Information Products. Handbook, Newsletter, State-of-the-art Reports, Trend Reports and Technical Digests.
- Overview of Standards for Information work: National and International; Indian and Harvard styles of Bibliographical References.
- Overview of Trends in Information Analysis, Repackaging and Consolidation.

Course Content: (Practice)

- The examiners will be required to prepare one indicative abstract and One Informative Abstract of One Research Article.
- The examiners will be required to prepare one abstract, either INDICATIVE ABSTRACT or INFORMATIVE ABSTRACT of One Journal Article, as specified by the examiners.
- Evaluation of Assignments (Preparation of Indicative and Informative Abstracts, Literature Reviews and Book Reviews)
- Abstracting, Writing of Reviews.

Methods of Teaching: Lectures, Brainstorming Sessions, Case Studies, Practicals etc.
Methods of Assessment: Assignment, Written Exam
Recommended Readings:

1. Jain, A K and Jhambekar, Ashok. 2000. *Marketing Information Products and Services: A Primer for Librarians and Information Professionals*. New Delhi: Tata McGraw Hill
2. Kingma, B R. 2001. *Economics of Information: A Guide to Economic and Cost-Benefit Analysis for Information Professionals*. Colarado: Libraries Unlimited
3. Lee, Sul H .2011. *Repackaging Libraries for Survival.* London: Routledge
4. Liu, Sifeng. 2010. *Grey Information: Theory and Practical Applications* (Advanced Information and Knowledge Processing). USA: Springer
5. Mentzas, G and Apostolou, D. 2003. *Knowledge Asset Management: Beyond the Process-centred and Product-centred Approaches* (Advanced Information and Knowledge Processing). USA: Springer
6. Iyer, V K. 1998. *Management of Library and Information Services*. Delhi: Rajat
7. Bates, M J. 2011. *Understanding Information Retrieval Systems: Management, Types, and Standards*. USA: Auerbach Publications
8. IDRC:1999. *Marketing Information Products and Services.USA*: IDRC
9. Eppler, M J. 2006. *Managing Information Quality*.USA: Springer
10. Weber, R P. 1990. *Basic Content Analysis*. New Delhi: Sage

Name of the Programme	**Master of Library and Information Science**
Course Title	**School Library and Information System and ICT (Elective 2)**
Course Number	**LIS 19.2**
Semester	**3**
Credits	**4**

Objectives of the Course:

- To understand the organization and management of school library collection, activities and services
- To inculcate the habit of reading and learning techniques including the hands on experience
- To familiarize the learners about print, electronic and web based information resources

Course Content:

- Philosophy of elementary Education. Place of Library in School: Purpose, Objectives and functions
- Information Resources for schools (including digital resources). Collection Development policy and strategy, organization and services
- Use of ICT in School Libraries. Library and information services management. Use of Web 2.0 tools, ICT based services and products for school environment
- Finance, manpower and Space management. Library building, furniture and fittings
- Library Associations for Schools-National and International: Activities, services and publications including standards and guidelines for school libraries.

Methods of Teaching: Lectures, Brainstorming Sessions, Case Studies, etc.

Methods of Assessment: Assignment, Written Exam

Recommended Readings:

1. American Library Association .2000. *Designing a School Library Media Center for the Future*. USA: ALA
2. Ann M. M. Wasman Mildred L. Nickel. 1998. New Steps to Service: *Common-Sense Advice for the School Library Media Specialist.* USA: American Library Association
3. Blanche Woolls .2000. *The School Library Media Manager 2nd edition*. Santa Barbara: Libraries Unlimited
4. Doug Johnson. 1997.*The Indispensable Librarian: Surviving (and Thriving) in School Media Centers in the Information Age* .Santa Barbara: Linworth Publishing
5. Helen F. Flowers. 1998. *500 Ways to Influence People and Win Friends for Your School Library Media Cente*r. New York : Neal-Schuman Publishers
6. Joyce Keeling. 2002. *Lesson Plans for the Busy Librarian: A Standards-Based Approach for the Elementary Library Media Center* .Santa Barbara: Libraries Unlimited
7. Judi Moreillon. 2012 *Co teaching Reading Comprehension Strategies in Secondary School Libraries: Maximizing Your Impact*. USA: ALA
8. Pam Spencer Holley. 2009. *Quick and Popular Reads for Teens*. YALSA
9. AASL. *2009. Standards for the 21st-Century Learner in Action. American Association of School Librarians* (AASL) AASL, 2009
10. Susan Sharpless Smith. 2010. *Web-Based Instruction: A Guide for Libraries*, USA: ALA

Name of the Programme	**Master of Library and Information Science**
Course Title	**Dissertation**
Course Number	**LIS 20**
Semester	**4**
Credits	**8**

The students are required to select a topic for the dissertation in consultation with respective assigned guide and prepare the same during the Second year of the course. The dissertation should be written as an individual work.

This prospectus provides detailed curriculum and course descriptions only.

To know full details about the following, please refer the Institute's admission related website https://admissions.tiss.edu/

1. Eligibility
2. Selection procedure
3. Reservations
4. Application Procedure
5. Mode of payment
6. Schedule of Online Test
7. After Selection Formalities
8. Fees, Deposits and other Charges

****