School of Library and Information Science
Central University of Gujarat

Master of Library and Information Science
COURSE AND CREDIT STRUCTURE

Semester	Course Code	Course Title	Credits
1	LIS-401	**Knowledge Society**	4
	LIS-402	**Knowledge Organization I: Classification (Theory & Practice)**	3
	LIS-403	**Knowledge Processing I: Cataloguing (Theory & Practice)**	3
	LIS-404	**Information Sources and Services**	4
	LIS-405	**Information Communication Technology (Theory & Practice)**	4
2	LIS-451	**Management of Libraries and Information Centres**	4
	LIS-452	**Information Storage and Retrieval**	4
	LIS-453	**Knowledge Organization II: Classification (Theory & Practice)**	3
	LIS-454	**Knowledge Processing II: Cataloguing (Theory & Practice)**	3
	LIS-455	**Library Automation (Theory and Practice)**	4
3	LIS-501	**Research Methodology**	4
	LIS-502	**Digital Libraries (Theory)**	3
	LIS-503	**Web Technologies and Web-based Information Management (Theory and Practice)**	3
	LIS-541	**Digital Libraries (Practice)**	3
	LIS-542	**Library Internship in a Recognized Library/Information Centre**	5
4	LIS-551	**Knowledge Management**	4
	LIS-552	**Informetrics and Scientometrics**	3
	LIS-571*	**Social Science Information Systems**	3
	LIS-572*	**Community Information Systems**	
	LIS-573*	**Science Information Systems**	
	LIS-574*	**Agricultural Information Systems**	
	LIS-575*	**Health Information Systems**	
	LIS-591	**Dissertation**	8
		Total credits	72

*Students are required to select any one course from LIS-571 to LIS-575

SEMESTER I

Name of the Programme	**Master of Library and Information Science**
Course Title	**Knowledge Society**
Course Number	**LIS-401**
Semester	**1**
Credits	**4**

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
- History of Libraries: ancient, medieval, modern
- Five Laws of Library Science
- 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, Seminars, Library visits, Fieldtrips, 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, Wayne A. 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 (Theory & Practice)**
Course Number	**LIS-402**
Semester	**1**
Credits	**3**

Objectives of the Course:

- To understand the importance of library classification in organization of knowledge.
- To understand the formation of subjects in the Universe of Subjects and be acquainted with major schemes of classification. To know the different schemes of classification
- To develop skills of classification.
- To develop skills in subject analysis and synthesis of different facets.
- To develop proficiency in using Colon Classification and Dewey Decimal Classification to construct Class Numbers for documents of different disciplines / subjects.

Course Content:

Theory

- Universe of Subjects: Formation, structure and development of subjects
- Library Classification: Meaning and Purpose; Historical Perspectives, Mapping of Universe of subjects in major schemes of Library classification – Dewey Decimal Classification, Universal Decimal Classification, Library of Congress Classification and Colon Classification.
- General Theory of Classification; Normative Principles; Three planes of work; Five Fundamental Categories: PMEST; Facet Analysis- Postulates; Principles of facet sequence. Principles of helpful sequence.
- Call Number and its components

Practice

Construction of Class Numbers for documents of different disciplines / subjects using Dewey Decimal Classification 22nd or 23rd edition.

- Introduction to the use of the DDC
- Analysis of a work; direct approach; Main classes, Divisions and Sections
- Use of notes likes “scope”, “Inclusion”, “Class here” “Optional provision” etc.

- Using synthetic features: Add from schedules
- Use of Table 1 'Standard Subdivisions'; Table 2 'Area'; Table 3 'Subdivisions of individual literature'; Table 4 'Subdivisions of individual languages'; Table 5 'Racial, Ethnic, National Groups', and Table 6 'Languages'.

Construction of Class Numbers for documents of different disciplines / subjects using Colon Classification 6th Revised edition

- Steps in classification, Basic subjects (including canonical classes), Systems and specials.
- Compound subjects, Fundamental categories, Facet sequence, Rounds and Levels, and synthesis of class number.
- Use of Anteriorising and posteriorising Common isolates, Language isolates, Space isolates & Time isolates.
- Use of different Devices.
- Dealing with complex subjects, complex isolates and complex array isolates.

Recommended Readings

1. British Standards Institute. 1988. *Universal Decimal Classification*. London: BSI.
2. Dewey, M. 2003. *Dewey Decimal Classification* (22nd ed., 4 Vols.). Ohio: OCLC.
3. Foskett, A. C. 1996. *Subject Approach to Information*. 5th ed. London: Library Association
4. Krishan, Kumar. 1998. *Theory of Classification*. 4th rev. ed. Delhi: Vikas Pub. House.
5. Mills, J. 1952. *Modern outline of library classification*. Bombay: Asia.
6. Palmer, B. I. & Wells, A. J. 1951. *Fundamentals of library classification.* London: George Allen and Unwin.
7. Parkhi, R. S. 1964. *Decimal Classification and Colon Classification in perspective.* Bombay: Asia.
8. Phillips, W. H. 1953. *Primer of book classification.* London: The Library Association.
9. Ranganathan, S. R. 1962. *Elements of Library Classification*. 3rd ed. Bombay: Asia
10. Ranganathan, S. R. 1963. *Colon Classification* (6th ed.) (with amendments). Bombay: Asia.
11. Ranganathan, S. R. 1987. *Colon Classification.* (7th ed.). Revised and edited by M.A.Gopinath. Bangalore: Sarada Ranganathan Endowment for Library Science.
12. Ranganathan, S. R. 1989. *Prolegomena to Library Classification*. Assisted by M. A. Gopinath. 3rd rep. ed. Bangalore: SRELS
13. Sayers, Berwick W C. 1958. *An introduction to library classification*. London: Grafton and Co.
14. Taylor, A. J. and Miller, D. P. 2007. Introduction to Cataloging and Classification. (10th ed). New Delhi: Atalntic Publishers.
15. Wynar, B. S. and Miller, D P. 2000. Wynar's introduction to cataloging and classification. (9th ed.). Englewood, Co.: Libraries Unlimited

Name of the Programme	**Master of Library and Information Science**
Course Title	**Knowledge Processing – I: Cataloguing (Theory & Practice)**
Course Number	**LIS-403**
Semester	**1**
Credits	**3**

Objectives of the Course:

- To be acquainted with the theory of Library Cataloguing
- To understand different catalogue codes and standards for bibliographic description.
- To practice cataloguing of different types of books.
- To understand the rules and practices of document description for books (Monographs) according to Anglo American Cataloguing Rules-2R.

Course Content

Theory

- Purpose, function and objectives of library catalogue; Library catalogue and similar other tools: Bibliographies, Publisher's catalogue, Accession list and Shelf list
- Evolution of the physical forms of the library catalogue
- Inner forms of library catalogue
- Standards for Bibliographic Organization; International Standard Bibliographic Description (ISBD), Functional Requirements of Bibliographic Records (FRBR)
- Catalogue Codes – Classified Catalogue Code, Anglo - American Cataloguing Rules 2 and Resource Description and Access (RDA)

Practice

Preparing Catalogue Entries (Main, Added and Reference Entries) for Books (Monographs) using Anglo American Cataloguing Rules -2 revised edition and Assigning Subject Headings to all entries (Using at least one Standard Subject Heading)

- Single Personal Authorship; Joint Authorship; Works of more than three Authors
- Collaborative Works; Series; Multivolume Works; Pseudonymous Authors
- Composite Works
- Corporate Authorship: a) Government Publications b) Proceedings of Conferences, Seminars, Workshops, etc. c) Other Corporate Bodies: Organizations, Institutions, Societies, etc.
- Uniform Titles; Sacred Scripture; Anonymous Works

Method of Teaching: Lectures, Practical Sessions, Seminars, Online presentations, Library Visits.

Method of Assessment: Assignments/ Journal Work; mid-term and end term written examinations: to assign class numbers with verification to different subjects using Colon

Classification 6th Revised edition and to prepare Catalogue Entries (Main, Added and Reference Entries) for Books (Monographs) using Anglo American Cataloguing Rules -2 revised edition.

Recommended Readings

1. American library association. 1968. *ALA Rules for filing catalog cards*. Chicago: ALA.
2. *Anglo-American Cataloguing Rules* (2nd rev. ed.). 1988. Chicago: ALA and Library Association.
3. Cutter, Charles A. 1949. *Rules for a Dictionary Catalogue.* London: Library Grafton & Co.
4. Fritz, D. A. 2009. Cataloging with AACR2: Anglo American cataloging rules and MARC21for books, electronic resources, sound recordings, videorecordings, and serials. (2nd ed.). New Delhi: Pentagon Press.
5. Girja Kumar, & Krishan Kumar. 1988. *Theory of cataloguing* (5th ed.). New Delhi: Vikas.
6. Hunter, Eric J. 989. *Examples illustrating AACR-2* (1988) revision. London: LA.
7. IFLA, ISBD Review Group. 2010. *ISBD (International Standard Bibliographic Description).*
8. IFLA, Study Group on the Functional Requirements for Bibliographic Records. 2010. *Functional Requirements for Bibliographic Records.*
9. Krishan Kumar. 1990. *An introduction to AACR-2.* New Delhi: Vikas.
10. Maxwell, Margaret F. 1989. *Handbook for AACR-2* (1988) revision. Chicago: ALA.
11. Maxwell, R. L. 2014. Maxwell's handbook for RDA: explaining and illustrating RDA using MARC21.London: Facet Publishing
12. Miller, Joseph (Ed.). 2000. *Sear's List of Subject Headings* (17th ed.). New York: Wilson.
13. Merring, M. 2014. The RDA workbook: learning the basics of Resource Description and Access. Englewood, Co.: Libraries Unlimited
14. Olson, H. A. and Boll, J. J. 2001. Subject analysis in online catalogs. (2nd ed.). Englewood, Co.: Libraries Unlimited.
15. Ranganathan, S. R. 1964. *Classified Catalogue Code with additional rules for Dictionary catalogue code* (5th ed.). Bombay: Asia.
16. Ranganathan, S. R. 1974. *Cataloguing practice* (2nd ed.). Bombay: Asia.
    (2010). *Functional Requirements for Bibliographic Records.*
17. Taylor, A. J. and Miller, D. P. 2007. Introduction to cataloging and classification. (10th ed). New Delhi: Atalntic Publishers.
18. Wynar, B. S. and Miller, D P. 2000. Wynar's introduction to cataloging and classification (9th ed.). Englewood, Co.: Libraries Unlimited.

Name of the Programme	**Master of Library and Information Science**
Course Title	**Information Sources and Services**
Course Number	**LIS-404**
Semester	**1**
Credits	**4**

Objectives of the Course:

- To understand the different types of information sources (print and digital), 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; Govt. Information Sources
- Different categories of information systems: libraries, documentation centres, information clearing houses, referral centres, information analysis centres, databanks etc; their structure, functions, products, and services;
- National & International information organizations, systems, centres, programs
- Electronic Resources: e-Journals, e-Books, Online Databases, Digital Reference Collection and Institutional Repositories, e-print archives, ETDs
- 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.
- Reference and Information Services, Virtual/Digital Reference Services
- Recent Trends: E-alerts, Web alerts, Web 2.0 tools for delivering information services and others

Method of Teaching: Lectures, Brainstorming Sessions, Seminars, library visits, outreach, etc.

Method of Assessment and Weightage: Assignment, Written Exam

Recommended Readings

1. Bopp, R. E. and Smith, L C. 2011. Reference and information services: an introduction. (4th ed.). Santa Barbara, California: Libraries Unlimited.

2. Chowdhury, G. G., & Chowdhury, Sudatta. 2001. Information sources and searching on the World Wide Web. London: Facet Publishing
3. Delaney, Julie. 2000. *Geographical Information Systems: An Introduction*. USA: Oxford University Press
4. Holsapple, Clyde W. and Whinston, Andrew B. 1996. *Decision Support Systems: A Knowledge-Based Approach*. Minneapolis: West Publishing Company
5. Hurt, C.D. 1998. *Information Sources in Science and Technology*. 3rd ed. Westport Conn.: Libraries Unlimited
6. Longley, Paul A. and Others. (eds). 2005. *Geographical Information Systems: Principles, Techniques, Management and Applications*. 2nd ed. Hoboken, N. J.: John Wiley and Sons
7. Marakas, George M. 2002. *Decision Support Systems*. 2nd ed. New Jersey: Prentice Hall.
8. Ranganathan, S. R. 1961. *Reference Service*. 2nd ed. Bombay: Asia Pub. House
9. Sprague, Ralph H. and Watson, Hugh J. (eds.).1993. *Decision Support Systems: Putting Theory into Practice*. 3rd ed. Englewood Cliffs, N. J.: Prentice Hall.
10. Stebbins, Leslie, F. 2005. *Student guide to research in the digital age: how to locate and evaluate information sources.* Santa Barbara: Libraries Unlimited
11. UNESCO. 1978. *Handbook of Information Systems*. PARIS: Unesco
12. 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 (Theory & Practice)**
Course Number	**LIS-405**
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 understand Open Source Software

Course content - Theory:

- Evolution of digital computers; Computers hardware, software, storage devices and their application in libraries
- Operating Systems: Linux, Windows, Shell programming
- Computer software applications - MS Office and Open Office
- Hypertext, Hypermedia, Multimedia and File Formats, User Interfaces and data visualization
- Networks and networking concepts; Internet; World Wide Web; Search Engines
- Open Source Software applications in libraries

Course Content - practical

- Operation of computers and connecting the various components
- Linux and Windows installation
- MS Office and Open Office
- Web searching and evaluation

Method of Teaching: Lectures, Practical Sessions, Seminars, and Projects.

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.
11. Wang, Wallace. 2010. Microsoft Office 2010 For Dummies. N. Delhi: John Wiley
12. Burke, John J. 2009. Neal-Schuman Library Technology Companion. Third Edition. New York: Neal-Schuman Publishers.
13. Savitra, Sirohi and Gupta, Amit. 2011. Koha 3 Library Management System. Mumbai: Packet Publishing.

SEMESTER II

Name of the Programme	**Master of Library and Information Science**
Course Title	**Management of Libraries and Information Centres**
Course Number	**LIS-451**
Semester	**2**
Credits	**4**

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, Library space planning,
- 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
- Marketing of library & information services

Method of Teaching: Lectures, Seminars, Study tours, 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**
Course Number	**LIS-452**
Semester	**2**
Credits	**4**

Objectives of the Course:

- To understand the historical perspectives and significance of Information storage & retrieval in the present context.
- To study various models, methods, techniques of Information Retrieval and search strategies
- Understand the significance of data security, evaluation of IR process for effectiveness.

Course Content:

- Information Retrieval and Vocabulary Control: Information Retrieval: Concepts, Features, Components & process, Genesis & Development
- Subject Indexing and Vocabulary Control: Concept & Need, Derived Indexing: Printed indexes & Database access systems; Subject Heading Lists, Thesaurus: Structure and Functions and design, Trends in Indexing: Automatic Indexing etc.; Name Authority Control & Access Points
- Subject Indexing Techniques: Chain Indexing, Postulate Based Permuted Indexing System(POPSI), Preserved Context Indexing System(PRECIS); Post-Coordinate Indexing Systems: Concept, Uses & Types: UNITERM Indexing System, Optical Coincidence System, Batten System, Citation Indexing: Concept and development. Online Citation Indexing Tools: SCOPUS, Web of Science, Google Scholar, CiteSeerX Beta etc.
- Operational IR Systems: From OPACs, Federated Search Systems, Discovery Systems etc. Web: Retrieval Systems: Web Information Retrieval System: Features;Information Retrieval Models and their Applications; Models based on Input/Output; Data retrieval model, Information retrieval model, Knowledge retrieval model
- Models based on Theories and Tools: Boolean model, Vector space model, Mathematical model
- Web Search Strategy: Characteristics of Web Information Retrieval, Web and Information Retrieval Tools: Need, Types and Features, Information Retrieval Process:

Techniques & Refinement, Information Retrieval Beyond Text, Information Retrieval Beyond English

- Evaluation of Information Retrieval Systems: Methods and Parameters; Current Trends in IR Systems, research and development

Methods of Teaching: Lectures, Practical Sessions, seminars, etc.
Methods of Assessment: Assignment, Presentation, Written Exam, Practical

Recommended Readings

1. Choudhury, C.G. 2004, Introduction to Modern Information Retrieval (2nd ed.). London: Facet Pub
2. Clevland, Donald B and Cleveland, Anna D. 1990. Introduction to Indexing and Abstracting, 2nd ed., USA: University of Michigan
3. Dhawan, K.S.1997. Principles of information retrieval, New Delhi: Commonwealth
4. Foskett, A.C. 1996. The subject approach to information, 5th ed. London: Library Association
5. Jones, Karen, Sparck. 1981. Information retrieval experiment. London: Butterworth
6. Kiewitt, Eva, L. 1979. Evaluating information retrieval systems. London, Greenwood
7. Lancaster, F.W. 2003. Indexing and Abstracting in Theory and practice, 3rd ed. London: Facet Pub.
8. Meadow, Charles T. 1967. The analysis of information systems. New York: John Wiley
9. Muhammad Riaz. 1991. Advanced indexing and Abstracting, New Delhi, Atlantic
10. Rajan, T.N. 1981. Indexing systems: concpets, models & techniques, Calcutta: IASLIC
11. Ranganathan, S.R. 1973. Documentation: Genesis and development. Delhi, Vikas Pub.
12. Rijsbergen, J.Van. 1979. Information retrieval, 2nd ed. London: Butterworths
13. Smiraglia, Richard P. 2002. Works as entitites for information retrieval, New York, Haworth
14. Vickery, B.C. 1970. Techniques of Information Retrieval. (2nd ed.). London, Butterworth
15. Wessel Andrew, E. 1974. Computer aided information retrieval. Los Angeles, Melville Pub.
16. Baeza –Yates, Ricardo. 1999. *Modern Information retrieval*. Delhi: Pearson Education
17. Belew, Richard K. 2001. *Finding Out About: A Cognitive Perspective on Search Engine Technology and the WWW*. Cambridge, UK: Cambridge University Press
18. Date, C.J. 2000. *An Introduction to Database Systems.* Reading, MA: Addison-Wesley
19. Grossman, David A. and Frieder, Ophir. 1998. *Information Retrieval: Algorithms and Heuristics* (The Information Retrieval Series). (2nd ed.). Dordreent, The Netherlands: Springer
20. Korfhage, Robert R. 1997. *Information Storage and Retrieval*. New York: Wiley
21. Meadow, Charles T., Boyce, Bert R. and Kraft, Donald H. 2000. *Text Information Retrieval Systems*. (Library and Information Science). 2nd ed. California: Academic Press
22. Neelameghan, A. 1995. *Online Database searching and Retrieval: Strategies, Procedures, Commands and Problems – A brief guide*. Bangalore: SRELS
23. Silberschatz, A., Korth, H.F. and Sudarshan, S.1997. *Database System Concepts.* 3rd ed. New York: McGraw-Hill
24. Van Rijsbergen, C. J. 2004. *The Geometry of Information Retrieval*. Cambridge: Cambridge University Press

25. 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	**Knowledge Organization II: Classification (Theory & Practice)**
Course Number	**LIS-453**
Semester	**2**
Credits	**3**

Objectives of the Course:

- To highlight the importance of canons in the design of classification schemes.
- To develop acquaintance with the ontologies and folksonomies.
- To develop skills of classification and subject analysis.
- To develop proficiency in using Universal Decimal Classification to construct Class Numbers for documents of different disciplines / subjects.

Course Content

Theory

- Canons for classification.
- Notation: Kinds, special features
- Relevance of classification in the context of digital libraries
- Trends in Library classification
- Classaurus, automatic classification, Web Dewey
- Ontologies and Folksonomies: OWL and SKOS

Practice

- **Construction of Class Numbers for documents of different disciplines / subjects using Universal Decimal Classification.**

Recommended Readings

1. Bavakutty, M. 1981. *Canons of library classification*. Trivandrum: Kerala Library Association.
2. IFLA, ISBD Review Group. 2010. *ISBD (International Standard Bibliographic Description).*
3. IFLA, Study Group on the Functional Requirements for Bibliographic Records. 2010. *Functional Requirements for Bibliographic Records.*
4. *International conference on future of knowledge organization in the networked environment, 3-5 September 2007*: *IKONE 2007*. Bangalore.
5. Krishan, Kumar. 1998. *Theory of Classification*. 4th rev. ed. Delhi: Vikas Pub. House.

6. Kumbhar, Rajendra. 2011. *Library Classification Trends in the 21st Century*. UK: Chandos.
7. Lazinger, Susan S. 2005. *Digital preservation and metadata: History, theory and practice.* Englewood: Libraries Unlimited.
8. Library of Congress, Network Development and MARC Standards Office. 2010. *MARC 21 format for bibliographic data.*
9. Library of Congress, Network Development and MARC Standards Office. 2010. *MARC Standards.*
10. Oggier, David. 2010. *Harnessing Folksonomies with a Web Crawler*. Germany: Verlag
11. Olson, Hope A, & Boll, John J. 2005. *Subject analysis in online catalogues.* (2nd ed.). Englewood: Libraries Unlimited.
12. Peters, Isabella. 2009. *Folksanomies, Indexing and Retrieval in Web 2.0*. Germany: Saur
13. Ranganathan, S. R. 1989. *Prolegomena to Library Classification*. Assisted by M. A. Gopinath. 3rd rep. ed. Bangalore: SRELS

Name of the Programme	**Master of Library and Information Science**
Course Title	**Knowledge Processing II: Cataloguing (Theory & Practice)**
Course Number	**LIS-454**
Semester	**2**
Credits	**3**

Objectives of the course

- To be acquainted with metadata and its standards.
- To understand Bibliographic Formats and Standards, deriving subject headings.
- Preparing Catalogue Entries (Main, Added and Reference Entries) for Non-Book Materials including electronic resources using Anglo American Cataloguing Rules-Second revised edition.

Course Content

Theory

- Bibliographic Standards: MARC, UNIMARC, MARC21, MARC XML, MARC family of Formats, Authority Files, CCF; ISO 2709; Retro conversion
- Metadata and metadata standards: Dublin Core
- Subject Cataloguing: Vocabulary control devices. Lists of Subject Headings, Thesauri. General theory of subject indexing languages (SIL)
- Co-operative Cataloguing, Centralized Cataloguing, CIP, Pre-Natal Cataloguing; Union Catalogue - WorldCat, IndCat
- Recent trends in cataloguing: Copy Cataloguing, Next generation catalogues, Web scale discovery services

Practice

- **Preparing MARC 21 records**
- **Preparing Catalogue Entries (Main, Added and Reference Entries) for Non-Book Materials using Anglo American Cataloguing Rules -2 revised edition**. Assigning Subject Headings (Using at least one Standard Subject Heading).
  - Serials
  - Cartographic Materials
  - Manuscripts
  - Graphic Materials
  - Printed Music
  - Sound Recordings
  - Motion Pictures & Video Recordings
  - Micro Forms
  - Electronic Resources

Method of Teaching: Lectures, Practical Sessions, Seminar
Method of Assessment: Assignments/ Journal Work; mid-term and end term written examinations: to assign class numbers with verification to different subjects using Dewey Decimal classification 22nd or 23rd edition and to prepare Catalogue Entries (Main, Added and Reference Entries) for Non-Book Materials using Anglo American Cataloguing Rules -2 revised edition.

Recommended Readings

1. *Anglo-American Cataloguing Rules* (2nd rev. ed.). 1988. Chicago: ALA and Library Association.
2. *Anglo-American Cataloguing Rules* (2nd rev. ed.). 2003. Chicago: ALA and Library Association.
3. Cutter, C A. *Cutter- Sanborn. Figure Author Table.*
4. Dewey, Melvil. (2003). *Dewey Decimal Classification and relative index* (22th ed., 4 Vols.). Ohio: OCLC. (or 23rd edition)
5. Hunter, Eric J. 1989. *Examples illustrating AACR-2* (1988) revision. London: LA.
6. Krishan Kumar. 1990. *An introduction to AACR-2.* New Delhi: Vikas.
7. Maxwell, Margaret F. 1989. *Handbook for AACR-2* (1988) revision. Chicago: ALA.
8. Miller, Joseph (Ed.). 2000. *Sear's List of Subject Headings* (17th ed.). New York: Wilson.

Name of the Programme	**Master of Library and Information Science**
Course Title	**Library Automation (Theory and Practice)**
Course Number	**LIS 15**
Semester	**2**
Credits	**4**

Objectives of the Course:

- To familiarise students with library automation, and retrieval process.
- To familiarize students with different Integrated Library System software (ILS)
- To provide hands on experience with Integrated Library System software (ILS)

Course Content:

- Library Automation: Definition, need, purpose and advantages.
  Planning for Automation: Steps in Automation - Developing a basic technology plan; Identifying goals and objectives; Describing existing library services and technology; Assessing needs and priorities.
- Understanding the features of some Library Management Software package. Selection criteria for Library management software. Hardware and Software selection; and Implementation.
- Areas of Automation: Design and development of automated system for Acquisition, Cataloguing, Access to Catalogue (OPAC), Circulation and Serial Control.
- Barcode Technology: Meaning, need, purpose and advantages. Types of barcodes and their application. RFID technology and its application in libraries.
- Integrated Library Systems: SOUL, WINISIS, Koha
- Artificial Intelligence (AI): Concept, use. Expert Systems / Knowledge based systems and its application in Libraries and Information Centres
- Designing Library Website

Practice

- Soul, WINSIS and Koha
- Library website designing

Recommended Readings:

1. Boardman, Mark. 2005. *The language of websites.* London: Rutledge Taylor & Francis Group.
2. Bolan, Kimberly, & Cullin, Robert. 2007. *Technology made simple: An improvement guide for small and medium libraries*. Chicago: American Library Association.
3. Bradley, Phil. 2000. *WWW: How to design and construct web pages*. London: Aslib.
4. Chowdhury, G. G., & Chowdhury, Sudatta. 2001. *Information sources and searching on the World Wide Web.* London: Facet Publishing.
5. Cohn, John M., Kelsey, Ann L., & Fiels, Keith Michael. 1998. *Planning for library automation: A practical handbook.* London: Library Association.
6. Ingersoll, Patricia, & Culshaw, John. 2004. *Managing information technology: A handbook for systems librarians*. Westport, CT: Libraries Unlimited.
7. Osborne, Larry N., & Nakamura, Margaret. 2004. *Systems analysis for librarians and information professionals* (2nd ed.). Englewood, CO: Libraries Unlimited.
8. Rao, Ravichandran I. K. 1990. *Library automation*. New Delhi: Wiley Eastern.
9. Rice-Lively, Mary Luhn, & Chen, Hsin-Liang. 2006. *Scenarios and information design; A user-oriented practical guide*. Oxford: Chandos Publishing.
10. Reynolds, Dennis. 1985. *Library automation: Issues and applications*. New York: Bowker.

11. Rowley, J.E. 1980. *Computer for libraries*. London: Clive Bingley.
12. Satyanarayana, N. R. 1995. *A manual of computerization of libraries*. New Delhi: Viswa Prakashan.
13. Satyanarayana, N. R. 2003. *A manual of library automation and networking.* Lucknow: New Royal Book Co.
14. Xavier, C. 2000. *World Wide Web design with HTML*. New Delhi: TMH.

SEMESTER III

Name of the Programme	**Master of Library and Information Science**
Course Title	**Research Methodology**
Course Number	**LIS-501**
Semester	**2**
Credits	**4**

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	**Digital Libraries (Theory)**
Course Number	**LIS-502**
Semester	**3**
Credits	**3**

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; 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
- Digital Library Initiatives: National and International; Case studies of digital libraries

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

Methods of Assessment: Assignment, Presentation, Written Exam, Study tour

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. Coulhon, Karen. 2014. Exploring digital libraries: foundations, practice, prospects. London: Facet Publishing
6. Choudhary, G. G and Choudhary S. 2003. Introduction to digital libraries. London: Facet Publishing
7. Fenner, Audrey (ed.).2005. *Managing Digital Resources in Libraries*. New York: Haworth
8. 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
9. Gopal, K. 2000. *Digital Libraries in Electronic Information Era*. New Delhi: Authors Press
10. Lesk, Michael. 1996. *Understanding Digital Libraries*, (The Morgan Kaufmann Series in Multimedia and Information Systems). 2nd ed. San Francisco: Morgan Kaufman.
11. Pitkin, G. M.(ed.).1996. *National Electronic Library*: *A Guide to the Future for Library managers*. London: Greenwood Press
12. William, Arms. 2005. *Digital Libraries*. New Delhi: Anne

Name of the Programme	**Master of Library and Information Science**
Course Title	**Web Technologies and Web-based Information Management (Theory and Practice)**
Course Number	**LIS- 503**
Semester	**3**
Credits	**3**

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, Discovery Services, Access tools – remote/web access, Access Management Technology, Relevant W3C Standards and Protocols.

- Search Engines, cluster based search engines and building search engines. Search Algorithms
- Web 2.0: RSS feeds, Blogs, Wikies etc; social media
- CMS (Content Management Systems): Concept, Types and Principles, CMS Architecture, CMS Software; Content Creation for Web; tools for content creation

Methods of Teaching: Lectures, Brainstorming Sessions, Practical Sessions, Case Studies, etc.
Methods of Assessment: Assignment, Presentation, Written Exam, Practical creation of a blog/ subject guide/ wiki

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	**Digital Libraries (Practice)**
Course Number	**LIS- 541**
Semester	**3**
Credits	**3**

Objectives of the Course:

- To provide hands on experience with design, development and implementation of Digital Libraries

Course content for Practicals:

- Digital Library: Tools and techniques and Software
- Digital Preservation and Selection of Materials for Digitization
- Open Source Software for Digital Library Creation

- Creation of Digital Library using at least one Open Source Software using open source software like DSpace, GSDL, Fedora, Eprints, etc.

Methods of Teaching: Lectures, Practical Sessions, etc.
Methods of Assessment: Assignment, Presentation, Practical
Recommended Readings

13. Andrews, J. 2010. *Digital Libraries.* London: Ashgate
14. Cornish, G. P. 1990. *Copyright interpreting the law for libraries and archives*. London: Library Association
15. Costantino Thanos, Maristella Agosti. 2002. *Research and Advanced Technology For Digital Libraries: 6th European Conference, ECDL 2002*, Rome. New York: Springer
16. Dahl, Mark et al. 2006.*Digital Libraries: Integrating content and systems* .London: Chandos.
17. Fenner, Audrey (ed.).2005. *Managing Digital Resources in Libraries*. New York: Haworth
18. 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
19. Gopal, K. 2000. *Digital Libraries in Electronic Information Era*. New Delhi: Authors Press
20. Lesk, Michael. 1996. *Understanding Digital Libraries*, (The Morgan Kaufmann Series in Multimedia and Information Systems). 2nd ed. San Francisco: Morgan Kaufman.
21. Pitkin, G. M.(ed.).1996. *National Electronic Library*: *A Guide to the Future for Library managers*. London: Greenwood Press
22. William, Arms. 2005. *Digital Libraries*. New Delhi: Anne

Name of the Programme	**Master of Library and Information Science**
Course Title	**Library Internship in a Recognized Library/Information Centre**
Course Number	**LIS-542**
Semester	**3**
Credits	**5**

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;

Content:

- Students must undergo a four-week internship in a library of their choice.
- A report of the internship has to be submitted to the school.

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 IV

Name of the Programme	**Master of Library and Information Science**
Course Title	**Knowledge Management**
Course Number	**LIS-551**
Semester	**4**
Credits	**4**

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	**Informetrics and Scientometrics**
Course Number	**LIS-552**
Semester	**4**
Credits	**3**

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, Webometrics and Altmetrics

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	**Social Science Information Systems**
Course Number	**LIS-571**
Semester	**4**
Credits	**3**

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:

- **Information System**: Basic Concepts, Components, Types and Characteristics of an Information System.
- **Structure and Development of Social Sciences:** Definition Scope, Landmarks and research Trends in the disciplines of Humanities, 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 Organizations:** Evaluation of Existing Information Systems and Networks in Social Sciences at National and International Level: 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.
- **Social Science Databases:** Critical study of Social Science Databases such as PROQUEST, Web of Knowledge, JSTOR, POPLINE, PsychInfo, Emerald, Census India, IndiaStat, etc.

Methods of Teaching: Lectures, Brainstorming Sessions, Field trips/ study tour, Case Studies etc.

Methods of Assessment: Assignment, Written Exam

Recommended Readings:

1. Atherton, Pauline. (1977). Handbook for information systems and service. Paris: UNESCO.
2. Buckland, Michael. (1991). Information and information systems: New directions in information management. New York: Praeger
3. Case, D. 2006. *Looking for Information, Second Edition: A Survey of Research on Information Seeking, Needs, and Behavior*. UK: Emerald Publishing
4. Dwivedi, Y K and Wade, M R. 2011. *Information Systems Theory: Explaining and Predicting*
5. Gordon, S.R and Gordon, J R. 1999. *Information Systems: A Management Approach*
6. Hevner, Alan and Chatterjee, Samir. 2010. *Design Research in Information Systems: Theory and Practice*. New York: Springer
7. Irani, Z and Lover, Peter. 2008. *Evaluating Information Systems: Public and Private Sector*. UK : Butterworth-Heneman
8. Kelkar, S A. 2009. *Information Systems: A Concise Study*. New Delhi: PHI
9. Leckie, G J et all. 2010. *Critical Theory for Library and Information Science: Exploring the Social from Across the Disciplines*. Colarado: Libraries Unlimited
10. Parida, Baman. (1993). Studies *on information systems, services and programs in India and abroad*. Delhi: Ajanta.
11. Rajaraman, V. 2011. *Analysis and design of Information Systems*. New Delhi: PHI
12. Sadagopan, S. 2009. *Management Information Systems*. New Delhi: PHI

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	**Community Information Systems**
Course Number	**LIS-572**
Semester	**4**
Credits	**3**

Especially useful for those interested in public or community libraries, youth services, university public engagement, social work, education, and anyone interested in working with or studying underserved communities.

Objectives of the Course:

- Studies how local, historical communities use information and communication technologies or otherwise access, create, organize, and share information.
- 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:

- Information System: Basic Concepts, Components, Types and Characteristics of an Information System.
- Meaning, definition, need, scope, uses and implications of Community Information Systems
- Survey of an emerging field that covers key principles for working in libraries or the wider non-profit/public sectors as individuals, organizations, and communities harness new technologies and media. Evaluation of Existing Information Systems and Networks in Social Sciences at National and International Level
- 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, Field trips/ study tour, Case Studies etc.

Methods of Assessment: Assignment, Written Exam

Recommended Readings

1. Atherton, Pauline. (1977). Handbook for information systems and service. Paris: UNESCO.
2. Buckland, Michael. (1991). Information and information systems: New directions in information management. New York: Praeger
3. Cater-Steel, A and Al-Hakim, Latif. 2008. *Information Systems Research Methods, Epistemology, and Applications*. USA: Information Science Reference
4. 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
5. Hevner, Alan and Chatterjee, Samir. 2010. *Design Research in Information Systems: Theory and Practice*. New York: Springer
6. Quinn, H S. 2011. *Community Information Needs in a Broadband Media Age*. UK: Nova Science
7. Ward, J L and Peppard, Joe. 2002. *Strategic Planning for Information Systems*. New York: Wiley
8. Mukhopadhyay. P. *Digital Community Information System: A Framework for India*. Germany: Lap lambert
9. Kelkar, S A. 2009. *Information Systems: A Concise Study*. New Delhi: PHI
10. Sadagopan, S. 2009. *Management Information Systems*. New Delhi: PHI

11. Rajaraman, V: 2011. *Analysis and design of Information Systems*. New Delhi: PHI
12. 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	**Science Information Systems**
Course Number	**LIS-573**
Semester	**4**
Credits	**3**

Objectives of the Course:

- To familiarize students with the meaning, definition, use and implications of Science Information Systems
- To study various sources of scientific information like invisible colleges, social media, open sources, databases, etc.
- To understand the significance of application of ICT in scientific information system set up

Course Content:

- **Information System**: Basic Concepts, Components, Types and Characteristics of an Information System.
- **Structure and Development of Social Sciences:** Definition Scope, Landmarks and research trends in the disciplines of pure and applied sciences.
- **Science Information System: Components:** Sources: Types and Media: Print and Non-Print, Electronic and Web Based. Institutions connected with Science Information Generation and Dissemination.
- **Study of the activities of Science Institutes and Organizations at the national and international levels:** Evaluation of Existing Information Systems and Networks in Social Sciences at National and International Level. Indian National Science Academy, BARC, Indian Institute of Technology (IIT), Indian Space Research Organization ISRO; NISCAIR, DESIDOC, NCSI, NISSAT, ENVIS, NSTMIS, Biotechnology Information System Network, National Informatics Centre, International Council for Science (ICSU), CERN, NASA, INIS, ASTINFO, PRISM, etc.
- **Science Databases: Internet-based scientific information sources and services** Critical study of Open source and commercial Science Databases; Web of Knowledge, PROQUEST, Science Direct, Nature, ACS, ASME, IEEE, ACM Digital Library, SCOPUS, INSPEC, Chemical Abstracts, PLoS, arXiv, etc.

Methods of Teaching: Lectures, Brainstorming Sessions, Field trips/ study tour, Case Studies etc.

Methods of Assessment: Assignment, Written Exam

Recommended Readings:

1. Atherton, Pauline. (1977). Handbook for information systems and service. Paris: UNESCO.
2. Buckland, Michael. (1991). Information and information systems: New directions in information management. New York: Praeger
3. Cater-Steel, A and Al-Hakim, Latif. 2008. *Information Systems Research Methods, Epistemology, and Applications*. USA: Information Science Reference
4. 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
5. Hevner, Alan and Chatterjee, Samir. 2010. *Design Research in Information Systems: Theory and Practice*. New York: Springer
6. Ward, J L and Peppard, Joe. 2002. *Strategic Planning for Information Systems*. New York: Wiley
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	**Agricultural Information Systems**
Course Number	**LIS-574**
Semester	**4**
Credits	**3**

Objectives of the Course:

- To familiarize students with the meaning, definition, use and implications of Agricultural Information Systems
- To study various source of agricultural information like organizations and databases.
- To understand the significance of application of ICT in community information system set up

Course Content:

- **Information System**: Basic Concepts, Components, Types and Characteristics of an Information System.
- **Structure and Development of Social Sciences:** Definition Scope, Landmarks and research trends in the discipline agriculture and allied sciences.
- **Agricultural Information System: Components:** Sources: Types and Media: Print and Non-Print, Electronic and Web Based. Institutions connected with Agricultural Science Information Generation and Dissemination.
- **Study of the activities of Agricultural Science Institutes and Organizations at the national and international levels:** Evaluation of Existing Information Systems and Networks in Social Sciences at National and International Level Indian Council of Agricultural Research (ICAR), National Science Academy, Consortium for e-resources in Agricultural Science (CeRA), Agricultural Science and Technology Information System (AGRIS), FAO, Consultative Group on International Agricultural Research (CGIAR)
- **Agricultural Science Databases: Internet-based scientific information sources and services** Critical study of Open source and commercial agricultural science Databases : PGR portal, ROHU Database, SCOPUS, Web of Knowledge, PloS, etc.

Methods of Teaching: Lectures, Brainstorming Sessions, Field trips/ study tour, Case Studies etc.

Methods of Assessment: Assignment, Written Exam

Recommended Readings:

1. Atherton, Pauline. (1977). Handbook for information systems and service. Paris: UNESCO.
2. Buckland, Michael. (1991). Information and information systems: New directions in information management. New York: Praeger
3. Cater-Steel, A and Al-Hakim, Latif. 2008. *Information Systems Research Methods, Epistemology, and Applications*. USA: Information Science Reference
4. 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
5. Hevner, Alan and Chatterjee, Samir. 2010. *Design Research in Information Systems: Theory and Practice*. New York: Springer
6. Ward, J L and Peppard, Joe. 2002. *Strategic Planning for Information Systems*. New York: Wiley
7. Mukhopadhyay. P. *Digital Community Information System: A Framework for India*. Germany: Lap lambert
8. Kelkar, S A. 2009. *Information Systems: A Concise Study*. New Delhi: PHI
9. Sadagopan, S. 2009. *Management Information Systems*. New Delhi: PHI
10. Rajaraman, V: 2011. *Analysis and design of Information Systems*. New Delhi: PHI
11. 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	**Health Information Systems**
Course Number	**LIS-575**
Semester	**4**
Credits	**3**

Objectives of the Course:

- To familiarize students with the meaning, definition, use and implications of Health Information Systems
- To study various sources of health information like organizations and databases.

Course Content:

- **Information System**: Basic Concepts, Components, Types and Characteristics of an Information System.
- **Structure and Development of Social Sciences:** Definition Scope, Landmarks and research trends in the disciplines of health sciences.
- **Health Science Information System: Components:** Sources: Types and Media: Print and Non-Print, Electronic and Web Based. Institutions connected with Health Science Information Generation and Dissemination.
- **Study of the activities of Health Science Institutes and Organizations at the national and international levels:** Evaluation of Existing Information Systems and Networks in Social Sciences at National and International Level. Indian National Science Academy, ICMR, National Medical Library, WHO Library, UN
- **Health Science Databases: Internet-based health information sources and services** Critical study of Open source and commercial Science Databases; Web of Knowledge, PROQUEST, Science Direct, Nature, Medline Plus, PubMed, EBSCO, Chemical Abstracts, PLoS, PsycINFO, Pharmocopeia, Interantional Pharceutical Abstracts (IPA), SCOPUS, POPLINE, etc.

Methods of Teaching: Lectures, Brainstorming Sessions, Field trips/ study tour, Case Studies etc.

Methods of Assessment: Assignment, Written Exam

Recommended Readings:

1. Atherton, Pauline. (1977). Handbook for information systems and service. Paris: UNESCO.
2. Buckland, Michael. (1991). Information and information systems: New directions in information management. New York: Praeger
3. Cater-Steel, A and Al-Hakim, Latif. 2008. *Information Systems Research Methods, Epistemology, and Applications*. USA: Information Science Reference
4. 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
5. Hevner, Alan and Chatterjee, Samir. 2010. *Design Research in Information Systems: Theory and Practice*. New York: Springer
6. Quinn, H S. 2011. *Community Information Needs in a Broadband Media Age*. UK: Nova Science
7. Ward, J L and Peppard, Joe. 2002. *Strategic Planning for Information Systems*. New York: Wiley
8. Mukhopadhyay. P. *Digital Community Information System: A Framework for India*. Germany: Lap lambert
9. Kelkar, S A. 2009. *Information Systems: A Concise Study*. New Delhi: PHI
10. Sadagopan, S. 2009. *Management Information Systems*. New Delhi: PHI
11. Rajaraman, V: 2011. *Analysis and design of Information Systems*. New Delhi: PHI
12. 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	**Dissertation**
Course Number	**LIS-591**
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.