Syllabus for the Two-Year M.Phil Programme in Library and Information Science

(To be effective from the session : 2017 - 2019)

Year	Semester	Course Code	Course Title	Credit Value	Marks Distribution
					Total Marks
1st (Course Work)	Sem I	M.Phil-101	Research Methodology	4	50
		M.Phil-102	Digital Library System	4	50
		M.Phil-103	Term Papers & Related Seminar Presentation(s)	4	25 + 25 = 50
		Sub Total		12	150
	Sem II	M.Phil-201	Digital Information Resources on Library and Information Science	4	50
		M.Phil-202	Information Management and Knowledge Organization	4	50
		M.Phil-203	Term Papers & Related Seminar Presentation(s)	4	25 + 25 = 50
		Sub Total		12	150
2nd	Sem III & IV	M.Phil-301	Dissertation (Text)	12	150
			Viva-voce	4	50
		Sub Total		16	200
			Grand Total	**40**	**500**

Year	Semester	Course Code	Course Title	Credit Value	Marks Distribution
					Total Marks
1st	Sem I	M.Phil-101	Research Methodology	4	50

Course Code : M.Phil-101
Course Title : Research Methodology

Unit I: Research: Meaning, Design and Methods

- Meaning, Need, Types.
- Problem formulation, Hypothesis
- Designing Research Proposal
- Methods - Scientific, Experimental, Historical, Descriptive, Survey
- Operations Research in LIS and Projective Techniques

Unit II: Research Data: Collection, Organisation, Analysis and Interpretation

- Data Collection Tools and Techniques: Sampling, Observation, Questionnaire, Interview, Schedule
- Data Organisation: Tabulation, Graphical representation
- Data Analysis and Interpretation: Statistical analysis (Including Frequency Distribution, Measures of Central Tendency, Dispersion, Standard Deviation, Correlation, Regression, Time-Series analysis)
- Measurement and Scaling Techniques
- Index Number

Unit III: Research Communication and Trends in LIS Research

- Writing Research Report: Structure, Style, Contents, and Citation
- Close and Open Access Research Publications
- Electronic Theses and Dissertations
- Trends in LIS Research – Global
- Trends in LIS Research – National

Reading List

1. Busha, Charles A. & Harter, Stephen P.: Research Methods in Librarianship: Techniques and Interpretations. New York: Academic Press, 1980.
2. Egghe, L. & Rousseau, R.: Introduction to Informetrics: Quantitative Methods in Library, Documentation and Information Science. Amsterdam: Elsevier, 1990.
3. Glazier, Jack D. & Hall, Peter M., eds.: Qualitative Research in Information Management. Englewood, CO: Libraries Unlimited, 1992.
4. Gorman, G.E. & Clayton, Peter: Qualitative research for the information professional: a practical handbook. 2nd ed. London: Facet Publishing, 1997.
5. Hafner, Arthur W. Descriptive Statistical Techniques for Librarians. 2nd ed. Chicago: American Library Association, 1997.
6. Hernon, Peter & Richardson, John V., eds.: Microcomputer Software for Performing Statistical Analysis: A Handbook Supporting Library Decision Making. Norwood, NJ: Ablex Publishing Corporation, 1988.
7. Kraft, Donald H. & Boyce, Bert R.: Operations Research for Libraries and Information Agencies: Techniques for the Evaluation of Management Decision Alternatives. San Diego: Academic Press, 1991.
8. Losee, Robert M., Jr. & Worley, Karen A.: Research and Evaluation for Information Professionals. San Diego: Academic Press, 1993.
9. Lynam, Peter, Slater, Margaret & Walker, Rennie: Research and the Practitioner: Dissemination of Research Results within the Library-Information Profession. London: Aslib, 1982.
10. Martyn, John & Lancaster, F. Wilfrid: Investigative Methods in Library and Information Science: An Introduction. Arlington, VA: Information Resources Press, 1981.
11. McClure, Charles R. & Hernon, Peter, eds.: Library and Information Science Research: Perspectives and Strategies for Improvement. Norwood, NJ: Ablex Publishing Corporation, 1991.
12. Mellon, Constance A.: Naturalistic Inquiry for Library Science: Methods and Applications for Research, Evaluation, and Teaching. New York: Greenwood, 1990.
13. Moore, Nick: How to Do Research. 2nd ed. London: Library Association,
14. Powell, Ronald R.: Basic Research Methods for Librarians. 3rd ed. Greenwich, CT: Ablex Publishing Corporation, 1997.
15. Prytherch, Ray: Information Management and Library Science: A Guide to the Literature. Brookfield, VT: Gower, 1994.
16. Slater, Margaret, ed.: Research Methods in Library and Information Studies. London: Library Association, 1990.
17. Stephen, Peter & Hornby, Susan: Simple Statistics for Library and Information Professionals. London: Library Association, 1995.

Year	Semester	Course Code	Course Title	Credit Value	Marks Distribution
					Total Marks
1st	Sem I	M.Phil-102	Digital Library System	4	50

Course Code : M.Phil-102
Course Title :Digital Library System

Unit I: Historical and Theoretical Foundations

- Nature, concepts, scopes, definitions and types of digital libraries
- History of digital library initiatives, institutional repositories and open knowledge movement
- Social, legal and economic issues
- Digital information resources and Digital archiving
    - Digital information resources – features, types and bitstream formats
    - Analog (traditional) vs. Digital information resources
    - Digital archiving – features, advantages and applications

Unit II: Organisation of Digital Objects

- Metadata – generic and domain-specific schemas (Including DCMES, GILS, AGLS, ONIX, TEI, IEEE LOM, GEMS, SeamlessUK etc.)
- Metadata encoding –
    - Markup languages – HTML, XHTML, XML
    - Encoding standards – W3C and IETF standards
    - Resource Description Framework (RDF)
- Resource identifiers (Naming services) – URN, URI, CNRI's handle, PURL, DOI
- Subject access systems – standards and tools
- Crosswalks and Interoperability
    - Crosswalks of metadata schemas
    - Interoperability – OAI/PMH, Z 39.50, ZING and SRW; OAI/PMH Vs. Z 39.50
    - Design and Development of Digital Library System

Unit III: Architecture, Information Retrieval and User interfaces

- Web architecture
    - Distributed information system (Internet) – architecture, standards, protocols and tools
    - World Wide Web – features, services, standards, protocols, tools and services
    - Web technologies and access systems
    - Common Gateway Interface (CGI) – architecture and programming tools (PERL, PHP, JSP)
- Web databases
    - Web-enabled DBMS – Relational and Bibliographic DBMS
    - Technologies, standards and tools
    - Products and services
- Architecture of digital library systems
    - Design issues
    - Design principles
    - Models
- Information retrieval in digital library systems
    - Information retrieval models for digital library systems
    - Use of vocabulary control devices
    - Text retrieval tools – types, features and comparisons (Lucene, MGPP, HTDig, SWISH-e)
    - Search techniques – Boolean, relational and positional operators (including Post Boolean development)
    - Study of information retrieval features of selected digital library systems
- User interfaces of digital library systems
    - Information seeking behaviour - models
    - Information access framework
    - Design issues, principles and standards
    - Study of user interfaces of selected digital library systems
    - Multilingual information retrieval system

Reading List

1. Argerich, K.: Professional PHP programming. Mumbai: SPD/Apress Reprints, 2004.
2. Arms, W.: Digital libraries. Cambridge MA: MIT Press, 2000.
3. Bayross, I.: Using Apache, MySQL, PHP and PERL on Linux. New Delhi: BPB Publications, 2000.
4. Bayross, I.: Using MySQL on Linux. New Delhi: BPB Publications, 2004.
5. Bhatnagar, S.: Information and communication technology in development: cases from India. New Delhi: Sage, 2002.
6. Birbeck, M. and Duckett, J.: Professional XML (2 nd ed.). Mumbai: Shrof Publishers, 2004.
7. Borgman, G.L.: From Gutenberg to the global information infrastructure: access to information in networked world. Cambridge MA: MIT Press, 2000.
8. Briggs, A.: The definitive guide to user mode Linux. Mumbai: Shrof Publishers, 2005.
9. Caplan, Priscilla: Metadata fundamentals for all librarians. Chicago: ALA, 2000.
10. Chowdhury, G.G. & Chowdhury, S.: Introduction to digital libraries. London: Facet Publishing, 2003.
11. Crawford, W. and Gorman, M.: Future libraries: dreams, madness, and reality. Chicago: ALA, 1995.
12. Deegan, M. & Tanner, S.: Digital futures: strategies for the information age. London: Library Association, 2003.
13. Fabisoff, S.G., & Ely, D.P.: Information and information needs. Washington D.C: US Office of Education, 1974.
14. Gorman, G.E. & Dorner, D.G.: Metadata applications and management. London: Facet Publishing, 2004.
15. Lesk, M.: Practical digital libraries: books, bytes and bucks. San Francisco: Morgan Kaufmann, 1997.
16. Marchionini, G.: Information seeking in electronic environments. Cambridge: Cambridge University Press, 1995.
17. Meadow, C.T., Boyce, B.R. & Kraft, D.H.: Text information retrieval systems (2 nd ed.). San Diego: Academic Press, 2000.
18. Myers, D.: Professional Java XML programming with servlet and JSP. Mumbai: Shrof Publishers, 2004.
19. Raymond, E. S.: The cathedral and the bazaar: musings on Linux and open source by an accidental revolutionary (Rev. ed). Cambridge: O'reilly and Associates Inc, 2001.
20. Unicode Consortium: The Unicode standard, version 4.1. Reading: Addision Wesley, 2005.
21. Witten, I.H. & Bainbridge, D.: How to build a digital library. San Francisco: Morgan Kaufmann, 2003.

22. Witten, I.H., Moffat, A. & Bell, T.C.: Managing gigabytes: compressing and indexing documents and images (2 nd ed.). San Francisco: Morgan Kaufmann, 2003.

Year	Semester	Course Code	Course Title	Credit Value	Marks Distribution
					Total Marks
1st	Sem I	M.Phil-103	Term Papers & Related Seminar Presentation(s)	4	25 + 25 = 50

Course Code : M.Phil-103
Course Title : Term Papers & Related Seminar Presentation(s)

Year	Semester	Course Code	Course Title	Credit Value	Marks Distribution
					Total Marks
1st	Sem II	M.Phil-201	Digital Information Resources on Library and Information Science	4	50

Course Code : M.Phil-201
Course Title : Digital Information Resources on Library and Information Science

Unit I: Generic Digital Information Resources on LIS

- Information Resources: Nature, Features and Types
- Institute-oriented Digital Information Resources: Including Library Associations, Library Schools, Subject Gateways and Digital Libraries on LIS, Subject Directories in Web, Journal Portals, Publisher's Portals, Book Reviews, Book Selection
- Virtual Reference Tools: Commercial Tools (e.g. Xrefer.com), Cross-Publishers Platforms for Reference Sources, Open Access Reference Tools, Yellow pages, White Pages, Library Directories (e.g. LibDex), Dictionaries, Acronyms, Glossary etc.
- Socio-Legal Information Sources: IPR related Information, Sherpa-Romeo project, IFLANET – CLM (Copyright and Legal Matters) and FAIFE (Free Access to Information and Freedom of Expression)

Unit II: Interactive Digital Information Resources on LIS

- Interactive Digital Information Resources: Nature, Features and Types
- LIS Discussion Forums and Mailing Lists (ListServs) – LIS in general and Lists related to second order divisions (Classification, Cataloguing, Reference, Computer applications, Digital library, Institutional repository etc.)
- Blogs and Biblioblogsphere: Nature, Features, Types, Projects and Services
- Wikis and Wikipedias in LIS: Nature, Features, Types, Projects and Services
- Library 2.0 Tools: Information Mashup, Flickr, YouTube, Social Software

Unit III: Digital Information Resources on LIS Education, Training and Research

- LIS Education and Training: Tutorials, Guided Training Programmes, Virtual Classrooms (WebCT, Blackboard etc.), Bibliographies, Reading lists, LIS Courseware, Multimedia Training Kits
- LIS Research: Electronic Theses and Dissertations on LIS (NDLTD, LDL, VidyaNidhi, Theses.com etc.), Citation Tools (e.g. CiteSeer), Virtual Union Catalogue (Macro and Micro levels), Research Guides (Proposal, Planning, Design, Budget etc.)
- Digital Channels of Research Publications
- Virtual Learning Environment (VLE) on LIS

Reading List

18. Carnaby, P: Next generation e-learning and digital information resources. Buenos Aires: IFLA, 2004. <Available at http://www.ifla.org/IV/ifla70/prog04.htm>
19. Casey, M. E. & Savastinuk, L. C.: Library 2.0: Service for the next-generation library. Library Journal, 26. <Available at http://www.libraryjournal.com/article/CA6365200.html>
20. Directory of Open Access Journals (DOAJ): http://www.doaj.org
21. FAO & UNESCO: Digitization and digital libraries module (in CDROM). Rome: FAO, 2005.
22. FAO & UNESCO: Management of electronic documents module (in CDROM). Rome: FAO, 2005
23. Lenhart, A., Fallows, D., & Horrigan, J.: Content Creation Online: 44% of U.S. Internet users have contributed their thoughts and their files to the online world. <Available at http://www.pewinternet.org/pdfs/PIP_Content_Creation_Report.pdf>
24. LIS Core Cluster: http://www.db.dk/
25. LISWiki. Web site: http://liswiki.org/wiki/
26. Maness, J. M.: Library 2.0 Theory: Web 2.0 and Its Implications for Libraries. Webology, 3(2), 2006. <Available at http://www.webology.ir/2006/v3n2/a25.html>
27. Montague, R.: Web-based information science education (WISE). Oslo: IFLA, 2005. <Available at http://www.ifla.org/IV/ifla71/Programme.htm>
28. Stephens, M.: ALA TechSource - Do Libraries Matter: On Library & Librarian 2.0. <Available at http://www.techsource.ala.org/blog/2005/11/do-libraries-matter-on-library-librarian-20.html >
29. TICER courses on digitization: http://www.ticer.nl/
30. Wellman, B., & Haythornthwaite, C. eds.: The Internet in everyday life. Malden, MA: Blackwell, 2002.
31. Wiki: http://en.wikipedia.com/wiki/
32. World list of LIS schools: http://informationr.net/wl/

Year	Semester	Course Code	Course Title	Credit Value	Marks Distribution
					Total Marks
1st	Sem II	M.Phil-202	Information Management and Knowledge Organization	4	50

Course Code : M.Phil-202
Course Title : Information Management and Knowledge Organization

Unit I: Information Sources, Systems and Services

- Information sources including digital sources; Information sources Vs. Information resources
- Information institutions and information systems; Information Transfer Cycle; Open Knowledge Systems
- Information Analysis and Consolidation (IA+C) – methods and products
- Digital Information Systems (Including library networks, library consortia, institutional repositories, digital libraries, subject gateways, virtual reference systems, journal portals etc.)
- ICT-enabled information services and products (including Personal Information Environment (PIE))

Unit II: Resource Description

- Objectives and principles of bibliographic description (including FRBR objectives, Ranganathan's principles, principles of Joint Steering Committee (JSC) and IME-ICC, principles of bibliographic relationships)
- Bibliographic data elements and models of bibliographic description (Including ISBDs, FRBR, GARR, FRAD, UKOLN's analytical model, XOBIS etc.)
- Bibliographic data standards
    - Exchange standards – ISO 2709/Z 39.2, MARC-XML, METS, MODS
    - Content designator / Framework standards – MARC 21, UNIMARC, CCF
    - Distributed cataloguing standards – Z 39.50, ZING, SRW
    - Interoperability and crosswalk
- Electronic resource description – generic and domain-specific metadata schemas, metadata encoding, metadata harvesting
- Trends of resource description and cataloguing
- Resource Organisation

Unit III: Information Storage and Retrieval

Subject analysis and representations –

- Historical and theoretical foundations

    - Pre and post coordinate indexing
    - Evaluation of information retrieval experiments/projects (including TREC)
- Automatic indexing systems – file Organisation processes, inverted file, text retrieval systems and software (Lucene, MGPP, HTDig, SWISH-e etc.), search strategies and techniques for CDROM databases and online systems (online databases, digital libraries, institutional repositories etc.), multimedia information retrieval
- Vocabulary control devices –
    - Traditional, digital and integrated (including standards of monolingual (ISO- 2788 / BS 5723) and multilingual (ISO 5964 / BS 6723) thesauri
    - Design and development of online integrated thesauri (through open source software)
    - Taxonomy, thesaurus and ontology – comparative study
- Models of information retrieval, Information seeking behaviour and User interfaces
- Intelligent information retrieval (including natural language processing (NLP) systems and cross-language information retrieval)

Reading List

1. Antoniou, G. & Harmelen, F.V.: A semantic web primer. Cambridge: MIT Press, 2004.
2. Atherton, P.: Handbook for information systems and services. Paris: Unesco, 1977.
3. Baeza-Yates, R. & Riberio-Neto, B.: Modern information retrieval. New York: ACM Press, 1999.
4. Bean, C.A. & Green, R. eds.: Relationships in the organization of knowledge. Drodrecht: Kluwer Academic Publishers, 2001.
5. Bhattacharya, G.: Information sciences: a unified view through a system approach. Calcutta: IASLIC, 1979.
6. Boll, John J.: The future of AACR2. Cataloguing and Classification Quarterly, 12(1), 3-34, 1990.
7. Borgman, C.L.: From Gutenberg to global information infrastructure: access to information in the networked world. Cambridge: MIT Press, 2000.
8. Broughten, V.: Faceted classification as a basis for knowledge organization in a digital environment: the Bliss bibliographic classification as a model for vocabulary management and the creation of multidimensional knowledge structures. The New review of Hypermedia and multimedia, 7(1), 67-102, 2001.
9. Buchanan, B.: Theory of library classification. London: Clive Bingley, 1979.
10. Chen, S.S.: Digital libraries: the life cycle of information. Columbia: BE Publishers, 1998.
11. Craven, T.C.: String indexing. Orlando; Academic Press, 1986.
12. Crawford, W. & Gorman, M.: Future libraries: dreams, madness, and reality. Chicago: American Library Association, 1995.
13. Crawford, W.: Bibliographic displays in online catalogue. London: Knowledge Industry, 1986.
14. CyberDewey: the first well-organized Internet directory. <available at http://www.anthus. com/ CyberDewey/CyberDewey.html>
15. EQUINOX – Library performance measurement and quality management system. <available at http://equinox.dcu.ie>
16. Evans, G.E.: Management techniques for libraries (2 nd ed.), 1993.
17. Flynn, R.R.: An introduction to information science. New York: Marcel Dekker, 1987.
18. Foskett, A.C.: Subject approach to information (5 th ed.), 1996.
19. Fugmann, R.: Subject analysis and indexing: theoretical foundation and practical advice. Frankfurt: Verlag, 1983.
20. Gilchrist, A.: From classification to knowledge organization, 1997.
21. Grogan, D.J.: Science and technology: an introduction to the literature (4 th ed.), 1983.
22. Heaney, M.: Object-oriented cataloguing. Information Technology and Libraries, 14(3), 135-153, 1995.
23. IFLA: Functional requirements for bibliographic records: final report. Munchen: K.G.

Saur, 1998 <available at http://www.ifla.org/VII/s13/frbr/frbr.pdf>

24. Lazer, P.: Information system design and management, Sarada Ranganathan lectures, 15, 1982.
25. LibQUAL+ <available at http://www.libqual.org>
26. Machlup, F.: Knowledge: its creation, distribution and economic significance V1: 1980, V2: 1982 & V3: 1984).
27. McGarry, K.J.: The changing context of information (rev. ed.), 1993.
28. Milstead, J.L.: Use of thesauri in the full-text environment <available at http://www.jelem.com/useof.htm>
29. Needham, C.D.: Organization of knowledge in libraries: introduction to library classification and cataloguing (2nd ed.). London: Andre Deutsch, 1971.
30. Salton, G.: Automatic text processing: the transformation, analysis and retrieval of information by computer. Reading, MA: Addison-Wesley, 1989.
31. Seal, A. ed.: Introducing the online catalogue. London: The British Library, 1984.
32. Stuart, R.D. & Eastlick, J.T.: Library management (3 rd ed.), 1988.
33. Svenonius, E.: The conceptual foundations of descriptive cataloguing. New York: Academic Press, 1989.
34. Svenonius, E.: The intellectual foundation of information organization. Cambridge: MIT Press, 2000.
35. Taylor, A.G.: Authority files in online catalogues: an investigation of their value. Cataloguing and Classification Quarterly, 9(3), 29-56, 1998.
36. Tenopir, C.: Use and users of electronic library resources: an overview and analysis of recent research studies. <available at http://www.clir.org/pubs/reports/pub120/ pub120.pdf>
37. Van Rijsbergen, C.J.: Information retrieval (2nd ed.). London: Butterworth, 1979.

Year	Semester	Course Code	Course Title	Credit Value	Marks Distribution
					Total Marks
1st	Sem II	M.Phil-203	Term Papers & Related Seminar Presentation(s)	4	25 + 25 = 50

Course Code : M.Phil-203
Course Title : Term Papers & Related Seminar Presentation(s)

Second Year

Course Code : M.Phil-301
Course Title : Dissertation

Year	Semester	Course Code	Course Title	Credit Value	Total Marks
2nd	Sem III & IV	M.Phil-301	Dissertation (Text)	12	150
			Viva-voce	4	50
		Sub Total		16	200