

**UNIVERSITY OF DHAKA**  
**DEPARTMENT OF INFORMATION SCIENCE AND LIBRARY MANAGEMENT**

**COURSE OF STUDIES**

**MA**

**Session: 2010-2011**

- a. there will a thesis group in the Department of Information Science and Library Management in MA starting from Session
- b. The students who get CGPA 3.5 in the BA (Hons.) examinations will be eligible to take thesis in lieu of course no. 508.

MA 1st Semester

MISLM 501	Digital Library System	100
MISLM 502	Information Retrieval Techniques	100
MISLM 503	Information Literacy	100
MISLM 504	Application of Internet in Library and Information Centres	100
	Viva-Voce	25

MA 2nd Semester

MISLM 505	Advanced Classification and Cataloguing (Practical)	
505 (A)	Classification Practical	50
505 (B)	Cataloguing Practical	50
MISLM 506	Knowledge Management	100
MISLM 507	Development and Customization of Library Management Software	100
MISLM 508	Library Systems and Services/Thesis	100
	Viva-Voce	25

**Unit 1: Introduction to Digital Librarianship**

Conceptual framework of digitization and digital librarianship; distinction and relationship with traditional librarianship and automated library systems; evolution; role; basic elements and models of DL

**Unit 2; Development of Digital Collections and Organization of DL**

Nature and types of digital collection, selection, acquisition, and stack management of digital collections; Metadata, Dublin core, content analysis and description, classification, ontology and vocabulary control. Database integration; Document formats; Representation of different media: text, images, sounds, multimedia; Interoperability between different information resources, collections, and systems, libraries and semantic web.

**Unit 3: Digitization and Building Repositories**

Concepts; methods and processes; digital preservation and achieving; core models, repository architecture, front end and back end technologies for capturing digital objects, storage and interactions; database and user interface design; Sharing, networking and interchanging digital contents; standards, protocols and interoperability; security.

**Unit 4: Information Access and Utilization of Digital Libraries**

Digital information services; online and offline information seeking, information behavior in digital libraries; searching and navigation strategies; access management to in-house and networked resources; Digital ready reference sources, reference work in digital environment; Free and Fee-based Digital Document Delivery; Web application in DL and building digital bridges through links; DL users, usability and use studies; evaluation approaches, criteria, and methodologies.

**Unit 5: Professional Issues**

Roles and responsibilities of the digital librarian; Management of digital libraries; Project management, Research projects in digital libraries. Digital Libraries Initiatives. Management issues. Integration with traditional library resources. Copyright issues and intellectual property rights in digital libraries; legal, ethical, economic and social issues; DL Education and Research; recent and future trends.

**Unit 6: Practical**

Making E-books, E-dissertations, E-prints, E-journals and other digital documents through scanning and desktop publishing, design and populate database for full-text and metadata, building and managing repository/digital library using freely available DL software e.g. Dspace, Greenstone, Fedora etc.

**Implementation Structure:****Course works**

Lectures, assignments, laboratory work, independent studies and group project etc.

**Marks distribution: 100**

Semester final (Theory)	40
Semester Final (Lab)	20
Mid Term (Theory)	20
Mid Term (Lab)	15
Attendance	5

**Reading list**

1. Yin-Leng Theng, Schubert Foo and Jin-Cheon Na. Digital Libraries: Design, Development, and Impact. - New York - Information science reference, 2009
2. Ian H Witten, Davis Bainbridge and David M. Nichols. How to build a digital library. 2<sup>nd</sup> ed. Burlington, MA : Morgan Kaufmann Publishers, 2003.
3. Sebastian Ryszard Kruk • Bill McDaniel. Semantic Digital Libraries, Berlin - Springer, 2009
4. Lesk, M. Understanding Digital Libraries (Second ed.). San Francisco, CA: Morgan Kaufman Publishers, 2004

5. Borgman, C. L. From Gutenberg to the Global Information Infrastructure. Cambridge, MA: The MIT Press, 2000
6. Arms, W. Y. (2000). Digital Libraries. Cambridge, MA: The MIT Press.
7. Chowdhury, G. G., Chowdhury, S. Introduction to Digital Libraries. London: Facet, 2003

**Unit 1:** Introduction to information retrieval; components of IR systems; information search process; types of searches; retrieval models

**Unit 2:** Online searching and CD-ROM systems; choosing sources; planning and performing the search; modifying the search; selecting results; developing search scenarios; demonstration and hands-on practice

**Unit 3:** Language and information retrieval; controlled vocabularies; controlled vocabulary in retrieval; problems with controlled vocabulary; natural language alternatives; expert systems

**Unit 4:** Browsing versus searching; browsing strategies; types of browsing; browsing tools; advantages of browsing; browsing limitations; the role of user interfaces

**Unit 5:** Search evaluation; recall and precision measures; criticisms of recall and precision measures; user-centred design and evaluation

**Reading list**

1. Baeza-Yates, R., and Ribeiro-Neto, B. *Modern Information Retrieval*. Addison- Wesley
2. Large, A., Tedd, L. A., and Hartley, R. J. *Information Seeking in the Online Age: Principles and Practice*. London: Bowker Saur
3. Chowdhury, G. G. *Introduction to Modern Information Retrieval*. London: Library Association Publishing
4. Harter, S. P. *Online Information Retrieval: Concepts, Principles, and Techniques*. London: Academic Press
5. Walker, G., and James, J. *Online Retrieval: A Dialogue of Theory and Practice*. Englewood, CO: Libraries Unlimited.

**Unit 1:** Information and nature of information, Information need and analysis, Information Literacy, definitions, necessity, Objectives and scope of IL, Understanding IL, Information Literacy for teaching, implications for learning, implications for school, implications for libraries and librarians, implications for workplace, society and culture.

**Unit 2:** Benefit and application of information literacy skill in information institutions, Major learning theories of information literacy skills instruction, including critical thinking and problem solving skills; Guideline for information literacy and lifelong learning; Information literacy and life long learning, Information literacy and Higher education, Information Literacy and Pedagogy, Information Literacy Assessment, Information Literacy Development (ALA, ACRL) Global Standards and Guidelines for Information Literacy Education, IFLA guidelines, Information literacy consortia, major schools around the world particularly UK, USA, Australia and New Zealand

**Unit 3:** Information age and Information Literacy, Seven Faces of Information Literacy by Christine Bruce, Seven Pillars/Standards of Information Literacy by (SCONUL), Kinds of Information Literacy, Information Literacy Cycle with examples, models, contents of IL.

**Unit 4:** Information Literacy in Digital age, creating a successful Information Literacy program for distance students, Information Literacy Tools, Search Strategies, Impact of information literacy in bridging the digital divide; Digital information literacy.

**Unit 5:** Information Literacy Education in South Asia (Bangladesh, India, Pakistan, Srilanka), present status, problems and preparing a guideline of IL for South Asian countries, role of IFLA for providing IL training for the developing countries.

**Unit 6:** Practical works on measuring IL competency, tutorial, project assignment and others.

#### **Reading list**

- Blanchett, H., Powis, C. & Webb, J. A guide to teaching information literacy: 101 practical tips. London: Facet.
- Calvo, M., Sætre, T., and Rafste, E. Information literacy education: a process approach. Professionalizing the Pedagogical Role of Academic Libraries. Oxford: Chandos.
- Christine Bruce. Seven faces of information literacy, AUSLIB: Adelaide, South Australia.
- Craig Gibson (Editor). Student engagement and information literacy, ACRL: USA
- Esther S. Grassian and Joan R. Kaplowitz. Information literacy instruction: theory and practice, Information literacy sourcebook, UK.
- Herring, J. Improving students' web use and information literacy: A guide for teachers and teacher librarians. London: Facet.
- Horton, F. W. Understanding information literacy: a primer. Paris: UNESCO
- Jacobson, T. & Mackey, T. (ed.) Using technology to teach information literacy. Neal Schuman: UK.
- Lloyd, A. Information literacy landscapes: information literacy in education, workplace and everyday contexts. Oxford: Chandos
- Welsh, T. S. & Wright, M. S. Information literacy in the digital age: an evidence based approach. Oxford: Chandos

**Unit 1: Introduction to WWW and Internet technologies**

Basic concepts, evolution, technologies and infrastructure of World Wide Web and Internet; TCP/IP and other internet protocols; Internet Service Provider (ISP), connectivity and bandwidth; switching techniques Major tools and services;

**Unit 2: Internet application in Library and information activities**

Application of Internet tools and services in library and information centers; orientation with different types of web information sources and their use; Search engines and navigation techniques for searching and retrieval of information on the web; Introduction web based library system/virtual library systems.

**Unit 3: Creating website**

Elements of static and dynamic web site; principles, art and planning of web site, content structuring and technologies; developing database driven web site for libraries and information centers; Addressing and publishing web products and sites; advertising and promotion of web product, assessment and evaluation techniques of web products and sites.

**Unit 4: Practical Laboratory works**

Browser basics: main elements, distinct environments, downloading and exploring feature of different browsers e.g. Firefox, Opera, IE etc.; E-mail Basics; creating static and dynamic web products and sites using mark up language e.g. HTML/XHTML, Cascade Style Sheet (CSS), client-server computing with PHP/ASP, Scripting with Java Scripting/VB scripting , data driven application with XML etc.

**Implementation Structure:****Course works**

Lectures, assignments, laboratory work, independent studies and group project etc.

**Marks distribution: 100**

Semester final (Theory)	40
Semester Final (Lab)	20
Mid Term (Theory)	20
Mid Term (Lab)	15
Attendance	5

**Reading list**

1. Westman, Stephen R. Creating Datacased-backed library Web Pages Using Open Source Tools. Chicago – ALA, 2006
2. Peter Morville and Louis Rosenfeld. Information Architecture for The World Wide Web.
3. Sebastool - O'Reilly Media, 2007.
4. Honeycutt, Jerry. et al. Using Internet – 4<sup>th</sup> Ed. – New York – MacMillan, 1997
5. Freire, Mario and Pereira, Manuela. Encyclopedia of Internet Technologies and Applications. Hershey : Information Science References, 2008
6. Davidsen, Susanna. Web site design with the patron in mind: a step-by-step guide for libraries. Chicago - American Library Association, 2004
7. Boronczyk, Timothy. et al. Beginning PHP6, Apache, MySQL Web Development. Inc., Indianapolis : Wiley Publishing, 200
8. Kevin Yank. Build Your Own Database Driven Web Site Using PHP & MySQL. Collingwood: Sitepoint Pty, 2009

**MISLM 505: Advanced Classification and Cataloguing (Practical)**

Marks 100

**(A) Classification Practical**

**(B) Cataloguing Practical**

**505(A) Classification Practical**

Marks 50

1. Dewey Decimal Classification (DDC)- Edition 22:
  - a. Construction of classification numbers with different tables
    - i) Table – 1: Standard Subdivisions
    - ii) Table – 2: Geographic Areas, Historical Periods, Persons
    - iii) Table – 3: Subdivisions for the Arts, for Individual Literatures,  
for Specific Literary Forms
    - iv) Table – 4: Subdivisions of Individual Languages
    - v) Table – 5: Ethnic and National Groups
    - vi) Table – 6: Languages
  - b. Number analysis using Six Tables of DDC 22<sup>nd</sup> Edition.
2. Universal Decimal Classification (UDC):
  - a. Construction of classification numbers with various auxiliaries
  - b. Number analysis
3. Library of Congress Classification (LCC):
  - a. Construction of classification numbers

**505(B) Cataloguing Practical**

Marks 50

**Unit 1:** Standardization of oriental names through application of modified Transliteration table of Arabic, Persian and Bengali alphabets provided by the International Congress of Orientalists and ISO.

**Unit 2:** Standardized transliterated entry heading of Bangladeshi Oriental names according to IFLA UBCIM' 96: Names of persons: national usage of entry in catalogues (compulsory).

**Unit 3:** Main Entry (with tracing) for the following categories of works:

- a. Corporate bodies as authors
  - International organizations,
  - Government publications,
  - Learned bodies, societies, institutions, associations, universities, bureaus.
- b. Motion Picture/Film
- c. Filmstrip
- d. Map
- e. Atlas

**Unit 4:** Application of MARC-21 and Dublin Core Metadata in library cataloging

**Reading list**

Saiful Islam K.M. Essentials of cataloging and classification. Dhaka : New Progati Prokashani, 2008.

Mxwell, robert L. Handhook for AACR2: explaining and illustrating Anglo-American Cataloging Rules through the 2003 updates. Rev. ed. Chicago – ALA, 2004

**Unit 1: The knowledge context:**

The changing nature of organizations, strategic management in organization, knowledge management, development of knowledge culture, models for strategic knowledge management, knowledge management and various discipline: knowledge management and management, knowledge management and library and information science, knowledge management and information and communications technologies, etc.

**Unit 2: Strategic knowledge management:**

Phases of knowledge development, knowledge management infrastructure, Communities of Practice, Harnessing organizational knowledge, specific knowledge leadership roles, leading a knowledge network.

**Unit 3: Knowledge foundations:**

Structural support for knowledge management, performance management, learning and development.

**Unit 4: Knowledge management and technology:**

Knowledge management systems, knowledge management technologies, knowledge management systems development.

**Unit 5: Knowledge repositories:**

Developing and managing knowledge repositories, repository quality control, libraries and knowledge repositories, mapping the content structure, content management systems, major software for content management.

**Unit 6: Knowledge service:**

Developing an effective knowledge service, role of knowledge workers in providing knowledge service, models of service provision, knowledge service stakeholders, evaluating the effectiveness of knowledge service.

**Unit 7: Knowledge management evaluation:**

Evaluating the effectiveness of knowledge strategy, identifying and measuring knowledge inputs, evaluation challenges, sustainable knowledge management, knowledge management problems and prospects in Bangladesh and developing countries, national knowledge strategies.

**Reading list**

Debowski, S. (2007). Knowledge Management. New Delhi: Wiley India.

Srikantaiah, T. K. & Koenig, M. E. D. (Eds.) (2001). Knowledge management for the information professional. (ASIS Monograph Series), New Jersey: American Society for Information Science.

Groff, T. R. & Jones, T. P. (2003). Introduction to Knowledge Management: KM in Business. Butterworth-Heinemann.

Dalkir, K. (2005). Knowledge management in theory and practice. Elsevier/Butterworth Heinemann.

Mishra, J. K. (2009). Knowledge management: Complexity, learning and sustainable innovation. Coronet Books.

Semertzaki, E. (2022). Special Libraries as Knowledge Management Centres. Oxford: Chandos Publishing (Oxford) Ltd.

Maier, R. (2004). Knowledge management systems: information and communication technologies for knowledge management. New York: Springer.



**Unit 1: Introduction to software and software engineering**

Introduction to Software, software characteristics, categories and applications; software engineering: process, methods and tools, the tasks of software development, software development methods and processes: the waterfall model, the spiral model, prototyping, incremental development, the unified process, open source software development etc.

**Unit 2: Software Development Process**

Requirements engineering; analysis modeling; software architecture; design concepts and principles; design approaches and methods: structured and object oriented design tools and techniques; user-interface design; design documentation; software testing strategies and techniques; software reliability and quality assurance; re-engineering, software maintenance; open source software: principles, process and standard, evaluation and selection of open source and commercial software for library applications.

**Unit 3: ICT Project Management**

project management concepts and processes, project planning, estimation techniques, scheduling tracking, organization and team structure, Risk analysis and management, cost estimation and justification, management styles.

**Unit 5: Fundamentals of Computer Programming**

Introduction to computer programming, principles, styles and process; environment and programming languages; algorithm, pseudo code

**Unit 6: Practical**

Programming with C: declaration, variables and constants, control structure, functions, arrays, pointers and strings, class and data abstraction, inheritance etc. Installation and customization of some commercial and open source software such as Green Stone, D-Space, KOHA, Fedora.

**Implementation Structure:****Course work:**

Lectures, assignments, laboratory work, and group project.

<b>Marks distribution:</b>	<b>100</b>
Semester final (Theory)	40
Semester final (Lab)	20
Mid Term (Theory)	20
Mid Term (Lab)	15
Attendance	5

**Reading list**

1. Pressman Roger S. Software Engineering: a Practitioner's Approach. Fifth ed. Boston : McGraw Hill, 2001.
2. Iaplanche Phillip A. What every Engineer should Know About Software Engineering. New York : CRC Press, 2007
3. Deitel H.M. and Deitel. P.J. C++ How to program. 2<sup>nd</sup> ed, New Jersey : Prentice Hall, 1998
4. Chuck Easttom. C++ Programming Fundamentals. Massachusetts : Charles River Media, 2003
5. Kapur Rachna et.al. Getting Started With Open Source Software: How to Run a Successful Free Software Project. Markham, ON : IBM, 2010
6. Sulayman K. Sowe, Ioannis G. Stamelos and Ioannis M. Samoladas Emerging Free and Open Source Software. Practices Hershey : IGL Publishing , 2008
7. Bronson Gray J. and Silver, Howard. An Introduction to Programming with ANSI C. New York : West Publishing, 1993

**Unit 1: The public library system and service**

Origin of public library movement; Development and purpose of the public library; Modern statements of purpose of the public library; public library systems and services in Bangladesh; public library legislation; public library service to children; public library extension services; public library and the society; public library co-operation.

**Unit 2: Academic library system and service**

Historical development of academic libraries in the world; objectives and functions of the university, college and school libraries; library organization; Library building and equipment; Library management; acquisition of books and periodicals; library co-operation; library-based learning.

**Unit 3: Special library system and service**

Kinds of special, technical and research libraries; place of the library in the parent body; objectives and functions of the special library; growth and development of special libraries in Bangladesh; role of special libraries in research; special library resources, services, standards and finance; education for special librarianship.

**Unit 4: National library system and service**

Definition, purpose, scope, objectives and functions of a national library; National library systems in the developed and developing countries; Finance and personnel; National library co-operation; legal deposit; Bibliographic services and control; extension services; public relations and publicity.

**Reading list**

Murison, W.J. The public library: its origin, purpose and significance

Heintze, I. The organization of the small public library

Ashworth, W. Special librarianship

Unesco. National libraries: their problems and prospects