UNIVERSITY OF MADRAS

DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE

MASTER OF LIBRARY AND INFORMATION SCIENCE

(M.Lib.I.Sc.)

2 Years –Programme

REGULATIONS

SYLLABUS

and

DETAILED COURSE CONTENTS

2016-2017
UNIVERSITY OF MADRAS

CHENNAI

Department of Library and Information Science

Guidelines, Regulations and Course Contents of the Programme leading to M.Lib.I.Sc. (Master of Library and Information Science) (Two years – Semester Scheme) Degree.

A. Programme Details

Name of the Department : Department of Library and Information Science
School : School of Information and Communication Studies
Subject : Library and Information Science
Name of the Programme : M.Lib.I.Sc. (Master of Library and Information Science)
Duration of the Programme : 2 years – 4 Semesters - Choice Based Credit System

B. Objectives of the Programme

1. To familiarise the concepts of information and communication.
2. To expose with advances in ICT and information handling techniques.
3. To acquaint with the activities and services of different information systems.
4. To introduce the concept, types, and techniques of research.
5. To introduce new strategies in Library Management effectively.
6. To create awareness on the emerging tools in digitization

C. Eligibility for Admission to the Programme

(i) Qualification for Admission

Candidates who have passed any Bachelor’s Degree Examination from a recognised University under 10+2+3 system and who have secured at least 50% marks in aggregate, in Part III (main
subjects) are eligible to apply seeking admission to the M.Lib.I.Sc. (Library and Information Science) Programme.

(ii)  **Selection for Admission**

The selection of candidates shall be made on the basis of the eligibility.

(iii)  **Intake**

The total number of candidates to be admitted to the programme shall be 20 (Twenty only).

(iv)  **Internship**

Each student shall take up Internship during Summer Vacation, between II Semester and III Semester.

**D. Syllabus**

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<thead>
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<th>Sl. No</th>
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Semester I

CIS C201 – Foundation of Library & Information Science

Unit I - Data, Information & Knowledge; Evolution of Information Science as a discipline; its scope and relation to Library Science, Cognitive Sciences, Computer Science etc; the inter-discipline nature of IS.

Unit II - Theories of Information, Communication Models; Channels of Communication-Formal & Informal; Information Transfer Cycle.

Unit III - Information / Knowledge Society; information and knowledge as economic factors; economics of information; legal and ethical issues; the digital divide.

Unit IV - National information infrastructure; library networks; legislative framework for provision of library services and access to information.

Unit V - Information / Memory institution of different kinds: Libraries, Archives, Documentation Centers, Information Analysis Centers, Museums and respective roles and functions.

Unit VI - Normative Principles: Five Laws of Library Science; open access to information; library and information profession

Suggested Readings


CIS C202 – Principles and Techniques of Management

Unit I - Schools of Management; Classical Neo- classical and Modern management theories; principles and functions of management.

Unit II - System concepts; System theory; Open and Close System; management techniques, PERT, CPM, etc.

Unit III - Human Resource Management; Financial resources management; budgets and budgeting techniques.

Unit IV - Crisis management; change management; space management.

Unit V - Quality management; TQM, quality audit, SERVQUAL, ISO 9000 series of standards.
Suggested Readings


CIS C203 – Introduction to IT and Programming

Unit I - Information Technology; Evolution of Digital Computers; Introduction to Telecommunications; Number Systems: Binary, Octal, Hexadecimal, Representation of Numbers in Computers; Character Representation: ASCII, ISCII and UNICODE; File formats
Unit II - Basic components of a Computer – Arithmetic Logic Unit; Control Unit; Memory Unit – Static and Dynamic RAM, ROM, Cache memory; Input / Output devices.

Unit III - Operating System: Linux, Windows; Boolean algebra & logic.

Unit IV - Fundamentals of Programming; Introduction to C programming; Object Oriented programming. Java, PHP

Unit V - Use of a standard DBMS package through lab work.

Suggested Readings


CIS C204 – Information Sources

Unit I - Information Sources – Documentary and Non-Documentary; Primary, Secondary and Tertiary Sources of Information and their Characteristics;

Unit II - Evaluation Criteria; Detailed Study on selected Reference Sources;

Unit III - Multimedia & E-resources; Portals, Subject Gateways; Open Access Resources

Unit IV - Search Engines, Search Techniques

Unit V - Lab. Work on Information Search & Access, Trial Demos

Suggested Readings


17. http://www.refdesk.com

Semester II
CIS C205 – Information Products and Services

Unit I - Information Products and Services: Documents Delivery, Translation; Current Awareness, SDI, E-Alert & Web-based Services; Information Analysis and Consolidation Products and Services.

Unit II - Study of products and services of selected major global Information Systems

Unit III - Users of Information; Understanding the users; Categories of users and their needs; Information use contexts; Information seeking behavior of users; Theories of Information behavior.

Unit IV - Use Studies; Methods of users studies; major information users and use studies and their findings

Unit V - Users Education & Information Literacy

Suggested Readings


**CIS C206 – Element of Statistics and Research Methods**

**Unit I** - Introduction to Statistics; definition of statistical terms-population, sample, data and variables; frequency distributions; scales of measurement; presentation of data-graphical and tabular; frequency tables, histogram, frequency curves; correlation and regression analysis; curve fitting; probability, probability distributions; measures of central tendency and dispersion; binominal, Poisson, geometric and Negative binomial distributions;

**Unit II** - Research design – definition, need; Sampling; Hypothesis

**Unit III** - Research methods- data collection & analysis.

**Unit IV** - Testing of hypothesis: z-test & t-test, and goodness-fit- test

**Unit V** - Report writing- style manuals (MLA, APA, Chicago);

**Unit VI** - Use of statistical packages such as SPSS.

**Suggested Readings**


**CIS C207 – Cataloguing & Metadata (Theory & Practice)**

Unit I - Bibliographic Entities and Bibliographic Records; Bibliographic files of different kinds, Bibliographic Objectives.

Unit II - Principles of Description; FRBR; Bibliographic Languages: Standards for Description: ISBD, AACR-2, RDA; Standards for Machine Readable Bibliographic Records – ISO 2709 and the MARC family of Formats, MARC-XML

Unit III - Subject languages and vocabulary control: Lists of Subject Headings, Thesauri: Indexing Models: Automatic Indexing.

Unit IV - Metadata and Metadata Standards: Dublin Core, EAD.

Unit V - Cataloguing Practice: Preparation of Bibliographic Records for different kinds of documents with emphasis on e-resources using appropriate standards (such as AACR-2 / RDA, MARC 21, LCSH, Authority Files) and software (KOHA).

**Suggested Readings:**


**Semester III**

**CIS C208 – Knowledge Organization (Theory & Practice)**

Unit I - Universe of Subjects: structure and attributes, modes of formation of subjects; Library Classification; Mapping of universe of subjects in major schemes of Library classification;

Unit II - General Theory of Classification; Normative Principles; The three planes of work; Principles and Postulates of Helpful Sequence; Facet Analysis; Notation; Kinds and Hospitality; General Theory of Subject Indexing Languages (SIL) of G.Bhattacharyya

Unit III - Trends in classification: Automatic classification, Classification in online system and Web; Knowledge Organization for Digital Libraries; Ontologies

Unit IV - Classification Practice: Use of specified editions of DDC and UDC for classification of documents

**Suggested Readings**


CIS C209 – Library Management & Automation

Unit I - Library as a System; Components and Subsystems; Library Housekeeping operations – Acquisition and Collection Development, Document circulation,
Serials control, Stock verification; Organizational structure, Library Authority; Library Infrastructure (including differently abled).

Unit II - Care, Preservation & Conservation of documents

Unit III - Library Standards; Measures of Performance of Libraries

Unit IV - Library Automation; Overview of library automation software; Criteria for selection of software; and Hardware (including differently abled); Electronic Surveillance.

Unit V - Detailed study of lab. Work using a specified package (E.g. KOHA)

**Suggested Readings**

18. http://www.inflibnet.ac.in
19. http://www.delnet.nic.in

CIS C210 – Information Storage & Retrieval

Unit I - Information Retrieval – Basic Concepts; Overview of IR systems; Historical Perspectives; Measures of Performance (ASLIB Cranfield, MEDLADS, TREC)

Unit II - Introduction to DBMS – integrity and security issues; E-R Models; Relational and other Database Models; Normalization. SQL, Implementation in MySql or PostgreSQL

Unit III - IR Models: Boolean, Vector and Probabilistic Models; Alternative IR Models: algebraic and probabilistic models (Bayesian networks).

Unit IV - Structured Text Retrieval Models; Text Operations: document pre-processing (word stemming, stop words, thesauri), document clustering; Linguistic aspects

Unit V - Searching vs. browsing; dynamic query formulation: keyword based querying, pattern matching, structural queries, query protocols; Hybrid, statistical and knowledge approaches; query expansion.

Suggested Readings

CIS C211 – Informetrics

Unit I - Informetrics: genesis, scope and definition; Librametry, Bibliometrics, Scientometrics & Webometrics

Unit II - Classical Bibliometrics laws: Zip’s law, Lotka’s law, Bradford’s Law of Scattering; Generalized Bibliometrics distributions. Fitting of Informetrics models: Bradford’s Curve, Leimukuhler’s Distribution, etc. Aspects of concentration measures; 80-20 rule, Price’s Law relating to scientific productivity; Analysis of use statistics.

Unit III - Growth and Obsolescence of literature: Various growth models; Aging factor and half-life: real vs. apparent; synchronous vs. diachronous.

Unit IV - Citation analysis: Bibliographic Coupling and Co-citation Analysis

Unit V - Science indicators: Impact factor, h-index, g-index, i-10; Mapping of Science

Suggested Readings


CIS C212 – Internship

To place students in a working library & information Centres environment of all kinds in the city or elsewhere and recommended by the Department or by choice of a candidate with the approval of Department Council; to enable students to be exposed in the varied units in a library & information Centre; to gain practical knowledge; and to give the students hands-on experience of what they are taught in the class room.

Internship shall be for a duration of **two months** (60 days) during the summer vocation of the year (i.e., May and June). It carries 4 credits.

A Report should be submitted followed by a presentation for evaluation and grading.

**Semester IV**

CIS C213 – Content Management

- **Unit I** - Introduction to CMS; benefits; Principles of CMS; CMS Architecture; system and data integration in CMS.
- **Unit II** - Creating and managing web page and content on web page; fundamentals of planning dynamic websites
- **Unit III** - Overview of CMS software such as Wordpress, Drupal, Joomla, and others to create dynamic and flexible websites; Evaluation of CMS.
- **Unit IV** - Application of CMS; CMS and community information systems; document management, records management, digital assets management

**Suggested Readings**


CIS C214 – Web Technology

Unit I - Mark-up Languages: SGML, HTML, XML, TCP / IP, FTP, SSHD; Common HTML Commands

Unit II - Web servers: Apache, IIS.

Unit III - CGI Programming: Introduction to Java scripts. PHP.

Unit IV - Protocols: SOAP. Open URL; Relevant W3 Standards and Protocols

Unit V - Search Engines, cluster based search engines and building search engines. Search Algorithms. Security Issues

Unit VI - Social networking tools; Semantic web; RSS feeds; Webcasts, Podcasts, Blogs.

Suggested Readings


CIS C215 – Digital Libraries
Unit I - Digital Libraries: Concept and definition; Historical development of Digital Libraries. Copyright and license issues.

Unit II - Digitization Process: Software, hardware and best practices; Scanners and scanner types; OCR and OCR software;

Unit III - Technology for DLs: Open source software; Dspace, GSDL: Features and comparative study of Dspace, Eprints and Fedora; Open Standards and File formats, Harvesting metadata, OAI-PMH and DL Interoperability;

Unit IV - Digital Library Architecture; Grid architecture. Open URL integration. Digital Preservation: Persistent identifiers: DOI and CNRI Handles; Multilingual digital repositories and Cross-language information retrieval

Unit V - Lab. Practice using GSDL / D-Space.

Suggested Readings

Electives

CIS E201 Project

A Project is a course work to be undertaken during the Fourth Semester. The project work shall be carried out under the supervision of the faculty of the Department. A written report shall be submitted for evaluation followed by viva-voce examination.

CIS E202 Knowledge Management

UNIT I Knowledge Management: Concept and definitions – Need for Knowledge Management in the emerging and changing business environment – Understanding
knowledge; Types of knowledge - explicit and tacit knowledge – Knowledge works changing role of Library and Information professionals.

UNIT II Knowledge creation and capturing Knowledge creation model – Capturing tacit Knowledge

UNIT III Knowledge codification and organization: Knowledge base-Knowledge mapping, decision trees, decision tables a frames etc.

UNIT IV Knowledge transfer and sharing steps in knowledge transfer. Knowledge transfer in E-World, role of Internet E-Business / E-Commerce.

UNIT V Tools for knowledge Management - Neural network Data mining – Legal and ethical issues in Knowledge Management

Suggested Readings


CIS E203 Marketing of Information

UNIT I Marketing Concepts; - Marketing of Information- Corporate Mission; Marketing Strategies
UNIT II Portfolio Management BCG Matrix Model; Product Market Matrix; Product Life Cycle
UNIT III Marketing Mix; Kotler’s Four C’s; McCarthy’s Four P’s
UNIT IV Market Segmentation and Targeting; Geographic and Demographic Segmentation; Behavioral and Psychographics Segmentation; User Behavior and Adoption
UNIT V Marketing Plan & Research; Corporate Identity Marketing Plan; Marketing Research

Suggested Readings

CIS E204 Electronic Publishing

UNIT I Concept, Scope, Nature & Types
UNIT II Evolution, Current Trends in E-publishing
UNIT III OAI, Open access sources, Pricing & Pricing models
UNIT IV Format & Structure, Languages of E-publishing
UNIT V E-Publishing - Socio-economic and Legal issues

Suggested Readings

**CIS E205 Documentation**

UNIT I  Scientific communication - Definition, types and forms of scientific communication (formal & informal)

UNIT II Scientific Literature/ Information Sources - Primary, Secondary Sources in Print, Electronic and Online.

UNIT III Literature Search - Search Statement and Strategies, Search Processes; Information gathering tool.

UNIT IV Principles/Guidelines of Scientific Writing (Practical Module)

The mechanics of data organization and presentation - oral, posters, writing/graphic - journal articles, thesis/dissertations and research/project proposals for funding.

UNIT V Documentation - Ethics - Academic Integrity & Plagiarism, Style Manuals and Citation practice.

**Suggested Readings**


**CIS E206 Academic Libraries**

UNIT I Academic Libraries: Types; Objectives and Functions.

UNIT II Collection Development; Problems in Collection Organisation; Collection Development Programmes

UNIT III Academic Library Services

UNIT IV Financial Management of Academic Libraries; Personnel Management; Norms and patterns of staffing

UNIT V Role of UGC and other bodies in promoting Libraries in Universities, Colleges and Other Institutions of Higher Learning

UNIT VI Resource sharing: Need and Objectives; Library consortia

**Suggested Readings**

4. Gelfand, M.A.,( [1968]). University Libraries for developing countries. [Paris]: Unesco


**CIS E207 Community Information Services**

Unit I  
Notion and Nature; Types & Levels

Unit II  
Types – Academic, Special & Public Environments

Unit III  
Use & User Study

Unit IV  
Diffusion of Community Information

Unit V  
Evaluation of Community Information Services

**Suggested Readings**


CIS E208 Information System for Industry

Unit 2  Management of Industrial Library - Finance, Human Resources, Material, Collection.
Unit 3  Information Products & Services - Types and Features.
Unit 4  Use & User studies
Unit 5  Case studies

Suggested Readings


