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**TUMKUR UNIVERSITY**  
**Dept. of Studies & Research in LIS**

**Programme Outcome**  
**Course Outcome**

Revised  
**M.Sc in LIS Course Structure and Syllabus**  
*(Choice Based Credit System)*

*(From the Academic Year 2018-19 onwards)*

  
**Dr. B. T. Sampath Kumar**  
Professor  
Dept. of Library and Information Science  
Tumkur University, Tumakuru.

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Dept. of Studies & Research in LIS

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(Choice Based Credit System)  
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Dr. T. Sampath Kumar  
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**M.Sc. in Library and Information Science Course Structure (CBCS)**

Paper Code and Title	No. of hours/ week	Credits	Duration of the exam	Marks		
				Internal Assessment	Internal Assessment	Total marks
<b>FIRST SEMESTER</b>						
CPT-1.1: Foundation of Library and Information Science	4	4	3 Hours	20	80	100
CPT-1.2: Information Sources	4	4	3 Hours	20	80	100
CPT-1.3: Library Classification	4	4	3 Hours	20	80	100
SPT-1.4A: Basics of Computer and Internet OR SPT-1.4B: Information Literacy	4	4	3 Hours	20	80	100
CPP-1.5: Basics of Computer	4	4	3 Hours	10	40	50
CPP-1.6: Information Sources	4	4	3 Hours	10	40	50
CPP-1.7: Library Classification	4	4	3 Hours	10	40	50
SPP-1.8A: Basics of Internet OR SPP-1.8B: Information Literacy	4	4	3 Hours	10	40	50
<b>SECOND SEMESTER</b>						
CPT-2.1: Management of Libraries and Information Centres	4	4	3 Hours	20	80	100
CPT-2.2: Library Cataloguing	4	4	3 Hours	20	80	100
SPT-2.3A: Library Automation OR SPT-2.3B: Information Systems and Programmes	4	4	3 Hours	20	80	100
OEPT-2.4: Information and Communication Technology –I (to be offered to the students of other departments)	4	4	3 Hours	20	80	100
CPP-2.5: Management of Libraries and Information Centres	4	4	3 Hours	10	40	50
CPP-2.6 :Library cataloguing	4	4	3 Hours	10	40	50
SPP-2.7A :Library Automation OR SPP-2.7B :Information Systems and Programmes	4	4	3 Hours	10	40	50
OEPP-2.8 :Information and Communication Technology-I (to be offered to the students of other departments)	4	4	3 Hours	10	40	50
<b>THIRD SEMESTER</b>						
CPT-3.1: Information Users and Services	4	4	3 Hours	20	80	100
CPT-3.2: Digital Libraries	4	4	3 Hours	20	80	100
SPT-3.3A: Research Methodology OR SPT-3.3B: Technical Writing	4	4	3 Hours	20	80	100
Writing 4 4 3 Hours 20 80 100 OEPT-3.4: Information and Communication Technology –II (to be offered to the students of other departments)	4	4	3 Hours	20	80	100
CPP-3.5: Information Processing and Retrieval	4	4	3 Hours	10	40	50
CPP-3.6: Digital Libraries	4	4	3 Hours	10	40	50

SPP-3.7A: Research Methodology OR SPP-3.7B : Technical Writing	4	4	3 Hours	10	40	50
OEPP-3.8: Information and Communication Technology –II (to be offered to the students of other departments)	4	4	3 Hours	10	40	50
<b>FOURTH SEMESTER</b>						
CPT-4.1: Information and Communication Networks	4	4	3 Hours	20	80	100
CPT-4.2: Web Technology	4	4	3 Hours	20	80	100
SPT-4.3A: E-Publishing OR SPT-4.3B: Webometrics, Informetrics and Scientometrics	4	4	3 Hours	20	80	100
CPD-4.4: Project	4	4	3 Hours	20 (Viva Voce)	80	100
CPP-4.5: Information and Communication Networks	4	4	3 Hours	10	40	50
CPP-4.6: Web Technology	4	4	3 Hours	10	40	50
SPP-4.7A: E-Publishing OR SPP-4.7B: Webometrics, Informetrics and Scientometrics	4	4	3 Hours	10	40	50
CPDP-4.8: Project Practical	4	4	3 Hours	10	40 (Presentation)	50

**Note / Follow ups:**

- Pedagogy:** The pedagogy of teaching includes - Lectures, Case Analysis, Group Discussion, Seminars/Presentations, Assignments, Movie screening, Role plays, Live telecast, etc.
- Case Study:** Minimum one case study need to be discussed in each unit of the concerned subject in the class room.
- Special Paper Theory (SPT) / Electives:** A Group of specialization will be offered only when minimum of 10 students opt for it.
- Dissertation:** Each student will have to undertake a business research / live business problem in a business organisation or industry and submit the report to the University in the 4<sup>th</sup> Semester. This will be evaluated for 80 marks and 20 marks will be awarded for the performance in the viva-voce. Preliminary work on Dissertation will commence in the beginning of the III Semester itself. Students will formulate research problem with the consultation of Guide and work on it during the III & IV semesters.
- Internal Assessment Marks allotment basis:** Internal assessment marks should be awarded on the following guidelines and documents to be preserved.

1 <sup>st</sup> Test for	: 10 marks	} average of two tests need to be taken for 10 marks
2 <sup>nd</sup> Test for	: 10 marks	
Seminar/ Presentations	: 05 marks	
Assignments	: 05 marks	
Total	: 20 marks	

## PROGRAMME OUTCOME

M.Sc in LIS Programme of Tumkur University aimed is to develop Library professionals with specialised skills and applied competencies in theoretical and practical knowledge of the Library and Information Science Professionals on catering to the contemporary Library and Information needs of industry and academia by providing student-centric learning atmosphere backed with critical thinking and problem solving capabilities.

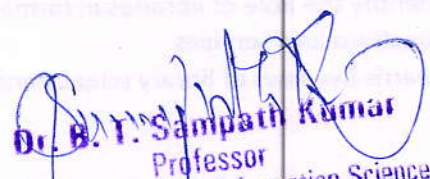
### Programme Objectives

The objective of this Programme is to provide a systematic and rigorous learning and exposure to the Library professionals with specialised skills and applied competencies in theoretical and practical knowledge of the Library and Information Science Profession.

The main objective of this Programme is to develop professionals for information management and for advanced teaching in Library and Information Science by training the LIS students to develop conceptual, applied and research skills as well as competencies required for effective problem solving and right decision making in routine and special activities relevant to Library and Information Science Profession as a whole.

The specific objectives of the M.S c in LIS Programme are to:

1. To set up a state-of -the-art Information Communication Technology Lab
2. To offer interdisciplinary courses dovetailing with Library & Information Science
3. To stimulate research in the emerging areas of Library & Information Science
4. To introduce new courses with industrial collaboration to suit the needs of the employment market.

  
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Paper Code and Title	No. of hours/ week	Credits	Duration of the exam	Marks		
				Internal Assessment	Internal Assessment	Total marks
<b>FIRST SEMESTER</b>						
CPT-1.1: Foundation of Library and Information Science	4	4	3 Hours	20	80	100
CPT-1.2: Information Sources	4	4	3 Hours	20	80	100
CPT-1.3: Library Classification	4	4	3 Hours	20	80	100
SPT-1.4A: Basics of Computer and Internet OR SPT-1.4B: Information Literacy	4	4	3 Hours	20	80	100
CPP-1.5: Basics of Computer	4	4	3 Hours	10	40	50
CPP-1.6: Information Sources	4	4	3 Hours	10	40	50
CPP-1.7: Library Classification	4	4	3 Hours	10	40	50
SPP-1.8A: Basics of Internet OR SPP-1.8B: Information Literacy	4	4	3 Hours	10	40	50

### Course Outcome

Course Code	Title of the Course	Type of the Course	Teaching Pedagogy	Hours per week	No. of Credits
CPT-1.1	Foundation of Library and Information Science	Core Paper	<ul style="list-style-type: none"> <li>• Black Board</li> <li>• PPT</li> <li>• Online Demo</li> </ul>	4	4

**After Successful completion of this course, students are able to:**

1. Familiarise with basics and functioning of Libraries and Information center's
2. Expose students to a variety Foundations of Library and Information Science
3. Know about the Library professional bodies and acts

**Unit-1:**

- Learns Libraries in Social context
- Understands Social and historical foundations of library
- Identify the Role of libraries in formal and informal education. Types of libraries: objectives, functions and Services.
- Learns five laws of library science and appreciate their implications.

**Unit-2:**

- Study the Library Development: History of Library movement, Growth and development of libraries in India.
- Appreciate Library cooperation: resource sharing, networking and consortia.

**Unit-3:**

- Study Inf. and Communication: Information: definition, characteristics, nature and use.
- Identify the Conceptual differences between Data, Information, and Knowledge.
- Plots Information transfer cycle: Generation, collection, storage and retrieval.
- Gets the orientation about the Information communication: channels, models and barriers.

**Unit-4:**

- Knows about Information Science: Evolution, Definition, Scope and current status.

- Gets the clarity on the Information Science as a discipline, Influence of Information Science on other disciplines.

#### Unit-5:

- Learns Library Legislation: need, purpose and essential features. Library legislation in India: Problems and Prospectus, Overview of Public Library Acts in India.
- Study in detail about Karnataka Public Library, Act, 1965. Press and Registration Act
- Appreciate Intellectual Property Rights: Copyright Act, Delivery of Books and Newspaper (Public libraries) Act, 1956, Right to Information Act, 2002.

#### Unit-6:

- Knows about the Library and Information Profession: Professional associations, Role in library development, Attributes of a profession.
- Able to correlate Librarianship as a profession: Professional ethics in Librarianship, LIS education and research in India.
- Learns about Professional Associations: State, National and International level, State level: KALA. National level: ILA, IASLIC, IASLIC & RRRLF. International level: IFLA, ALA, CILIP and UNESCO.

Dr. Hemavathi B N					
Course Code	Title of the Paper	Type of the course	Teaching Pedagogy	Hours per week	No. of credits
CPT 1.2	Information sources	Core paper Theory	<ul style="list-style-type: none"> <li>• Black board</li> <li>• PPT</li> </ul>	4	4

#### Objective

- Get an overview of the nature, definition, concept and need, characteristics of information
- Identify types of information sources best suited for specific information needs
- Differentiate between sources and resources of information
- Identify the documentary and non-documentary sources with examples
- Know and distinguish between Primary, Secondary and Tertiary sources of Information, and
- To learn about the types, characteristics and uses of reference sources, to know about the concept of e-information sources, to understand the evaluation criteria

#### Learning outcome

After going through **CPT 1.2: Information Sources, students will**

- Understand the basic concepts of information, its characteristics, difference between information sources and resources, importance of information services for library users.
- Learn the characteristics of various information sources, its categorization and use in different contexts.
- acquainted with various reference sources, viz. Dictionary, Thesaurus, Encyclopaedia, Yearbook, Almanac, Directory, Handbooks, Manuals, Biographical information sources; Bibliographies; Indexing and Abstracting Periodicals, and Databases.
- Understand the evaluation criteria of print and electronic information sources.

Course Code	Title of the Paper	Type of the course	Teaching Pedagogy	Hours per week	No. of credits
CPT 1.3	Library Classification	Core paper Theory	<ul style="list-style-type: none"> <li>• Black board</li> <li>• PPT</li> </ul>	4	4

### Objective

- Get an overview of the definition, concept and need of library classification
- Understand descriptive and dynamic theory and species of classification
- Understand the mapping of universe of knowledge in CC, DDC and UDC
- Know the planes of work, canons of classification and fundamental categories
- Know the major contribution in the development of theory of library classification

### Learning outcome

After going through **CPT 1.3: Library classification, students will**

- Understand the basic concepts of library classification
- Learn about the mapping of universe of knowledge in CC, DDC and UDC.
- Understand the planes of work, canons of classification, notational system along with major contribution in the development of theory of library classification.

Course Code	Title of the Course	Type of the Course	Teaching Pedagogy	Hours per week	No. of Credits
SPT-1.4A	Basics of Computer and Internet	Special Paper	<ul style="list-style-type: none"> <li>• Black Board</li> <li>• PPT</li> <li>• Online Demo</li> </ul>	4	4

**After Successful completion of this course, students are able to:**

4. Understand the basic concept of Information technology along with the different types, generations, advantages and limitations.
5. Expose students to know the various hardware and software components.
6. Know about data representations and different kinds of file organisations

### Unit-1:

- Learn scope and evolution of Information technology.
- Understand the basic concept of computer and its different kinds.
- Identify the advantages and limitations of computer.

### Unit-2:

- Understand the Components of a Computer
- Study the different kinds of Computer Hardware
- Learn various types of computer memory
- Study the different kinds of Input/output Devices.

### Unit-3:

- Learn the basic concept of Computer Software and its different types.
- Understand the salient features of MS-DOS and MS-WINDOWS
- Study various kinds of Language Processors
- Learn few application Software Packages viz., MS Office - Word, Excel and PowerPoint

### Unit-4:

- Know about the Data Representation and Data Manipulation
- Understand the different kinds of Codes including BCD, EBCDIC and ASCII.
- Study the different types of Number system viz., Decimal and Binary, Addition, Subtraction.
- Understand the basic of Logic gates viz., AND, OR, NOT, NAND, NOR .

#### Unit-5:

- Understand the concept of Programming as well as Steps involved in Programing
- Exposer to know few programming languages C, C++, Java and HTML
- Learn the basic concept, Types and advantages and disadvantages of file organisations.

#### Unit-6:

- Understand the basics of Internet, its Origin, History and Evolution.
- Get the idea of Internet based library and information services.
- Learn various Web Browsers viz., Internet Explorer, Google Chrome, Mozilla Firefox.
- Know about the Need, importance, Types and Search strategies of search engines,
- Able to evaluate the search engines based on the Criteria for evaluation.

Course Code	Title of the Paper	Type of the course	Teaching Pedagogy	Hours per week	No. of credits
CPT 1.7	Library Classification	Core paper Practical	<ul style="list-style-type: none"> <li>• Classroom Instruction</li> <li>• Dewey Decimal Classification system</li> </ul>	4	2

#### Objective

- Acquaintance with classifying of document according to the latest edition of Dewey Decimal Classification Systems.

#### Learning outcome

After going through **SPT 1.7: Library Classification**, students will get hands on experience in

- Classifying of documents according to DDC

Course Code	Title of the Course	Type of the Course	Teaching Pedagogy	Hours per week	No. of Credits
SPP 1.8A	Basics of Internet	Special Paper Practical	<ul style="list-style-type: none"> <li>• Demonstration</li> <li>• Lab Practical</li> </ul>	4	2

**After Successful completion of this course, students are able to:**

7. Familiarise with the functioning of Web browsers
8. Explore the features of various search engines and meta search engines.
9. Acquire skills in various search strategies in Internet search engines
10. Create custom search engines

### Acquaintance with Web browsers

- Get a basic understanding of functioning of Web browsers.
- Familiarise with the features of different Web browsers, viz., Internet Explorer / Microsoft Edge, Mozilla Firefox, Google Chrome.
- Understand various settings in Web browsers.

### Search Engines

- Develop an understanding of search engines
- Understand the types of search engines: general search engines, meta search engines.
- Familiarize with the features of popular search engines, viz. Google, Yahoo!, Bing.

### Search Strategy

- Get acquainted with query formulation, selection of terms for search.
- Understand and apply various search strategies, viz., basic search, exact phrase search, specific file format search, specific site/domain search, language filter, region filter, time (update) filter, etc.
- Understand and apply Boolean search strategies: AND, OR, NOT.
- Evaluate the performance of search engines based on recall and precision.

### Custom Search Engine

- Develop a basic understanding of difference between a search engine and custom search engine.
- Appreciate the need for custom search engine and visualize the scenario which necessitates custom search engine.
- Appreciate the application of custom search engines in providing information services.
- Create a custom search engine and evaluate its performance.

Course Code	Title of the Paper	Type of the course	Teaching Pedagogy	Hours per week	No. of credits
SPP 1.8B	Information Literacy	Special Paper Practical	<ul style="list-style-type: none"><li>• Class room Instruction</li><li>• Big6 Model</li></ul>	4	2

### Objective

- Acquaintance in applying B-6 skills in problem solving.

### Learning outcome

After going through **SPP 1.8B: Information literacy, students will** get hands on experience in Applying of B-6 model in solving the problem

Paper Code and Title	No. of hours/ week	Credits	Duration of the exam	Marks		
				Internal Assessment	Internal Assessment	Total marks
<b>SECOND SEMESTER</b>						
CPT-2.1: Management of Libraries and Information Centres	4	4	3 Hours	20	80	100
CPT-2.2: Library Cataloguing	4	4	3 Hours	20	80	100
SPT-2.3A: Library Automation OR SPT-2.3B: Information Systems and Programmes	4	4	3 Hours	20	80	100
OEPT-2.4: Information and Communication Technology –I (to be offered to the students of other departments)	4	4	3 Hours	20	80	100
CPP-2.5: Management of Libraries and Information Centres	4	4	3 Hours	10	40	50
CPP-2.6 :Library cataloguing	4	4	3 Hours	10	40	50
SPP-2.7A :Library Automation OR SPP-2.7B :Information Systems and Programmes	4	4	3 Hours	10	40	50
OEPP-2.8 :Information and Communication Technology-I (to be offered to the students of other departments)	4	4	3 Hours	10	40	50

### Course outcome

Course Code	Title of the Paper	Type of the course	Teaching Pedagogy	Hours per week	No. of credits
CPT 2.1	Management of Libraries and Information Centres	Core paper Theory	<ul style="list-style-type: none"> <li>• Black Board</li> <li>• PPT</li> <li>• Online Demo</li> </ul>	4	4

### After Successful completion of this course, students are able to:

1. Familiarise with basics and functioning of Libraries and Information centers (LICs)
2. Expose students to a variety Foundations of management of LICs
3. Know about the principles of management

### Unit-1:

- Learn about the Management: Concept, Meaning, Definition and scope. Management styles and approaches. Functions and Principles of Management.
- Understand the Organisational structure: Principles. Organizational structure of LICs.

### Unit-2:

- Understand the Collection development: Types of Documents. Selection and Acquisition: tool, procedure and policies. Problems of collection development.
- Learns the Technical processing and preparation of documents for use: shelving, circulation work, methods of book circulation-charging and discharging system.

**Unit-3:**

- Studies Human Resource Management: Meaning, Definition, need and Importance. Personnel management in LIC: job analysis, job description and job specification.
- Appreciates Selection and recruitment: Procedure and methods. Motivation, Training and Development, Performance appraisal, Qualities of librarians.

**Unit-4:**

- Well-verse with the Financial Management: Importance, Sources of Finance,
- Gets acquainted with the Budgeting methods and Techniques, Budgeting control, Cost benefit analysis.

**Unit-5:**

- Study about the Library Building, Furniture and Equipment: Planning, Design and Maintenance.
- Understands Performance evaluation of librarian, information centres and services: TQM, PERT, CPM, SWOT analysis.
- Studies Library case studies: Library of Congress, BLDSC, CISTI, National library of India, Kolkata, Sheshadri Iyer Memorial Library-Bangalore.

**Unit-6:**

- Familiarise with Maintenance Procedure, policies and techniques of library records.
- Compilation of Annual Reports and Library rules and regulations.
- Marketing of Information Products and Services: Meaning, definitions, need. Market segmentation, Positioning, Market Mix, 4P's. Promotion, Marketing audit, Role of librarian in marketing of LIS products and services.

Course Code	Title of the Paper	Type of the course	Teaching Pedagogy	Hours per week	No. of credits
CPT 2.2	Library Cataloguing	Core paper Theory	<ul style="list-style-type: none"> <li>• Black board</li> <li>• PPT</li> </ul>	4	4

**Objective**

- Get an overview of the definition, concept and need, objectives and functions of library cataloguing
- Understand the evolution of catalogue codes from Panizzi to RDA
- Understand the forms of document cataloguing
- Know the concept of subject cataloguing and Normative Principles, Laws, Canons and Principles of Library cataloguing along with the different standards for Bibliographic descriptions
- Understand the concept of resource sharing with the case study of OCLC

**Learning outcome**

After going through **CPT 2.2: Library Cataloguing, students will**

- Understand the basic concepts, need, objectives and functions of library cataloguing
- Learn about the evolution of cataloguing codes and different forms document cataloguing
- Understand the Normative Principles, Laws, Canons and principles of library cataloguing along with subject cataloguing.

Learn about resource sharing among libraries with different standards for bibliographic descriptio

Course Code	Title of the Paper	Type of the course	Teaching Pedagogy	Hours per week	No. of credits
SPT 2.3A	Library Automation	Special paper Theory	<ul style="list-style-type: none"> <li>Black board</li> <li>PPT</li> </ul>	4	4

### Objective

- Get an overview of the definition, concept, need and importance of library automation
- Understand areas and strategies of library automation
- Understand the infrastructure required for library automation
- Know the automation of housekeeping operations of the library
- Know the application of latest technology in library functions
- Know the different library automation software along with criteria for its evaluation

### Learning outcome

After going through **SPT 2.3A: Library Automation, students will**

- Understand the basic concepts concept, need and importance of library automation
- Learn about the areas, strategies and infrastructure required for library automation
- Know about the application of latest technologies such as RFID, NFCT, Discovery tools and artificial intelligence in library functions
- Know about various software used for library automation, understand its features and evaluation criteria to consider the automation software for libraries

Course Code	Title of the Course	Type of the Course	Teaching Pedagogy	Hours per week	No. of Credits
OEPT-2.4A	Information and Communication Technology-I	Open Elective Paper	<ul style="list-style-type: none"> <li>Black Board</li> <li>PPT</li> <li>Online Demo</li> </ul>	4	4

**After Successful completion of this course, students are able to:**

1. Understand the basic concept of Information technology along with the different types, generations, advantages and limitations.
2. Expose students to know the various hardware and software components.
3. Know about the Need, importance, Types and Search strategies of search engines,

### Unit-1:

- Learn scope and evolution of Information technology.
- Understand the basic concept of computer and its different kinds.
- Know the basics of Networks and its types.

### Unit-2:

- Understand the Components of a Computer
- Study the different kinds of Computer Hardware
- Learn various types of computer memory
- Study the different kinds of Input/output Devices.

**Unit-3:**

- Learn the basic concept of Computer Software and its different types.
- Understand the salient features of MS-DOS and MS-WINDOWS
- Study various kinds of Language Processors
- Learn the few application Software Package viz., MS Office - Word, Excel and PowerPoint

**Unit-4:**

- Know about the Data Representation and Data Manipulation
- Understand the different kinds of Codes including BCD, EBCDIC and ASCII.
- Study the different types of Number system viz., Decimal and Binary, Addition, Subtraction.
- Understand the basic of Logic gates viz., AND, OR, NOT, NAND, NOR .

**Unit-5:**

- Understand the basic Concept, Need, Network Topologies, and Types of Networks
- Know about Internet, its Origin, History and Evolution.
- Study the different kinds of Web Browsers viz., Internet explorer, Google chrome, Firefox. Internet based Library services.

**Unit-6:**

- Know about the Need and importance, Types and Search strategies of search engines,
- Able to evaluate the search engines based on the Criteria for evaluation.

Course Code	Title of the Paper	Type of the course	Teaching Pedagogy	Hours per week	No. of credits
CPP 2.5	Management of Library and Information Science	Core Paper Practical	<ul style="list-style-type: none"> <li>• Classroom Instruction</li> <li>• Practical Demo</li> <li>• Case Study</li> </ul>	4	2

**Objective**

- Acquaintance with LICs management, maintenance, Budgeting and other housekeeping operations.

**Learning outcome**

After going through CPP 2.6: Library Cataloguing, students will get hands on experience in

- Acquaintance with the Budgeting – Preparation of Library budget,
- Hands on experience in Acquisition-Book recommendation form, placing the order, certification for payment
- Actual Accessioning- entry, Preparation of Library committee meeting proceedings,
- Preparation of annual report of library, Preparation of Library rules and regulations.

Course Code	Title of the Paper	Type of the course	Teaching Pedagogy	Hours per week	No. of credits
CPP 2.6	Library cataloguing	Core Paper Practical	<ul style="list-style-type: none"> <li>• Classroom Instruction</li> <li>• AACR2R</li> </ul>	4	2

**Objective**

- Acquaintance with cataloguing of book materials and non-book materials according Anglo-American Cataloguing Rules 2<sup>nd</sup> Revised edition.

### Learning outcome

After going through **CPP 2.6: Library Cataloguing**, students will get hands on experience in

- Cataloguing of book materials such as, books, journals, conference proceedings, institutional and Government publications

Course Code	Title of the Course	Type of the Course	Teaching Pedagogy	Hours per week	No. of Credits
SPP 2.7A	Library Automation	Special Paper Practical	<ul style="list-style-type: none"> <li>• Demonstration</li> <li>• Lab Practical</li> </ul>	4	2

### After Successful completion of this course, students will be able to:

1. Understand and appreciate the need for library automation.
2. Acquire installation skills, configuration & working with library automation software.
3. Understand various modules and features in library automation software.
4. Administer the various library operations using library automation software.

### Installation of Library Automation Software

- Understand the features of various library automation software.
- Familiarise with the differences between commercial and open source library automation software.
- Understand the system requirements for installation of library automation software.
- Install the library automation software and its dependencies.

### Configuration of Library Automation Software

- Manage logins to the library automation software
- Create administrative user.
- Familiarize with basic settings and configure them.

### Bibliographic records Management

- Get acquainted with MARC21 Bibliographic and Authority data formats.
- Create new bibliographic framework, add bibliographic data
- Create item types and holdings data.
- Accounting of invoices.

### Patron records Management

- Create patron categories with required settings.
- Create new patron record.
- Edit/modify patron records.
- Manage Patron login credentials

### Transaction Management

- Define circulation privileges for different patron categories.
- Define circulation and fines rules.
- Perform various circulation transactions, viz., Check out, renew, Check in, reservations.

### Online Public Access Catalogue (OPAC)

- Configure OPAC module.
- Customize OPAC user interface.

- Understand and appreciate the working of indexing program.
- Understand and execute various search strategies.

Course Code	Title of the Course	Type of the Course	Teaching Pedagogy	Hours per week	No. of Credits
OEPP 2.8	Information and Communication Technology-I	Open Elective Practical Paper	<ul style="list-style-type: none"> <li>• Demonstration</li> <li>• Lab Practical</li> </ul>	4	2

**After Successful completion of this course, students will be able to:**

1. Understand and appreciate the Information and Communication Technology (ICT).
2. Acquire skills in MS-Office: MS Word, MS Excel, MS PowerPoint packages
3. Learn about the Web browsers: Internet explorer, Google chrome, Firefox, Search Engines and meta-search engines
4. Appreciate the search features by the use of search strategy
5. Create a custom search engine.
  - Use of social media to help enable customers in fulfilling their information needs

To detect the plagiarism by the use of both open sources and proprietary plagiarism detecting tools

Paper Code and Title	No. of hours/ week	Credits	Duration of the exam	Marks		
				Internal Assessment	Internal Assessment	Total marks
<b>THIRD SEMESTER</b>						
CPT-3.1: Information Users and Services	4	4	3 Hours	20	80	100
CPT-3.2: Digital Libraries	4	4	3 Hours	20	80	100
SPT-3.3A: Research Methodology OR SPT-3.3B: Technical Writing	4	4	3 Hours	20	80	100
Writing 4 4 3 Hours 20 80 100 OEPT-3.4: Information and Communication Technology –II (to be offered to the students of other departments)	4	4	3 Hours	20	80	100
CPP-3.5: Information Processing and Retrieval	4	4	3 Hours	10	40	50
CPP-3.6: Digital Libraries	4	4	3 Hours	10	40	50
SPP-3.7A: Research Methodology OR SPP-3.7B : Technical Writing	4	4	3 Hours	10	40	50
OEPP-3.8: Information and Communication Technology –II (to be offered to the students of other departments)	4	4	3 Hours	10	40	50

Course Code	Title of the Course	Type of the Course	Teaching Pedagogy	Hours per week	No. of Credits
CPT 3.1	INFORMATION USERS AND SERVICES	Core Paper Theory	<ul style="list-style-type: none"> <li>Classroom lectures</li> <li>Seminar</li> <li>Tutorial</li> </ul>	4	4

**After Successful completion of this course, students will be able to:**

1. Understand the users of the Library and their needs
2. Develop a target oriented services according to the user needs
3. Familiarise with the various user study and information retrieval studies.
4. Familiarise with the various information seeking behaviours and models.

**Unit-1:**

- Learn about Information processing and Retrieval: Meaning, Definition, Functions, and components.
- A detailed study on Information transfer cycle.

**Unit-2:**

- Detailed concept study on Indexing including theories, methods and importance.
- Appreciates Indexing as profession
- Get a detailed orientation on Indexing languages: Vocabulary control, Semantics and Syntax.
- Construction of Thesaurus: Meaning, Definition, importance, Design and construction.

**Unit-3:**

- Understands an Indexing System and its types such as Pre-coordinate and post coordinate. PRECIS, POPSI, KWIC and its variations, UNITERM Indexing, Citation indexing: Chain Indexing, Science Citation Index, Social Science Citation Index.

**Unit-4:**

- Study and understand about Information Users and their needs: Categories of information users; User studies -Need, and importance scope, purpose, objectives Methods and techniques of user study.
- Concept study on User Education: Definition; need, Objectives, Technique and methods of user education programme.
- Understands Information seeking behaviour- models.

**Unit-5:**

- Rendering Information Services: Meaning and definition, Need and Importance.
- Learns Reference Service Concept, Definition.
- Gets a detailed orientation on the Types of information services such as SDI, CAS, Translation and DDS, Referral Service, Indexing and Abstracting Service, Newspaper Clipping Services.

**Unit-6:**

- Quantifies Information as a resource, and understand on the Economic value of information.
- Marketing of Information Products and Services; Meaning, Definition and Need. Market Segmentation, Positioning, Market Mix, 4p's- Product, price, place, promotion, Marketing Audit, Role of Librarian in Marketing of LIS.

Course Code	Title of the Course	Type of the Course	Teaching Pedagogy	Hours per week	No. of Credits
OST 3.1	INFORMATION USERS AND SERVICES	Core Paper Theory	Classroom lectures Seminar Tutorial	4	4

After successful completion of this course, students will be able to:

1. Understand the users of the library and their needs
2. Develop a oriented services according to the user needs
3. Familiarize with the various user study and information retrieval studies
4. Familiarize with the various information seeking behaviours and models.

**Unit-1:**

- Learn about information processing and retrieval: Definition, function and components.
- A detailed study on information transfer cycle.

**Unit-2:**

- Detailed concept study on indexing including its models, methods and importance
- Approaches to indexing as profession
- Get a detailed orientation on indexing languages: Vocabulary control, synonyms and antonyms
- Construction of thesaurus; Meaning, Definition, importance, Design and construction

**Unit-3:**

Course Code	Title of the Course	Type of the Course	Teaching Pedagogy	Hours per week	No. of Credits
CPT 3.2	Digital Libraries	Core Paper Theory	<ul style="list-style-type: none"> <li>• Classroom lectures</li> <li>• Seminar</li> <li>• Tutorial</li> </ul>	4	4

**After Successful completion of this course, students will be able to:**

5. Understand and appreciate the need for digital libraries.
6. Develop a conceptual design of a digital library.
7. Evaluate the hardware and software requirements for implementing a digital library.
8. Understand the role of various organizations, digital library initiatives and open access movement in promoting digital libraries.

**Unit-1:**

- Develop an understanding of digital resources and their characteristics.
- Differentiate between *born digital resources* and *legacy resources*.
- Understand various manifestations of electronic documents.
- Comprehend the features of Portable Document Format (PDF).

**Unit-2:**

- Develop a conceptual understanding of digital libraries.
- Identify the characteristics, merits, drawbacks of digital libraries.
- Understand the differences between traditional libraries and digital libraries.
- Understand and appreciate the evolution of digital libraries and the role of digital libraries conferences.
- Perceive the role of digital libraries in education and research.

**Unit-3:**

- Understand Digital Library architecture.
- Recognize the importance of interoperability protocols and standards.
- Study the stages in design and development of digital libraries.
- Understand the process of digitization and the role of scanning and OCR therein.

**Unit-4:**

- Know about persistent identifications systems – DOI, handle system, OpenURL.
- Understand resource discovery mechanisms.
- Understand the implications of Digital Rights Management, Digital Preservation and Archiving.

**Unit-5:**

- Identify different software used for setting up of digital libraries.
- Explore the features of digital library software – GSDL, DSpace, Eprints.
- Comparatively evaluate the features of digital library software.

**Unit-6:**

- Understand the concept of Open Access, and Institutional Repository.
- Study some important Digital Libraries and digital library projects.
- Appreciate the role of Open Access Movement in promoting the growth of digital libraries/institutional repositories.

Course Code	Title of the Paper	Type of the course	Teaching Pedagogy	Hours per week	No. of credits
SPT 3.3 A	Research Methodology	Special paper Theory	<ul style="list-style-type: none"> <li>• Black board</li> <li>• PPT</li> </ul>	4	4

### Objective

- Get an overview of the definition, concept, need and importance and types research
- Understand the types of research design and the concepts such as review of literature, designing of research proposal and literature search
- Understand the different research methods and research techniques and tools
- Know the statistical application in data analysis and interpretation
- Know the structure, style content and guidelines for research reports along with the different style manuals for referencing

### Learning outcome

After going through **SPT 3.3A: Research Methodology, students will**

- Understand the basic concepts concept, need and importance and types of research
- Learn about the different types of research design, research methods and tools and techniques to be applied in research.
- Know about the essential concepts such as review of literature, designing of research proposal and literature search
- Know about the statistical application and presentation of data in data analysis and interpretation along with structure, style, content and guidelines of research report

Course Code	Title of the Paper	Type of the course	Teaching Pedagogy	Hours per week	No. of credits
SPT 3.3 B	Technical Writing	Special paper Theory	<ul style="list-style-type: none"> <li>• Black board</li> <li>• PPT</li> </ul>	4	4

### Objective

- Get an overview of the definition, concept, need and importance, types, functions of technical writing
- Understand the styles and techniques of technical writing
- Understand the different aspects of technical communication, presentation and its evaluation

### Learning outcome

After going through **SPT 3.3B: Technical Writing, students will.**

- Understand the basic concepts concept, need and importance and types of technical writing
- Learn about the different styles and techniques of technical writing
- Learn about the different aspects involved in the technical communication, its presentation and its evaluation

Course Code	Title of the Course	Type of the Course	Teaching Pedagogy	Hours per week	No. of Credits
OEPT-3.4:	Information and Communication Technology-II	Open Elective Paper	<ul style="list-style-type: none"> <li>• Black Board</li> <li>• PPT</li> <li>• Online Demo</li> </ul>	4	4

**After Successful completion of this course, students are able to:**

1. Understand the basic concept Web, its evolution-Web 1.0, 2.0, and 3.0
2. Learn different kinds of Network protocols viz., TCP/IP, SMTP, HTTP, FTP.
3. Know the Need, Types of Internet Security viz., Antivirus, Firewall, Data backup, Password, and Cryptography

**Unit-1:**

- Know the basics of Web, its evolution-Web 1.0, 2.0, and 3.0.
- Understand the different kinds of Web resources including e-journals, e- reference sources, e-books, e-pg patashala, Subject gateways and Portals, ETDs, Online databases

**Unit-2:**

- Know the advantages of e-mail, video conferencing, instant messaging, and fax.
- Learn different kinds of Network protocols viz., TCP/IP, SMTP, HTTP, FTP.

**Unit-3:**

- Familiarise with Web Designing Tools including Mark-up Languages
- Learn the criteria for the evaluation of Websites and Web Resources
- Understand the Concept, Need and Importance, Types of different kinds of Social networks:

**Unit-4:**

- Learn the Concept, Types, Cyber Laws and IT Bill 2001 (Govt. of India) and its amendments.
- Know the Need, Types of Internet Security viz., Antivirus, Firewall, Data backup, Password, and Cryptography.

**Unit-5:**

- Learn about the Concept, meaning, Characteristics and applications of Internet of Things.
- Understand the Cloud computing its origin, architecture, models, Cloud service providers, advantages and disadvantages.
- Know the: concept, need and importance of various Online Learning Courses.

**Unit-6:**

- Understand the difference between References, bibliography and citation
- Learn the various citation styles and reference management tools
- Know the basic concept of Plagiarism and its Social, legal issues and usability issues.

Course Code	Title of the Paper	Type of the course	Teaching Pedagogy	Hours per week	No. of credits
CPP 3.5	Information Processing and Retrieval	Core paper Practical	<ul style="list-style-type: none"> <li>Classroom Instruction</li> <li>Universal Decimal Classification System</li> </ul>	4	2

### Objective

- Acquaintance with classifying of document according to the latest edition of Universal Decimal Classification System.

### Learning outcome

After going through **CPP 3.5: Information Processing and Retrieval**, students will get hands on experience in  
Classifying of documents according to U

Course Code	Title of the Course	Type of the Course	Teaching Pedagogy	Hours per week	No. of Credits
CPP 3.6	Digital Libraries	Core Paper Practical	<ul style="list-style-type: none"> <li>• Demonstration</li> <li>• Lab Practical</li> </ul>	4	2

**After Successful completion of this course, students will be able to:**

1. Understand and appreciate the need for establishing digital libraries.
2. Acquire skills in installation, configuration and working with digital library software.
3. Understand various features in digital library software.
4. Independently customize, administer and offer institutional repository as a library service.

#### **Installation of Digital Library Software (DSpace)**

- Understand the features of various digital library software.
- Understand the system requirements for installation of DSpace digital library software.
- Install DSpace and its dependencies.

#### **Creating Communities and Collections**

- Understand the concept of Communities and Collections
- Create Top Level Communities and Sub-communities.
- Create Collections.

#### **Submission of Documents**

- Understand the properties of Dublincore (DC) Metadata standard.
- Get acquainted submission process.
- Understand Step-by-step submission of documents.
- Enter metadata in DC standard and upload the file.
- Grant the license.
- Complete the submission process.

#### **Submission Workflow Management**

- Understand the need for defining submission workflow.
- Study the User account management in Linux.
- Create new user accounts.
- Define submission workflow.
- Complete the submission process using submission workflow.

#### **Metadata harvesting using OAI-PMH**

- Understand the concept and need for metadata harvesting.
- Understand Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH).
- Harvest metadata from other digital libraries/institutional repositories.
- Understand and use OAI-PMH with Object Reuse and Exchange (ORE) feature to harvest bitstreams (files).

#### **Customization of Digital Library**

- Customize JSPUI in DSpace.
- Customize header text, description and logo.
- Configure intranet access to DSpace using Static IP.
- Configure Webmail in DSpace using Gmail SMTP service.
- Customize DSpace for multilingual records management.

Course Code	Title of the Paper	Type of the course	Teaching Pedagogy	Hours per week	No. of credits
SPP 3.7A	Research Methodology	Special Paper Practical	<ul style="list-style-type: none"> <li>• Computer Lab Instruction</li> <li>• SPSS Software</li> </ul>	4	2

#### Objective

- Acquaintance with data management by using the **Software Package for Social Science (SPSS)** software.

#### Learning outcome

After going through **SPT 3.7A: Research Methodology**, students will get hands on experience in

- Step by step procedures involved in the creation/coding of variables, data coding and analysing skill with different data analyse tools such as descriptive statistics, chi-square test, correlation, Annova and T-Test in SPSS software

Course Code	Title of the Paper	Type of the course	Teaching Pedagogy	Hours per week	No. of credits
SPP 3.7B	Technical Writing	Special Paper Practical	<ul style="list-style-type: none"> <li>• Computer Lab Instruction</li> </ul>	4	2

#### Objective

- Acquaintance with technical writing process, techniques and styles and Reference Management systems

#### Learning outcome

After going through **SPP 2.7B: Technical Writing**, students will get hands on experience in

- Technical writing process, its techniques and styles and also hands on experience in using software application required in technical writing

Paper Code and Title	No. of hours/ week	Credits	Duration of the exam	Marks		
				Internal Assessment	Internal Assessment	Total marks
<b>FOURTH SEMESTER</b>						
CPT-4.1: Information and Communication Networks	4	4	3 Hours	20	80	100
CPT-4.2: Web Technology	4	4	3 Hours	20	80	100
SPT-4.3A: E-Publishing OR SPT-4.3B: Webometrics, Informetrics and Scientometrics	4	4	3 Hours	20	80	100
CPD-4.4: Project	4	4	3 Hours	20 (Viva Voce)	80	100
CPP-4.5: Information and Communication Networks	4	4	3 Hours	10	40	50
CPP-4.6: Web Technology	4	4	3 Hours	10	40	50
SPP-4.7A: E-Publishing OR SPP-4.7B: Webometrics, Informetrics and Scientometrics	4	4	3 Hours	10	40	50
CPDP-4.8: Project Practical	4	4	3 Hours	10	40 (Presentation)	50

Course Code	Title of the Course	Type of the Course	Teaching Pedagogy	Hours per week	No. of Credits
CPT-4.1:	<b>INFORMATION AND COMMUNICATION NETWORKS</b>	Core Paper	<ul style="list-style-type: none"> <li>• Black Board</li> <li>• PPT</li> <li>• Online Demo</li> </ul>	4	4

**After Successful completion of this course, students are able to:**

1. Understand the basic concept of Signals and Components, Process.
2. Know the Modulation and Demodulation and Transmission media
3. Learn the Need, Uses, Network Topologies and Types of Networks.
4. Learn the basic concepts of E-commerce, need and Importance, Types, Applications.

**Unit-1:**

- Understand the basic concept of Signals and Components, Process.
- Understand the Modulation and Demodulation and Transmission media

**Unit-2:**

- Learn the Need, Uses, Network Topologies and Types of Networks.
- Understand the Network Architecture, Network protocols viz., TCP/IP, SMTP, HTTP, and FTP.

**Unit-3:**

- Learn the various Communication Networks viz., NICNET, BSNL and ERNET.
- Know the activities and functions of INFLIBNET, DELNET and CAIBNET

**Unit-4:**

- Understand the various types of Electronic communication viz., E-mail, video conferencing, instant messaging, and fax.
- Learn the basic concepts of E-commerce, need and Importance, Types, Applications.

**Unit-5:**

- Learn about the Concept, meaning, Characteristics and applications of Internet of Things.
- Understand the Cloud computing its origin, architecture, models, Cloud service providers, advantages and disadvantages.
- Know the concept, need and importance of various Online Learning Courses.

**Unit-6:**

- Understand the difference between References, bibliography and citation
- Learn the various citation styles and reference management tools
- Know the basic concept of Plagiarism and its Social, legal issues and usability issues.

Course Code	Title of the Course	Type of the Course	Teaching Pedagogy	Hours per week	No. of Credits
CPT-4.2	Web Technology	Core Paper Theory	<ul style="list-style-type: none"> <li>• Classroom lectures</li> <li>• Seminar</li> <li>• Tutorial</li> </ul>	4	4

**After Successful completion of this course, students will be able to:**

1. Acquire conceptual understanding of Web Technology.
2. Appreciate the need for Web Content Management skills for library and information professionals.
3. Understand HTML and HTML tags.
4. Evaluate the features of different Web Content Management Software.
5. Understand Web mining and relevance of Big Data for libraries and information centres.

**Unit-1:**

- Understand the growth and development of Web.
- Appreciate different types of Web resources.
- Identify the characteristics of different types of e-resources.
- Understand citation databases and their features.

**Unit-2:**

- Develop a conceptual understanding of social networks.
- Appreciate the need and importance of social networking with special reference to libraries.
- Know the characteristics of Web 2.0 services such as Wiki, Blog, and Social media.
- Understand and evaluate Web resources.

**Unit-3:**

- Get acquainted with Hypertext Markup Language (HTML).
- Identify and study various HTML tags.
- Understand the syntax of HTML tags and their use in Web designing.

**Unit-4:**

- Know about Web Content Management Systems.
- Understand CMS terminology.
- Understand Client-server architecture and database management systems.

**Unit-5:**

- Identify different open source software used for web content management.
- Explore the features of WCMS software – Wordpress, Joomla, Drupal.
- Comparatively evaluate the features of WCMS software.

**Unit-6:**

- Understand the concept of Web mining and its types.
- Appreciate the need and importance of Analytics in Web Content management.
- Understand Big Data and its relevance and applications for libraries and information centres.

Course Code	Title of the Course	Type of the Course	Teaching Pedagogy	Hours per week	No. of Credits
SPT-4.3B	Bibliometrics, Scientometrics, Informetrics and Webometrics	Core Paper Theory	<ul style="list-style-type: none"> <li>Classroom lectures</li> <li>Seminar</li> <li>Tutorial</li> </ul>	4	4

Course Code	Title of the Course	Type of the Course	Teaching Pedagogy	Hours per week	No. of Credits
CPT-4.3A	E-Publishing	Core Paper Theory	<ul style="list-style-type: none"> <li>• Classroom lectures</li> <li>• Seminar</li> <li>• Tutorial</li> </ul>	4	4

**After Successful completion of this course, students will be able to:**

1. Acquire conceptual understanding of Web Technology.
2. Appreciate the need for Web Content Management skills for library and information professionals.
3. Understand HTML and HTML tags.
4. Evaluate the features of different Web Content Management Software.
5. Understand Web mining and relevance of Big Data for libraries and information centres.

**Unit-1:**

- Understands Electronic Information, its Concept, structure, features, Information industry.
- Identify the Role of librarian in information industry.

**Unit-2:**

- Study in detail on Electronic Publishing, its Concept, categories – commercial, open access, self e-publishing, scholarly communication.

**Unit-3:**

- Design and development of Electronic information products: e-books, e-journals, e-zines, e-reference sources, ETDs.
- Detailed study on Economics of e-publishing.

**Unit-4:**

- Understand the E-Publishing Process: peer reviewing, editing, proofreading, designing, typesetting, and printing.
- Learning the art of Referencing: references, bibliography, citation, citation styles,
- Developing a familiarity on reference management tools

**Unit-5:**

- Familiarise with the E-publishing software: features and use. Study of select e-publishing software: MS Publisher and OJS.

#### Unit-6:

- Develops awareness on IPR and Copyright issues in e-publishing.
- Implications of Plagiarism, Social, legal issues and usability issues.
- Understands about Plagiarism detection software, online plagiarism checkers

#### CPD-4.4: PROJECT

- Student shall have to choose a topic for Project and preliminary preparation to be carried out under the guidance of a teacher. The student shall have to submit the Project on the chosen topic before the commencement of IV semester theory examinations.

Course Code	Title of the Course	Type of the Course	Teaching Pedagogy	Hours per week	No. of Credits
CPP 4.6	Web Technology	Core Paper Practical	<ul style="list-style-type: none"><li>• Demonstration</li><li>• Lab Practical</li></ul>	4	2

#### *After Successful completion of this course, students will be able to:*

1. Understand and appreciate the need for Web content management.
2. Understand and apply HTML in Web designing.
3. Acquire skills in installation, configuration and working with Web Content Management Software.
4. Create, manage and administer websites using an open source Web Content Management Software
5. Understand Web hosting and its requirements.
6. Get acquainted with social networking services.

#### **Acquaintance with Web Designing: HTML**


- Know about HTML and its tags.
- Understand the syntax of HTML tags.
- Create HTML files.

#### **Web Content Management Systems**

- Understand the system requirements for installation of WCMS software – Wordpress, Joomla, Drupal.
- Install WCMS software.
- Create and manage websites using WCMS software.
- Understand Web hosting and its requirements.

#### **Social Networks**

- Understand the features of social networking services.
- Explore the features of YouTube, Twitter, and Slide share.
- Appreciate the need and relevance of social networking in libraries and information centres.

  
Dr. B. Y. Sampath  
Professor  
Dept. of Library and Information Science  
Tumkur University, Tumakuru.

- Develop awareness on IPR and Copyright issues in e-publishing
- Implications of plagiarism, social, legal issues and usability issues
- Understands about plagiarism detection software, online plagiarism checker

CPD-6.5: PROJECT

- Student shall have to choose a topic for Project and preliminary preparation to be carried out under the guidance of a teacher. The student shall have to submit the Project on the chosen topic before the commencement of IV semester theory examinations

Course Code	Title of the Course	Type of the Course	Teaching Pedagogy	Hours per week	No. of Credits
CPD 4.6	Web Technology	Core Paper Practical	• Demonstration • Lab Practical	4	2

After successful completion of this course, students will be able to:

1. Understand and appreciate the need for Web content management.
2. Understand and copy HTML in Web designing.
3. Acquire skills in installation, configuration and working with Web Content Management Software.
4. Create, manage and administer websites using an open source Web Content Management Software.
5. Understand Web hosting and its requirements.
6. Get acquainted with social networking services.

Acquaintance with Web Designing: HTML


- Know about HTML and its tags.
- Understand the syntax of HTML tags.
- Create HTML files.

Web Content Management Systems

- Understand the system requirements for installation of WCM2 software - WordPress, Joomla, Drupal.
- Install WCM2 software.
- Create and manage websites using WCM2 software.
- Understand Web hosting and its requirements.

Social Networks

- Understand the features of social networking services.
- Explore the features of YouTube, Twitter, and Slide show.
- Appreciate the need and relevance of social networking in learning and information content.

  
 Dr. E. V. Srinivasan  
 Professor  
 Dept. of Library and Information Science  
 Anna University, Chennai