



YENEPOYA

(DEEMED TO BE UNIVERSITY)

Recognized under Sec 3(A) of the UGC Act 1956

Accredited by NAAC with 'A' Grade

YENEPOYA (DEEMED TO BE UNIVERSITY)

Deralakatte, Mangaluru -575018

REGULATIONS AND CURRICULUM GOVERNING

POSTGRADUATE PROGRAM

MASTER OF LIBRARY AND INFORMATION SCIENCE (M.Lib.I.Sc)

(CURRICULUM - EFFECTIVE FROM 2020-21)

ATTESTED

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31.12.2019

NOTIFICATION-37/2019 dtd. 31.12.2019

Sub: Curriculum approval of 2 year Postgraduate program in Library and Information Science (MLibISc)

Ref: Minutes of the 37th Academic Council meeting held on 13.12.2019, vide agenda – 10

The Regulations and Curriculum for 2 year Postgraduate program in Library and Information Science (M.Lib.I.Sc.) have been approved at the meetings of 37th Academic Council and 48th Board of Management respectively held on 13.12.2019.

REGISTRAR

To:
The Head, department of Library Science

Copy to:

1. Controller of Examinations
2. Chairperson, Faculty of Science
3. P.A to VC
4. File copy

Regulations, Scheme and Syllabus
Master of Library and Information Science (M.Lib.I.Sc)
(Choice Based Credit System)

Preamble

Libraries are an integral part of the society. Libraries as gateways to knowledge and culture provide the basic conditions for lifelong learning, independent decision-making and cultural development of the individuals and social groups. Institutions in all sectors of the economy, be it education sector, research sector, service, corporate or public sector need libraries. Educational institutions need libraries to support formal and informal education, learning, support literacy, check digital divide and help shape new ideas and perspectives, communities need libraries to create awareness among under-privileged sections for their empowerment, for information on upcoming opportunities in the market for skill development, employment in societal institutions, opportunities for their engagement in social and economic sectors. Society needs libraries so that people become well-informed citizens and play active role in societal development. Library and information science graduates are required in all sectors including educational institutions, corporate libraries, public libraries, archive centres, publishing houses and research centres.

In view of the present trend and demand for Library and information science graduates, Yenepoya (deemed to be University) decided to start the Department of Library and Information Science at Yenepoya (deemed to be University) and offer postgraduate programme in Library and Information Science.

Preamble to the Syllabus

The Master of Library and Information Science (M.Lib.I.Sc) program is of minimum 90 credits (18 Hard Core Courses of 67 credits + 2 Soft Core Courses with 6 credits, field work and project with 11 credits and 2 open elective courses with 6 credits) spread over four semesters. This program is offered at the Department of Library and Information Science, Yenepoya (deemed to be University), Mangalore, Karnataka. The Choice Based Credit System to be implemented through this curriculum would allow students to develop a strong base in the fundamentals and specialize in the disciplines of their liking and abilities.

Application of information and communication technologies has revolutionized the whole concept of libraries and opened new vistas for information storage and retrieval and ways to access information. In order to equip the students to be employable in academic as well as industry the program emphasizes both theory and modern application of library and information science, The program has some unique features such as web-based applications in libraries and practical exposure to specialized computer software to organize their work and to handle these technological devices to navigate the digital world, to properly handle information and to enable users to access it easily.

The syllabus of the first year (two semesters) covers most of the core courses. In the second year, there are 7 Hard core courses, one field work and one project. There are two open elective courses – one in 2nd semester and one in 3rd semester. The syllabus has been framed to have a good balance of theory and practical application in the library. It is possible for the students to study basic courses from other disciplines such as social work, biosciences and business management under open electives.

Objective of teaching and training of postgraduate students in M. Lib. I. Sc. is to prepare the student get a good foundation in its theory for successful practice in the profession. The goal of Library and Information Science (LIS) education is, therefore, to prepare personnel for the task of successful performance at different levels of competence as managers in different types of libraries and as teachers in the schools of LIS.

Objectives of the Course

1. To familiarize the learners with the basic concepts of information and its communication in society.
2. To produce quality manpower for collection, organisation and dissemination of information products and services in and beyond conventional libraries and information centers, thereby to train students for a professional career in Library & Information Sciences.
3. To teach latest techniques in information processing and develop capability in retrieving information efficiently for library and information professionals.
4. To sensitize the learners and enable them to resolve the major issues associated with the development of new technology in the libraries and information centers;

5. To introduce modern tools and techniques to students to manage Libraries and Information Centers effectively and prepare the library and information professionals in the changing electronic and networked era and knowledge society.
6. To get the students acquainted with the activities and services of different information systems and introduce them to packaging and consolidation techniques;
7. To impart ICT based skills using open source software in order to make them serve competently in an automated and networked environment; and
8. To impart high level skills and training necessary for those aspiring to hold higher positions in library and information centers within the country and abroad.

1. General Regulation

1.1. Title of the programme :

Master of Library and Information Science (M.Lib.I.Sc)

1.2. The commencement of the programme:

August 2020.

1.3. Eligibility for admission:

For M.Lib.I.Sc following candidates are eligible,

Candidates who have passed any Bachelor's degree examination from a recognized University and who have secured at least 50% marks in aggregate shall be eligible for admission as per the University guidelines issued from time to time.

The total number of Candidates to be admitted to the program would be 15. If there are more candidates than the number of seats, an entrance examination will be conducted. Performance at the entrance test will be considered for admission.

1.4. Duration of the programme:

Two years with four semesters.

1.5. Course pattern:

Choice based credit System with 4 semesters

1.6. Course Pattern and Credits

Choice based credit System with 4 semesters

Total credits	: 90 credits
Hardcore courses	: 67 credits
Discipline specific electives/ Soft Core courses	: 06 credits
Open elective papers	: 06 credits
Library Field Work	: 05 credits
Project	: 06 credits

1 credit=1 hour of lecture per week/ 2 hours of practical / filed work Course pattern is given in Table 1.

Course Pattern and Credits distribution

Name	Hard Core		Soft Core		Open Elective		Field Work /Project	
	Papers	Credits	Papers	Credits	Papers	Credits	Papers	Credits
I Sem	6	22	-	-	-	-	-	-
II Sem	5	18	-	-	1	3	-	-
III Sem	3	12	1	3	1	3	1	5
IV Sem	4	15	1	3	-	-	1	6
Total	18	67	2	6	2	6	2	11

2. Semesters

An academic year shall consist of two semesters;

Odd Semester 1 st & 3 rd	July/August to December/January
Even semester 2 nd & 4 th	January/February to June/July

3. Types of Courses

3.1 Core course: The programme of study will have “Core” and “Elective” courses. The Core course will further consist of “Hard” and “Soft” Core courses. Hard core courses will have 4 credits while soft courses will have 3 credits. Hard core is a course that should compulsorily be studied by a candidate whereas there can be choice between Soft Core courses.

3.2. Open Elective: Generally a course which can be chosen from a pool of courses and which may be very specific or specialized or advanced or supportive to the discipline/ subject of study or which provides an extended scope or which enables an exposure to some other discipline or subject or domain or nurtures the candidates proficiency skill.

- The open elective courses shall be offered in the second and third semesters only.
- The list of open elective courses offered shall be displayed in the website.
- A student shall not take the courses offered by the department in which she/he is enrolled.
- Registration for the open elective courses shall be at least one week prior to the commencement of the course with the CBCS coordinator.

3.3. Teaching-Learning methods: The course shall comprise lectures/tutorials/project work/viva/ seminars/assignments/presentations/self-study etc. or a combination of some of these.

4. Attendance

Each course (theory, practical, etc.) shall be treated as an independent unit for the purpose of attendance. A student shall attend a minimum of 80% of the total instruction hours in a course including tutorials and seminars in each semester.

5. Exam Regulation

5.1. Assessment of a Course

Evaluation for a course shall be done on a continuous basis with continuous internal assessments (CIA) followed by one semester end university examination (SEE) for each course. The components of CIA may include two sessional tests, Seminar /other related activities, Review / Assignment/Social involvement and other activities relevant to the course. The weightage of CIA shall be 40% and SEE shall be 60%.

5.2. Attendance for Exam

Minimum attendance required in every course is 80%. Student who has less than 80% shall not be permitted to appear for the Semester end examination in the course in which the short fall exists. The HOD/course coordinator through the Dean of Faculties shall

announce the names of the students who will not be eligible to take the Semester End-Examinations in the various courses and send a copy of the same to the Controller of Examination's(CEO) office. Registrations of such students for those courses shall be treated as cancelled.

5.3.Registering for examination

Candidates having minimum 80% attendance in each of the courses can only qualify to appear for the semester end examinations. The candidates shall register for all the courses of a semester when he/she appears for the examination of that semester for the first time.

5.4.Scheme of Examinations

5.4.1. Internal Assessment

Marks for internal assessment shall be awarded on the basis of seminars, journal paper presentations, tests, assignments etc. The assessment gives importance to continuous and comprehensive evaluation. The internal assessment marks shall be notified to the students before it is communicated to the Controller of Examinations, before the commencement of the University examinations.

Components of CIA	Details	Weightage
Sessional Tests	Average of the two tests	20
Seminar/ other related activities	One Seminar/ course One Journal paper relevant to the core courses	10
Review/Assignments	Discipline specific as required by the course	10

5.4.2. Semester End Examination

There shall be examinations at the end of each semester ordinarily during December/January for odd semesters and during June/July for even semesters. The SEE duration shall be three hours.

Pattern of question paper for semester end examination

Sl. No	Key Criteria	No. of questions and Marks	Max marks
1.	Short questions (10 out of 10 questions)	10 X 2	20
2.	Short note questions (4 out of 6 questions)	4 X 5	20
3.	Long answer type questions (2 out of 4 questions)	2 x10	20
TOTAL			60

Pattern for practical examination

Sl. No	Key Criteria	No. of questions and Marks	Max marks
1.	Short Notes questions (10 out of 10 questions)	10 X 2	20
2.	Short questions (4 out of 5 questions)	4 X 5	20
3.	Long answer type questions (2 out of 3 questions)	2 x10	20
TOTAL			60

CIA for practical's (40 marks) shall be based on the quality of the records (10 marks), and average score of two practical tests conducted.

5.5. Valuation of answer scripts

- a. Each theory examination shall be evaluated by one internal and one external examiner. There shall be a third evaluation if the difference is more than 15%.
- b. Practical examination shall be jointly conducted and evaluated by one internal examiner and one external examiner.

5.6. Evaluation of Project

Project work is in lieu of one course and it is compulsory in the IVth Semester. Students need to carryout study on practical aspects of library and information centres, collect data related to the problem compile the data, carry the data analysis, statistical methods used for the data analysis, the tenability of the hypothesis related to the problem and the inferences drawn. Finally these aspects must be compiled in the form of dissertation and submit in the end of IV semester of April/May before the End of the Examination. The guide and students ratio for dissertation is 1:5 and guide shall be Professor, Associate Professor and Assistant Professor.

The internal assessment marks shall be allotted by the supervisor based on the work progress, attendance and internal viva.

Dissertation/Project: Dissertation shall be evaluated by an external and internal examiner on the following criteria;

Sl. No	Key Criteria	Max marks
1	Outline of the work and adequacy of the methodology	30
2	Presentation of Computational output, interpretation and reporting style.	40
3	Presentation of Project Work in front of Experts	30
TOTAL		100

5.7. Marks qualifying for a pass

- 5.7.1 A candidate shall be declared to have passed the PG program if he/she secures at least a CGPA of 5.0 (Course letter Grade P) in the aggregate of both internal assessment and semester end examination marks.
- 5.7.2 For each course the total of 100% is determined from the CIA evaluation and the SEE and aggregate of CIA and SEE at 50% as minimum for pass.
- 5.7.3 The candidates who pass all the semester examinations in the first attempt in two years are eligible for ranks provided they secure at least a CGPA of 6.0 (at least letter Grade A).
- 5.7.4 The results of the candidates who have passed the fourth semester examination but not passed the lower semester examinations shall be declared as NCL (Not Completed Lower semester examinations). Such candidates shall be eligible for the degree only after completion of all the lower semester examinations.
- 5.7.5 A candidate who passes the semester examinations in parts is eligible for only

CGPA and letter Grade but not for ranking.

5.7.6 Carry over shall be allowed for candidate who failed in not more than two courses in a semester.

5.7.7 Candidate who fails in any of the unit/project work/Project Report/ dissertation shall reappear in that unit/project work/Project Report/ dissertation and pass the examination subsequently.

5.8. Re-Entry after Break of the study

5.8.1 Students admitted to a program abstaining for more than 3 months must seek readmission into the appropriate semester.

5.8.2 The student shall follow the syllabus in vogue (currently approved/is being followed) for the program

5.8.3 All re admissions of students are subject to the approval of the University.

5.9. Maximum period for completion of the Programme

A candidate shall complete the four semesters (two years) programme within five years from the date of admission.

5.10. Letter Grades

The results of successful candidates at the end of each semester shall be declared in terms of Grade Point Average (GPA) and alpha sign grade. The results at the end of the fourth semester shall be classified on the basis of the Cumulative Grade Point Average (CGPA) obtained in all the four semesters and the corresponding overall alpha-sign grade. The letter grade as described below shall be adopted.

Programme alpha-sign grade	CGPA
O+(Outstanding)	More than or equal to 9 but less than 10
O (Excellent)	More than or equal to 8 but less than 9
A+ (Very Good)	More than or equal to 7 but less than 8
A(Good)	More than or equal to 6 but less than 7
B+ (Average)	More than or equal to 5.5 but less than 6
P(pass)	More than or equal to 5 but less than 5.5
F (Fail)	Less than 5.0

5.11. Calculation of Cumulative Grade Point Average (CGPA):

It is a measure of overall cumulative performance of a student over all semester. The CGPA is the ratio of total credit points secured by a student in various courses in all semesters and the sum of all the total credits of all courses in all the semesters. It is expressed up to two decimals.

$$CGPA = \frac{\sum_{i=1}^n C_i S_i}{\sum_{i=1}^n C_i}$$

where S_i is the SGPA of the i^{th} Semester and C_i is the total number of credits in that semester.

The following is the sample illustration of computing semester grade point averages (GPA), cumulative grade point average (CGPA) and the letter grades assigned.

	Semester I	Semester II	Semester III	Semester IV
Credit (C_i)	20	18	20	24
SGPC (S_i)	8.23	7.31	6.95	8.2

$$\begin{aligned} CGPA &= (20 \times 8.23 + 18 \times 7.31 + 20 \times 6.95 + 24 \times 8.2) / 82 \\ &= 631.98 / 82 \\ &= 7.71 \end{aligned}$$

CGPA Range	Letter Grade
9.0-10.0	O+(Outstanding)
8.0 – 8.99	O(Excellent)
7.0 - 7.99	A+ (Very Good)
6.0 - 6.99	A(Good)
5.5 - 5.99	B+ (Average)
5.0 – 5.49	B (Pass)
<5.0	F (Fail)

6. Definitions of Key Words

- 6.1 **Academic Year:** Two consecutive (one odd + one even) semesters constitute one academic year.
- 6.2 **Choice Based Credit System:** The CBCS provides choice for students to select from the prescribed courses (Hard Core, Soft Core and open elective courses).
- 6.3 **Course:** Usually referred to as ‘papers’, is a component of a programme. The courses shall define learning objectives and learning outcomes. A course shall comprise lectures/tutorials /project work/viva/seminars/assignments/presentations/self-study etc. or a combination of some of these.
- 6.4 **Credits:** Credit defines the quantum of contents/syllabus prescribed for a course and determines the number of hours of instruction required per week. Thus, normally in each of the courses, credits will be assigned on the basis of the number of lectures/tutorial laboratory work and other forms of learning required, to complete the course contents in a 16-20 week schedule: One credit=1 hour of lecture per week/ two hours of Laboratory or practical. All courses need not carry the same credits.
- 6.5 **Grade Point:** The grade points in a course shall be assigned on the basis of actual marks scored (End semester examination and Internal assessment) in that course. It is a numerical weight allotted to each letter grade on a 10-pointscale

The Grade Point Average (GPA) in a semester shall be computed as follows:

alpha-sign grade	Limits*	Grade Point
OO+	95-100	10
OO	90-94	9.5
OA+	85-89	9.0
OA	80-84	8.5
AA+	75-79	8.0
AA	70-74	7.5
AB+	65-69	7.0
AB	60-64	6.5
BB+	55-60	6.0
PP	50-54	5.5
FF	Less than 50	0

*Limits are considered after converting the marks out of 100 in that course. A student obtaining grade FF or absent will be required to reappear in the examination of that course.

- 6.6 **Credit Point:** It is the product of grade point and number of credits for a course.
- 6.7 **Cumulative Grade Point Average (CGPA):** It is a measure of overall cumulative

performance of a student over all semesters. The CGPA is the ratio of total credit points secured by a student in various courses in all semesters and the sum of the total credits of all courses in all the semesters. It is expressed up to two decimal places.

- 6.8 **Letter Grade:** It is an index of the performance of students in a said course. Grades are denoted by letters: O⁺, O, A⁺, A, B⁺, B, P,F.
- 6.9 **Semester Grade Point Average (SGPA):** It is a measure of performance of work done in a semester. It is ratio of total credit points secured by a student in various courses registered in a semester (except open electives and extra courses) and the total course credits taken during that semester. It shall be expressed up to two decimal places.

$$SGPA (i) = \frac{\sum C_j G_j}{\sum C_j}$$

C_j is the number of credits of the j^{th} course and G_j is the grade point scored by the student in the i^{th} semester.

- 6.10 **Transcript or Grade Card or Certificate:** Based on the grades earned, a grade certificate shall be issued to all the registered students after every semester. The grade certificate will display the course details (code, title, number of credits, grade secured) along with SGPA of that semester.

7. Detailed syllabus: Detailed syllabus enclosed as Annexure–I

Table 1. Course Scheme of instruction and examination for Semester-wise

Course code	Type of Course	Course name	Hrs/ Week	Exam (hours)	IA Marks	End Semester Marks	Max marks	Credits
First Semester								
FS02LS-1C1	Hard Core-Theory	Foundations of Library and Information Science	4	3	40	60	100	4
FS02LS -1C2	Hard Core-Theory	Information Sources	4	3	40	60	100	4
FS02LS -1C3	Hard Core-Theory	Knowledge Organization: Classification	4	3	40	60	100	4
FS02LS-1C4	Hard Core-Theory	Fundamental of Information and Computer Technology	4	3	40	60	100	4
FS02LS-1P1	Hard Core-Practical	Knowledge Organization: Classification (Practice)	6	3	40	60	100	3
FS02LS-1P2	Hard Core-Practical	Fundamental of Information and Computer Technology (Practice)	6	3	40	60	100	3
Total Credits								22
Second Semester								
FS02LS-2C1	Open Elective	Information Source and Services	3	3	40	60	100	3
FS02LS-2C2	Hard Core-Theory	Management of libraries and Information centers	4	3	40	60	100	4
FS02LS-2C3	Hard Core-Theory	Knowledge Organization: Cataloguing and Metadata	4	3	40	60	100	4
FS02LS-2C4	Hard Core-Theory	Library Automation	4	3	40	60	100	4
FS02LS-2P1	Hard Core-Practical	Knowledge Organization: Cataloguing and Metadata (Practice)	6	3	40	60	100	3
FS02LS-2P2	Hard Core-Practical	Library Automation Software (Practice)	6	3	40	60	100	3
Total Credits								21

Third Semester

FS02LS-3C1	Open Elective	Scholarly Communication	3	3	40	60	100	3
FS02LS-3C2	Hard Core-Theory	Information Retrieval	4	3	40	60	100	4
FS02LS-3C3	Hard Core-Theory	Research Methodology	4	3	40	60	100	4
FS02LS-3C4	Hard Core-Theory	Information Systems and Services	4	3	40	60	100	4
FS02LS-3E1	Soft Core-Theory	Discipline Elective: (Any one)	3	3	40	60	100	3
FS02LS-3E2		a) Academic library systems & services						
FS02LS-3E3		b) Public library systems & services						
FS02LS-3E4		c) Industries and R&D Library Systems & Services						
FS02LS-3PR	Hard Core	Literature Survey and Field Work / Internship					100	6
Total Credits								24

Fourth Semester

FS02LS-4C1	Hard Core-Theory	Emerging Web-based Technologies in Libraries	4	3	40	60	100	4
FS02LS-4C2	Hard Core-Theory	Digital Libraries and Digital Content Management	4	3	40	60	100	4
FS02LS-4P1	Hard Core-Practical	Digital Libraries (Practice)	6	3	40	60	100	3
FS02LS-4E1	Soft Core-Theory	Discipline Elective: (Any one)	3	3	40	60	100	3
FS02LS-		a) Users, User Studies and Information Literacy						
		b) Management of Information System						

4E2 FS02LS-4E3		c) Bibliometrics and Informetrics,						
FS02LS-4WS	Hard Core-Theory	Soft Skills: Communication and Technical Writing Skills	4	3	40	60	100	4
FS02LS-4PR	Hard Core	Project work / Dissertation					100	6
Total Credits								24
Total Credits for the M.Lib.I.Sc program								90

Syllabus of M.Lib.I.Sc

First Semester

Course Code	Type of Course	Course name	Hrs/Week	Credits
FS02LS-1C1	Hard Core- Theory	Foundations of Library and Information Science	4	4
FS02LS -1C2	Hard Core- Theory	Information Sources	4	4
FS02LS -1C3	Hard Core- Theory	Knowledge Organization: Classification	4	4
FS02LS-1C4	Hard Core- Theory	Fundamental of Information and Computer Technology	4	4
FS02LS-1P1	Hard Core- Practical	Knowledge Organization: Classification (Practice)	6	3
FS02LS-1P2	Hard Core- Practical	Fundamental of Information and Computer Technology (Practice)	6	3
Total Credits				22

Hard Core	FOUNDATIONS OF LIBRARY AND INFORMATION SCIENCE	No. of credits: 4 Total = 48 hrs
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COURSE OBJECTIVES:

At the end of the course, the students will be able to:

- Differentiate between data, information, and knowledge; types of libraries, their functions and role in the development of society;
- Be familiarized with the status of library legislation in India;
- Understand the role and functions of various professional bodies in the development of libraries and information centres; and
- Comprehend the national information policy and changing dimensions of knowledge society.

COURSE OUTLINE

- Unit 1 : Library & Information Centers: Meaning and Definitions, Components; Evolution and their role in the modern society. History of Libraries. Library movement in India. Role of Library and Information Centers in Modern Society; Different types of Libraries - functions, objectives, and activities. 08hrs
- Unit 2 : Five Laws of Library Science and their implications to Library and Information Centers and Services. 08hrs

- Unit 3 : Information - Definitions, Contributions of Belkin, Robertson, Derwin, Ingwersen, etc.; DIKW model (Data- Information- Knowledge-Wisdom), Information, Information Science. Information as a resource/commodity; Information society. Information Transfer Cycle-Generation. Role of Information in modern society. Communication theories and models. Levels of communications – Intrapersonal, interpersonal and mass communication. Barriers to communication. 08hrs
- Unit 4 : Library Legislation – need, purpose and essential features; Library Legislation in India – problems and prospects. Overview of Public Library Acts in India. Detailed study of Karnataka Public Library Act 1965; Press and Registration Act and Delivery of Books (Public Libraries) and News paper Act, 1954 and 1956; Right to Information Act. Information technology Act 2000. Intellectual Property Rights (IPR). National and International Information Policies and Programs. National Knowledge Commission (NKC) and its role. 08hrs
- Unit 5 : Library and Information Profession: Attributes of a profession; Librarianship as a profession; Professional ethics and qualities; LIS Education and Research. Library Development: Development of Libraries in India with special reference to Karnataka. Public relations and extension activities. 08hrs
- Unit 6 : Professional Associations – Objectives and functions; Role of professional associations in Library development; Regional Library associations- KALA; National Library associations - ILA, IATLIS, IASLIC ; International Library associations –IFLA, FID,ALA, SLA, and LA. Promoters of Library and Information services: National level - RRRRLF, International level – UNESCO. 08hrs

Reference Books:

- Burahohan, A. (2000). *Various aspects of librarianship and Information Science*. Delhi: ESS ESS.
- Eisenberg, M. B., Lowe C. A., & Spitzer, K. L. (2004). *Information literacy: Essential skills for Information age*. London: Libraries Unlimited.
- Greer, R., Grover, R., & Fowler, S. (2013). *Introduction to the Library and Information Professions, Ed.2.Libraries* (2nd ed.). Libraries Unlimited.
- Isaac, K. A. (2004). *Library legislation in India: A critical and comparative study of state Library acts book description*. New Delhi: Ess Ess Publication.
- Kumar, G. (1988). *Library development in India*. New Delhi: Vikas.
- Kumar, P. S. G. (2011). *Foundations of Library and Information Science. Paper I of Ugc Model Curriculum*. B.R. Publishing Corporation.
- Ranganathan, S. R. (2006). *The Five Laws of Library Science*. Bangalore: ESS ESS.
- Rout, R. K. (1991). *Library legislation in India: problems and prospects*. New Delhi: Reliance Publishing House.
- Rubin, R. (2010). *Foundations of Library and Information Science*. Neal Schuman.
- Surendra, S., & Sonal, S. (2002). *Library, Information and Science and society*. Delhi: ESS ESS.

Velaga, V., & Madhusudhan, M. (2006). *Public Library legislation in the new millennium: New Model Public Library Acts for the Union*. Bookwell.

Hard Core	INFORMATION SOURCES	No. of credits: 4 Total 48 hrs
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COURSE OBJECTIVES:

At the end of the course, the students will be able to:

- Demonstrate the knowledge of the major information sources and reference tools which facilitate access to information;
- Develop evaluative skills for selecting both in print and electronic information sources;
- Select and describe the appropriate source to answer informational questions; and
- Provide practical skills related to various reference tools to the students.

COURSE OUTLINE

Unit 1	: Information Sources: Concept, Meaning, Definition, Nature, Types, Characteristics, Functions, Importance, and uses. Types of sources - Primary, Secondary & Tertiary, Human and Institutional sources	08hrs
Unit 2	: Primary Sources (Print and Electronic Versions): Concept, Characteristics and uses; Periodicals, Conference Proceedings, Technical Reports, Patents, Standards and Specifications, Trade Literature, Theses and Dissertations, Reprints, Preprints and Monographs.	08hrs
Unit 3	: Secondary Sources (Print and Electronic Versions): Concept, Characteristics and uses; Dictionaries, Encyclopedias, Handbooks and Manuals, Bibliographies, Geographical Sources and Biographical Sources, Yearbooks, Almanacs, Sources of Statistics, Abstracting and Indexing Sources. Tertiary Sources (Print and Electronic Versions): Concept, Characteristics and uses; Directories, Bibliography of Bibliographies, Union Catalogues, Guides to Subject Literature.	08hrs
Unit 4	: Non-documentary Sources: Human resources - Consultants, Experts, Extension Workers, Technology gatekeepers, Invisible Colleges, Information Brokers. Institutional resources - National and International agencies, Govt. Departments, R&D Organizations, Academic Institutions, Data Banks, Institutional Websites.	06 hrs
Unit 5	: Electronic Information Resources: Meaning and Definitions, Growth and Development of e-resources: Types. Internet Information resources, Databases (Bibliographic, Numeric and Full text). Open Access Resources, List servers, Subject gateways, Virtual Libraries. Mini Project: Study of the features and functionality of any one source , ACM digital Library, IEEE / IEE Electronic Library Online (IEL), Emerald, EBSCO, PsycINFO, Elsevier Science, PubMed Central, J-Gate , J-Store, Web of	10 hrs

Science, SCOPUS, SciFinder Scholar, PLOS, DOAJ, RePEc, etc.).E-learning Resources: Swayam, Swayam Prabha,e-PGPathshala, eGynakosh, e-shodhsindhu, NDL, NPTEL; ETD–Shodhganga, Shodhgangothri, NLIST, IIT’s & IIM’s Consortiaetc., Open Learning Resources: OER,MOOCs.

Unit 6 : Evaluation of Print, Electronic & Web based Resources - Criteria for Evaluation of Print, Electronic & Web based Resources

08 hrs

Reference Books:

- Anil, D., & Yashada, R. (2005). *Learn Library Science Series*. New Delhi: ESS Publication.
- Bemis, F. B. (2013). *Library and Information Science: A Guide to Key Literature and Sources*. USA: ALA.
- Chowdhury, G. G., & Chowdhury, S. (2001). *Information sources and searching on the World Wide Web*. London: Library Association.
- Grogan, D. (1982). *Science and Technology* (4th ed.). London: Clive Bingley.
- Guha, B. (1983). *Documentation and Information Services: Techniques and Systems* (2nd ed.). Calcutta: World Press.
- Katz, W A. (1989.). *Introduction to Reference work* (5th ed., Vol. 2). New York: Mc-Graw Hill.
- Kuma, K. (1987). *Reference services* (Rev. Ed. 3). New Delhi: VIKAS.
- Kumar, K. (2003). *Reference services* (3rd ed.). New Delhi: VIKAS.
- Parker, C. C., & Purely. (1986). *Information Sources in Science and Technology* (2nd ed.).
- Ranganathan, S. R. (1992). *Reference service* (2nd ed.). Bangalore: Sarada Rangnathan Endowment for Library Science.
- Rao, I. K. R. (2001.). *Electronic Sources of information*. Bangalore: DRTC.
- Sewa , S. (1997). : *International manual of Reference and information services*. New Delhi: Beacon Book.
- Sewasingh. (1997). *Handbook of Reference and Information Services*. New Delhi: Crest Publishing house.
- Sharma, J. S., & Grover, D. R. (1992). *Reference service and sources of Information*. New Delhi: Ess Ess Publications.
- Sharma, P.S.K.(1992). *Library and society* (2nd ed). New Delhi: Ess Ess
- Singh, G. (2013). *Information sources, Services and Systems*. India: PHI Learning Private Limited.
- Parashar, R.G. (1991). *Information and its communication*, New Delhi: Medallion Press.

Hard Core	KNOWLEDGE ORGANIZATION: CLASSIFICATION	No. of credits: 4 Total 48 hrs
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COURSE OBJECTIVES:

At the end of the course, the students will be able to:

- Explain the modes of formation of subjects and its characteristics;
- Discuss the principles and philosophy of library classification;
- Understand various standards adopted in digital resource management.

COURSE OUTLINE

Unit 1	: Classification – Meaning, Definition. Library Classification – Definitions, meaning, objectives Need, Purpose and Functions. General theory of classification, Theory of knowledge classification, Theory of book classification. Understanding the developments in theory of Library Classification. Study of the contributions of E.C. Richardson, H.E. Bliss, W.C. Berwick Sayer, J.D. Brown, E.W. Hulme, CRG, and S.R.Ranganathan.	08hrs
Unit 2	: Universe of Knowledge: Structure, attributes, Modes of formation of subjects. Types of Classification schemes. Understanding the concept of and schemes in Knowledge Classification. Knowledge Classification vs. Library Classification. Understanding the Knowledge Classification Systems such as Vedic Classification, Greek Classification. General theory of Library Classification.	08hrs
Unit 3	: Normative Principles of Classification: Three planes of work. Canons, Principles and Postulates. Devices, Mnemonics. Five fundamental categories and Notation. Universe of subjects – Concept, Definition, Structure, and Attributes of subjects. Spiral of Scientific Method; Modes of Formation of Subjects. Call number and its structure.	08hrs
Unit 4	: Fundamental Categories: Facet analysis and facet sequence, Phase relations, Common Isolates. Notational System: Meaning, need, functions and types, Call Number mnemonics, Hospitality in array and chain, Devices.	08hrs
Unit 5	: Study of selected schemes of classification: Dewey Decimal Classification, Library of Congress Classification (LC), Universal Decimal Classification, Colon Classification. Major contributions of Ranganathan to Classification theory. Design and development of schemes of Library Classification.	08hrs
Unit 6	: Trends in Library Classification: Thesaurifacet, Classaurus, Automatic Classification, Classification in online systems, WebDewey. Knowledge Organization Systems: Concepts. Facet Ontology, Folksanomies, Web Ontology Language (OWL), Simple Knowledge Organization System (SKOS). Taxonomies, Authority Files. Knowledge Organization in Digital Environment	08hrs

Reference Books:

- Dhyani, P. (1998). *Library Classification: Theory and practice*. New Delhi: VishwaPrakashan.
- Kanna, J. K. (1955). *Library and Society*. Kurukshetra: Research Publication.
- Kumar, K. (1980). *Theory of Library Classification* (2nd ed.). New Delhi: Vikas.
- Kumar, P. S. G. (2003). *Knowledge organization, Information processing and retrieval theory*. Delhi: BR.
- Parkhi, R. S. (1977). *Library Classification: Evolution of a dynamic theory*. Bombay: Asia.
- Ranganathan, S. R. (1957). *Prolegomena to Library Classification* (2nd ed.). London: LA.
- Ranganathan, S. R. (1960). *Colon Classification* (6th ed.). Bangalore: Sarada Ranganathan Endowment for Library Science.
- Sajja M. P (2013). *The Theory and Practice of the Dewey Decimal Classification System*. New Delhi: Chandos Publishing.
- Sinha, S. C., & Dhiman, A. K. (2002). *Prolegomena to universe of knowledge*. New Delhi: ESSESS.
- Srivastava, A. P. (1993). *Theory of knowledge Classification in Libraries*. New Delhi: sage.

Hard Core	Fundamentals of Information and Computer Technology	No. of credits: 4 Total =50 hrs
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COURSE OBJECTIVES:

At the end of the course, the students will be able to:

- ➤get acquainted with the components of Information Technology;
- ➤acquire skills required for handling different operating systems;
- ➤use application software for office management; and
- ➤develop an understanding of the file organizations and database management systems.

COURSE OUTLINE

- Unit 1 : Information Technology - Concepts, Definition, Components and applications; Historical developments, Characteristics, Applications, Generations and Classification of computer. 08hrs
- Unit 2 : Computer Hardware: Components of a Computer; Memory - Arithmetic/Logic Unit, Control Processing Unit, Input and Output Devices, Internal and External Storage Devices. Internal Storage: ROM and RAM, External Storage Devices: Magnetic Devices-Hard Disk; Optical Devices -CD-ROM, DVD, Blue-ray Disc; Pen drive; Input/output Devices: 08hrs

	Microphone, Joystick, Touchpad, Touch Screen, barcode reader. Output devices: Printer, Plotter, Monitor & Speaker.	
Unit 3 :	Computer Software: Types and categories. Programming concepts: system analysis, algorithms and flow charts, Open source and proprietary software. System Software: Purpose. Operating Systems - MS-DOS, LINUX, Multi - User Operating Systems like MS WINDOWS, Unix. Mobile Operating Systems–IOS, Android. Application Software – Word Processing (MS Word) MS Excel, MS Power point presentation. File organization: Field, Record, file, database, types of file organization and their advantages and disadvantages.	10hrs
Unit 4 :	Data Representation in Computers: Number systems, Binary numbers: Binary addition (1's and 2's complement methods), Subtraction, Multiplication and Division. Data Representation of Integers, Fractions. Character encoding standards – ASCII, EBCDIC, ISCII and UNICODE. Issues with respect to character collation and sorting.	08hrs
Unit 5 :	Programming Languages: Machine Languages, Assembly Languages, High-Level languages, Generations of Programming Languages, Flow- Charting: Programming languages: BASIC, PASCAL, C, C++, HTML, Python, CSS, PHP.	08hrs
Unit 6 :	Internet: Historical development, Web browsers – Internet Explorer, Mozilla Firefox and Google Chrome. Software suites, Anti-virus programs, Sharewares, Web design tools, HTML Editors. Search Engines- need and importance, types, search strategies.	08hrs

Reference Books:

- Kumar, A. (2004). *Information technology for all.*(Vol.2). New Delhi: Anmol Publications.
- Deeson, E. (2000). *Managing with information technology.* London: KoganPage Ltd.
- Dhiman, A. K. (2003). *Basics of information technology for librarians and information scientists.* (Vol 1). New Delhi: Ess Ess Publications.
- Mohamed, H. K. (2011). *Information and communication technology in special libraries: Ict based resources, services and training.* . LAP LAMBERT Academic Publishing.
- Rowley, J. (1992). *Computer fundamentals: Concept, Systems and Applications* (2nd ed.). BPB.
- Sinha, P. K. (2000). *Computer fundamentals.* BPB Publication. ISBN:9788176567527.
- Rajagopalan, R. (1987). *Understanding computers.* Tata McGraw-Hill.
- Winn , L. R. (1995). *Multimedia bible Indianapolis.* Sams publishing.
- Tay , V. (1998). *Multimedia making it work.* Osbome: McGraw-Hill.
- Thomas , C. B. (1991). *Digital computer fundamentals* (6th ed.). McGraw Hill.
- Prasher, R. G. (2003). *Indian Libraries in IT Environment.* Ludhiana: Medallion Press.
- Khaisar, M. K., Mallaiah, & Vishala, B. K. (2014). *Proceedings of the National Conference on 'Democratization of Information using Ict: Role of Libraries for Social Enlightenment (Demict-2014), DLISc.* Mangalagangothri. ISBN:978-93-82845-33-1.

Hard Core	KNOWLEDGE ORGANIZATION: CLASSIFICATION (PRACTICE)	No. of credits: 3 Total =64 hrs
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COURSE OBJECTIVES:

At the end of the course, the students will be able to:

- be familiarized with the latest Edition of DDC
- acquire skills required for classifying various types of documents;
- arrange and locate books shelved in the library; and
- develop an understanding of the organization of the library.

COURSE OUTLINE

Classify the documents according to Dewey decimal classification (Latest edition)

- Unit 1 : Introduction: Structure and organization of DDC
- Unit 2 : Classification of simple Documents.
- Unit 3 : Classification of documents using tables/ standard subdivisions
- Unit 4 : Classification of documents representing compound subjects
- Unit 5 : Classification of documents representing complex subjects.
- Unit 6 : Assignment of Book Number
Web Dewey

(Each student shall maintain Practical Record and submit the same at the time of Practical Examination)

Note: Marks for Practical Examination:

60 Marks for practical Examination (Semester exam)

10 Marks for Practical Record

30 marks Average score of two Practical Tests conducted (Internals)

Hard Core	Fundamentals of Information and Computer Technology (Practice)	No. of credits: 3 Total =64 hrs
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COURSE OBJECTIVES:

At the end of the course, the students will be able to:

- Practically to get acquainted with Information Technology;
- Use of application software for library management; and
- Develop an understanding of the file organizations and database management systems.
- Knows the use of internet browsing, search techniques and web design.

COURSE OUTLINE

- Unit 1 : Exercise in the use of operating systems:
 A) Command line operating systems UNIX,
 B) GUI based operating systems – Microsoft Windows, Linux
- Unit 2 : Microsoft –Word
- Unit 3 : Microsoft -Excel
- Unit 4 : Microsoft -PowerPoint
- Unit 5 : Internet browsers and Search Techniques
- Unit 6 : Basic Website Creation: HTML and Web Design

(Each student should maintain Practical Record and submit the same at the time of Practical Examination)

Note: Marks for Practical Examination:

60 Marks for practical Examination (Semester exam)

10 Marks for Practical Record

30 marks Average score of two Practical Tests conducted (Internals)

Second Semester

Course Code	Type of Course	Course name	Hrs/Week	Credits
FS02LS-2C1	Open Elective	Information Source and Services	3	3
FS02LS-2C2	Hard Core- Theory	Management of libraries and Information centers	4	4
FS02LS-2C3	Hard Core- Theory	Knowledge Organization: Cataloguing and Metadata	4	4
FS02LS-2C4	Hard Core- Theory	Library Automation	4	4
FS02LS-2P1	Hard Core- Practical	Knowledge Organization: Cataloguing and Metadata (Practice)	6	3
FS02LS-2P2	Hard Core- Practical	Library Automation Software (Practice)	6	3
Total Credits				21

Open Elective	INFORMATION SOURCES AND SERVICES	No. of credits:3 Total = 48 Hrs
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COURSE OBJECTIVES

At the end of the course, the students will be able to:

- Demonstrate the knowledge of the major information sources and reference tools which facilitate access to information
- Develop evaluative skills for selecting both in print and electronic information sources;
- To know the reference and information service, differentiate between reference and information services
- To identify the information needs of different groups of users and the services library can offer to meet these information needs

COURSE OUTLINE

Unit 1 : Information Sources: Data, Information, Knowledge, Wisdom: Meaning, Definition, Nature, Characteristics, Importance of Information and Information Source. 06hrs
Types of sources (Primary, Secondary & Tertiary), Human and Institutional sources.

Unit 2	: Primary Sources (Print and Electronic Versions): Concept, Characteristics and uses. Secondary Sources (Print and Electronic Versions): Concept, Characteristics and uses; Tertiary Sources (Print and Electronic Versions); Non-documentary Sources: Human resources. Institutional resources Evaluation of reference sources print and electronic.	08 hrs
Unit 3	: Electronic Information Resources: Meaning and Definitions, Growth and Development of e-resources. Internet Information resources, Institutional Repositories, Open Access Resources, Databases (Bibliographic/Indexing/Full text), Emerald, EBSCO, Elsevier Science, PubMed Central, J-Store, , SciFinder Scholar, PLOS, Online Bibliographic/Indexing/Citation Databases: Web of Science, SCOPUS, DOAJ, DOAB,J-Gate, etc. E-learning Resources: Swayam, SwayamPrabha,e-PGPathshala, eGynakosh, e-shodhsindhu, NDL, ETD–Shodhganga, Shodhgangothri, NLIST, IIT’s & IIM’s Consortia	08 hrs
Unit 4	: Information Services: Concept and Types of Information Services – Traditional Library Services and Web-enabled Library and Information Services; User education methods and techniques, Reference service, CAS and SDI, Document Delivery Services, translation Services: Concept and Types -Short and Long Range Ref Services. Referral service. Reference Collection, Skills and Qualities of a Reference Librarian.	08 hrs
Unit 5	: Web-Based Library and Information Services: Introduction, Need and Purpose. Web-based Online Public Access Catalogue (Web OPAC), Library Webpage, E-mail, List servers, Subject Gateways, Ask-a-Librarian, Alerting services –Bulletin Boards, Web Forms, FAQs - methods and techniques, Web Based User Education, Virtual Reference Desk (VRD), Virtual Libraries.	08 hrs
Unit 6	: Information Systems: Meaning, Objectives and Functions. Libraries and Information Centers, Information analysis centers, Study of National and International Information Systems and Services: NISCAIR, DESIDOC, NASSDOC, NISSAT, SENDOC, Library Consortia - OCLC, INFLIBNET, UGC-INFONET, DELNET, NICNET, ERNET, and INDEST. International Information Systems - CAS, INSPEC, AGRIS, BIOSIS, INIS, MEDLARS-MEDLINE, ERIC.	10 hrs

Reference Books:

Asija,S.(1998). *Documentation services in India: A review of some selected documentation centres*. New Delhi: Academic Publications.

Dhimani, A., & Rani, Y. (2005). *Learn Library Science Series*. ESS Publication: New Delhi.

Guha, B. (1983). *Documentation and Information: Services, techniques and systems*. Calcutta: World Press.

- Gupta, B. M. (1991). *Handbook of Libraries, archives, Information centres in India*. New Delhi: Aditya Prakshan.
- Hirsh, S. (2015). *Information Services Today: An Introduction* (1st ed.). Rowman & Littlefield,
- Katz, W. A. (1978). *Introduction to reference work* (5th ed., Vol. 2). New York: McGraw-Hill.
- Kumar, K. (2003). *Reference services* (3rd ed.). New Delhi: Vikas.
- Maguire, C., Kazlauskas, E. J., & Weir, A. D. (2013). *Information services for innovative organizations*. Bingley: Emerald Group Publishing Limited.
- Neelameghan, A. & Prasad, K. N. (2005). *Information systems and services in India*. Bangalore: SRELS.
- Parker, C. C., & Turley, R. V. (1986). *Information sources in science and technology: a practical guide to traditional and online use*. London: Butterworths.
- Parker, C.C. and Purely: *Information Sources in Science and Technology*. Ed. 2.1986
- Ranganathan, S. R. (1992). *Reference service* (2nd ed.). Bangalore: Sarada Ranganathan Endowment for Library Science.
- Rao, I. K. R. (2001). *Electronic Sources of information*, Bangalore: DRTC
- Ryan, B. (2013). *Optimizing academic library services in the digital milieu: Digital devices and their emerging trends* (1st ed.). Philadelphia, PA: Chandos Pub.
- Singh, G. (2013). *Information sources, Services and Systems*. India: PHI Learning Private Limited.
- Singh, S. (1997). *International manual of Reference and information services*. Delhi: Beacon Book.
- Singh, S. (1997). *Handbook of Reference and Information Services*. New Delhi: Crest Publishing house.
- Smith, L. C., & Wong, M. A. (2017). *Reference and information services: an introduction* (5th ed). Santa Barbara, CA: Libraries Unlimited.

HardCore	MANAGEMENT OF LIBRARIES AND INFORMATION CENTRES	No. of credits: 4 Total =50 hrs
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COURSE OBJECTIVES

At the end of the course, the students will be able to:

- Know the meaning, evolution and purpose of management;
- Understand different levels of management and various managerial skills required, Knows how to manage library and information centres;
- Understand the application of modern management techniques and methods in managing libraries and information centres; and
- Apply the principles and procedures for developing an organisational structure for a library.

COURSE OUTLINE

Unit 1	: Management: Concepts, Definition and Scope; Management Styles and Approaches; Functions and Principles of Management and their application to Library and information centers, Principles of Scientific management, Management by objectives (MBO), Change Management, Governing of Libraries and Information Centers.	08hrs
Unit 2	: Human Resource Management: Meaning, Definition, Objectives and Functions; Selection and Recruitment; Manpower planning, Job analysis; Motivation; Training and Development; Performance Appraisal, Promotion and transfer. Financial Management: Resource Mobilization; Budgeting Methods and types of Budgets, Preparation of budget, Budgeting Techniques, PPBS. Zero based budgeting, Costing and Accounting, Cost Benefit Analysis Outsourcing.	10hrs
Unit 3	: Library Operations: Collection Development - Selection and Acquisition; Technical Processing; Serials Control; Circulation Control; Maintenance; Stocks verification and Weeding. Online Book stores–Identification, Advantages, Online Book Shops v/s Traditional Book Shops, URLs.	08hrs
Unit 4	: Library Records and Statistics: Library Records, Annual Report – Compilation ,Contents and Style; Library Statistics, Staff Manual, Authority File: Purpose, Types, Library annual Report and Library	08hrs
Unit 5	: Marketing of Library Products and Services – Plan, Research, Strategies, Mix, Segmentation, Pricing and Advertising; Management Consultancy. Marketing Mix; Kotler’s Four P’s; McCarthy’s Four P’s. Packing, Branding and Advertising. User Behavior and Adoption.	08hrs
Unit 6	: Systems Analysis and Design: Library as a system; Design and Planning of Library and	08hrs

Information Center, Library Building: Hybrid and Digital, Furniture and Equipment, SWOT. Total Quality Management (TQM) - Its Concept, Definition, Elements and Techniques. Quality Audit, LIS related Standards. Performance Evaluation of Library and Information Centers. PERT, CPM Technology Management.

Reference Books:

Anil Kumar Dhiman & Yashoda Rani (2004) *Library Management: A Manual for Effective Management*, Ess Ess Pubns.

Applegate, R. (2013). *Practical evaluation techniques for librarians*. Santa Barbara, California: Libraries Unlimited.

Bryson, J. (2018). *Effective library and information centre management* (2nd ed.). London: Routledge.

Burger, R. H. (2016). *Financial Management of libraries and Information Centre* (1st ed.). Libraries Unlimited.

Chatterjee, A. K. (1982). *Introduction to Management: Its Principles and Techniques*. Kolkatta: World Press.

Gupta, K. D. (2001). *Library practice for effective management*. New Delhi: Indian Library Association.

Khan, K. M., Mallaiah, & K, V. B. (2014). *Proceedings of the National Conference on 'Democratization of Information using ICT: Role of Libraries for Social Enlightenment (Demict-2014), DLISc*. Mangalagangothri.

Kumar, K. (1987). *Library administration and management*. New Delhi: Vikas Publications.

Mittal, R. L. (1984). *Library administration: theory and practice*. New Delhi: Ess Ess Publications.

Narayana, G. J. (1991). *Library and information management*. New Delhi: Prentice-Hall of india.

Nelke, M. (2012). *Strategic Business Development for Information Centres and Libraries* (1st ed.). Chandos Publishing.

Prajapati, R. S. (2013). *Theories and practices of library management*. New Delhi: Discovery Pub. House.

Sharma, P., & Kumar, R. (2013). *Collection development and management in libraries and information centres in digital scenario*. New Delhi: SSDN Publishers & Distributors.

HardCore	KNOWLEDGE ORGANIZATION: CATALOGUING AND METADATA	No. of credits: 4 Total = 48 Hrs
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COURSE OBJECTIVES:

At the end of the course, the students will be able to

- Explain the types and needs for various types of library catalogues;
- Understand and make use of the various bibliographic formats for effective management of bibliographic records; and
- Understand various standards adopted in digital resource management.

COURSE OUTLINE

Unit 1	: Resource Description: Concepts and definition. Library Catalogue: Meaning, Definition, Need, Purpose, Objectives and Functions; Types and forms of Catalogue including Online Public Access Catalogue (OPAC) and Web-OPAC. History and development of Catalogue codes and practices:	08hrs
Unit 2	: Physical forms and Inner forms of Catalogues. Kinds of entries (Card Catalogue to OPAC) their structure and uses. Filing rules and procedures. Normative principles of Cataloguing: Canons, Laws, Principles. Resource sharing of bibliographic data: Meaning and importance.	08hrs
Unit 3	: Subject Cataloguing: Concept, Purpose, and importance; Subject heading lists – Sears List of Subject Headings (SLSH), Library of Congress Subject Headings (LCSH), Medical Subject Headings (MeSH) and Thesaurus; Chain Procedure	08hrs
Unit 4	Study of major Catalogue Codes; ISBD, AACR (latest edition); FRBR-RDA (Resource Description Access); Resource Description Framework (RDF). Filing rules and procedures;	08hrs
Unit 5	: Metadata: Meaning, Definition, Purpose, Use and types. Standards for Bibliographic Description: Metadata standards: UNIMARC, CCF, MARC-21 & Dublin Core, Z39.50, TEI (Text Encoding initiative), DCAT (Data Catalog Vocabulary), Z39.50, PREMIS (Preservation Metadata: Implementation Strategies), METS, TEI, EAD VRA Core and other resource discovery issues. Consortia approach to metadata-OAI-PMH, ISO2709, BIBFRAME.	08hrs
Unit 6	: Resources Sharing: Co- operative, Centralized and Union Cataloguing; Cataloguing at Source, CIP, Union Catalogues: Concept, Types and Compilation, , copy cataloguing, OCLC WorldCat	08hrs

Reference Books:

- ALA. (2002). *Anglo-American cataloguing rules* (2 nd rev). New Delhi: Oxford.
- Barbara, M. W. (1997). *Sears list of subject headings*. New York: H.W. Wilson.
- Byrne, D. J. (1998). *MARC manual: Understanding and records*. Chicago: ACA.
- Janaki,R .C.(2011.)*Online cataloging*. Pacific books international: New Delhi.
- Kumar, K. (1981). *An Introduction to Cataloguing & Practice*.New Delhi : Vikas Publishing House.
- Mal,B.(2005).*Practical cataloguing*. Shree publishers & Distributors: New Delhi.
- Maxwell, R.,& Maxwell, M.F. (1997). *Maxwell's handbook of AACR2R: Explaining and illustrating the Anglo American Cataloguing Rules and the 1993 amendments*. Chicago: ACA.
- Maxwell, R.L.,& Connell, T.H. (2000). *Future of Cataloguing*. Chicago: ALA.
- Mishra A.R., & Ahmad M.D. (2004). *Issues in Digital Cataloging*. Shree Publishers & Distributors : New Delhi,
- Ramalingam, M. S. (2000). *Library Cataloguing and Classification systems*. Delhi: Kalpaz.
- Ranganathan, S. R. (1950). *Library Catalogue: Fundamentals and procedures*. LA: Madras.
- Ranganathan, S. R. (1955). *Headings and canons*. Madras: S Vishwanathan.
- Ranganathan, S. R. (1998). *Classified Catalogue code*. Madras : UBSPD.

HardCore	LIBRARY AUTOMATION	No. of credits: 4 Total = 48 Hrs
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COURSE OBJECTIVES:

At the end of the course, the students will be able to:

- Understand the concept of library automation and how to implement in libraries;
- Get familiarized with the automated services that can be rendered in libraries and information centres;

- Know features, advantages, requirements, steps, standards and models of library automation; and
- Be aware of various software packages on library automation, free, open, and commercial.

COURSE OUTLINE

Unit 1	: Library Automation: Meaning and Definition, Genesis, History, Need and Importance, Areas of Library Automation	08hrs
Unit 2	: Strategies for Library Automation / Integrated Library Management System (ILMS): Factors – hardware, software, technical standards, Prerequisites, Library Automation Tasks	08hrs
Unit 3	: Areas of ILMS – Acquisition, Cataloguing, Access to Catalogue (OPAC), Circulation and Serial Control. Automation of House Keeping Operations: Acquisition and Cataloguing, with focus on role, rationale, Sub systems and Interface, File and Data Structure, OCLC and LC. Automation of House Keeping Operations: Circulation and Serials Control with focus on role, rationale, Subsystems and Interface, File and Data Structure; Retrospective Conversion: Strategies and Techniques	10 hrs
Unit 4	Introduction to Library Automation (ILMS) Software Packages – Proprietary and Free and Open Source Software (FOSS) -Features of KOHA, SOUL, Easylib, Libsys, NewgenLib; Evaluation of Library Automation Software.	08hrs
Unit 5	: Infrastructure Requirements for Library Automation: Manpower, Hardware, Software, Cost, Furniture and Equipment – Barcode, RFID, QR Codes, NFCT (Near Future Communication Technology).	08hrs
Unit 6	: Library Technology: Library Security, Discovery tools, Semantic Technology and tools, Link resolves.	06hrs

Reference Books:

- Ahmad, H. (2016). *Integrated library management systems an Indian scenario of modern library automation* (1st ed.). New Delhi: Ess Ess Publications.
- Ahmad, H., & Alam, M. (2016). *Library automation in India: an evaluative study*. New Delhi: Ane Books Pvt. Ltd.
- Banerjee, K., & Parks, B. (2017). *Migrating library data: a practical manual*. Chicago: ALA Neal-Schuman, an imprint of the American Library Association.
- Bilal, D., & Bilal, D. (2014). *Library automation: core concepts and practical systems analysis* (3rd ed.). Santa Barbara, CA: Libraries Unlimited.
- Brooks, J. (2014). *Practical systems analysis in library automation and management*. London: Koros Press Limited.
- Cohn, J. M., Kelsey, A. L., Fiels, K. M., & Muirhead, G. (1998). *Planning for library automation: a practical handbook*. London: Library Association Pub.
- Haravu, L. J. (2004). *Library automation: design, principles, and practice*. New Delhi: Kesavan Inst. of Information and Knowledge Management, Allied Publishers.

Hennig, N. (2014). *Apps for librarians: using the best mobile technology to educate, create, and engage*. Santa barbara, CA: Libraries unlimited.

Jost, R. M. (2016). *Selecting and implementing an integrated library system the most important decision you will ever make* (1st ed.). Amsterdam: Elsevier.

Starker, R. (2017). *Transforming libraries: a toolkit for innovators, makers, and seekers*. Irvine, CA: EdTechTeam Press.

Webber, D., & Peters, A. (2010). *Integrated library systems: planning, selecting, and implementing* (1st ed.). Santa Barbara, Calif: Libraries Unlimited.

HardCore	KNOWLEDGE ORGANIZATION: CATALOGING AND METADATA (PRACTICE)	No. of credits: 3 Total = 64 Hrs
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COURSE OBJECTIVES:

At the end of the course, the students will be able to:

- Create catalogue entries for the Print resources as per the cataloguing codes/rules / AACR 2R /RDA
- Create catalogue entries for Non-print resources according to MARC21 and Dublin core

COURSE OUTLINE

Cataloguing of book and non-book materials according to AACR2R/RDA and creating records using MARC21 and Dublin Core.

Unit 1 : Catalog of Single, joint authors and mixed authors.12 hrs

Unit 2 : Cataloging of serials publication, multi volumes and corporate publications.

Unit 3 : Cataloging of Pseudonym, periodicals and electronic resources.

Unit 4 : Metadata: MARC 21 and Dublin Core

MARC 21

Creating MARC21 records for simple print documents.

Creating MARC21 records for simple electronic resources.

CreatingMARC21recordsforcomplexdocuments–printande-resources.

Unit 6 : **Dublin Core**

Preparing Simple and Qualified Dublin Core records in HTML.

Preparing Simple and Qualified Dublin Core records in XML.

Preparing Simple and Qualified Dublin Core records in RDF.

(Each student should maintain Practical Record and submit the same at the time of Practical Examination)

Note: Marks for Practical Examination:

60 Marks for practical Examination (Semester exam)

10 Marks for Practical Record

30 marks Average score of two Practical Tests conducted (Internals)

Reference Books:

Anglo-American Cataloguing Rules (2002)2ndRevEd.

MARC 21 and Related standards for Bibliographic Records. New York: LC.<http://dublincore.org>

RDA: Resource, description and access: 2013 revision. London: CILIP.

HardCore	LIBRARY AUTOMATION (PRACTICE)	No. of credits: 3 Total =64 Hrs
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COURSE OBJECTIVES:

At the end of the course, the students will be able to:

- Practically gets acquainted with database management systems and Automated Library Management
- Use of application software for library management; and
- Knows the use of search engines and search techniques.

COURSE OUTLINE

- Unit 1 : Hands on Practice DBMS – WINISIS or MS Access
- Unit 2 : Hands on Practice KOHA – Integrated Library Management System Software (ILMS) –(all modules)
- Unit 3 : Searching documents from internet using different search Engines; Searching WebOPAC, WorldCat, IndCat; Formulating and applying various Strategies

(Each student should maintain Practical Record and submit the same at the time of Practical Examination)

Note: Marks for Practical Examination:

60 Marks for practical Examination (Semester exam)

10 Marks for Practical Record

30 marks Average score of two Practical Tests conducted (Internals)

Third Semester

Course Code	Type of Course	Course name	Hrs/Week	Credits
FS02LS-3C1	Open Elective	Scholarly Communication	3	3
FS02LS-3C2	Hard Core-Theory	Information Retrieval	4	4
FS02LS-3C3	Hard Core-Theory	Research Methodology	4	4
FS02LS-3C4	Hard Core-Theory	Information Systems and Services	4	4
FS02LS-3E1 FS02LS-3E2 FS02LS-3E3 FS02LS-3E4	Soft Core-Theory	Discipline Elective: (Any one) e) Academic library systems & services f) Public library systems & services g) Industries and R&D Library Systems & Services h) Health Science Information System systems & services	3	3
FS02LS-3PR	Hard Core-Practical	Literature Survey and Field Work /Work Experience		6
Total Credits				24

Open Elective	SCHOLARLY COMMUNICATIONS	No. of credits:4 Total =48 Hrs
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COURSE OBJECTIVES

At the end of the course, the students will be able to:

- Know the paradigms of Scholarly communication, Historical perspective of scholarly communication systems. Scholarship and scholarly traditions;
- To prepare short communications, review articles, technical report, monographs, project proposals, dissertations/theses and house bulletins and use of style manuals;
- Understand the criteria for evaluation of Scholarly scientific and technical communications and presentations.

COURSE OUTLINE

- Unit 1 : Republic of Science and Scholarship: Foundations of Science and scholarship. Principles and paradigms of scientific culture/scholarship: Historical perspective of scholarly communication systems. Scholarship and scholarly traditions. 08hrs
- Unit 2 : Study of journals, their functions, working and processes. The importance of scientific and professional societies in journal publishing; the peer review process; the migration of peer review journals from print to Web-based; Serials pricing crisis phenomena. 08hrs
- Unit 3 : Rise of Internet as game changer in scholarship, communication, and daily lives. Evolution of Internet/Electronic publishing; Peer review and quality control. Impact factor (journal impact factor). H-index (author-level metric). 08hrs
- Unit 4 : Web 2.0 and the emergence of Wikipedia; slide share; You Tube; blogs and others as mainstream media. E-Science, Open Data and cyber Infrastructure. 08hrs
- Unit 5 : Open Access Movement: understanding OA—concepts, principles, ideology and philosophy of Open Source, Open Content; Open Educational Materials and Open Access to scientific literature; the Green and Gold route to OA. Familiarity with the people and organisations behind the OA movement. Study of Open source software for IR and DL: DSpace; Eprints ; Fedora ; Kete. 08hrs
- Unit 6 : Copyrights issues. Understanding copyrights. Creative Commons. Licensing issues. Scientometrics and metrics of scholarly communication. Innovations in measuring Science and scholarship. Mapping Science and tools and parameters: usage and influence factors. 08hrs

Reference Books:

Derricourt, R. (1996). *An author's guide to scholarly publishing*, Princeton. N. J: Princeton University Press.

Andersen, D.L.(2004). *Digital scholarship in the tenure, promotion, and review process*. Armonk. N.Y : M.E. Sharpe.

Machlup, F. (1980). *Information through the printed word: The dissemination of scholarly, scientific, and intellectual knowledge. 1978-1980*. New York: Praeger Publishers.

Nisonger, T. E. (2007). *Journals in the core collection: Definition, identification, and applications*. *The Serials Librarian*

Rowlands, I. & Nicholas, D. (2005). *New journal publishing models: an international survey of senior researchers*. London: CIBER

Rowlands, I. *et al.* (2004). *Scholarly Communication in the digital environment: what do authors want?* London, CIBER. Available at: <http://www.ucl.ac.uk/ciber/ciber-pa-report.pdf>.

Saha, S. *et al.* (2003). *Impact factor: a valid measure of journal quality?* *Journal of the Medical Library Association* 91: 42-6. Available at <http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=141186&blobtype=pdf>

Gorman, G.E. (2005). *Scholarly publishing in an electronic era*. London: FacetPub.

Schroter, S. (2005). *Perception of open access publishing: interviews with journal authors*. *British Medical Journal*, 330: 756

Tibbitts, G. (2006). *Measuring quality in journal publishing: new and emerging methods*. *Presentation at International Academy of Nurse Editors conference*, London, August 2003. Available at: http://www.blackwellpublishing.com/press/files/2006_08August03_INANE_Conference_London_GTV2.ppt

HardCore	INFORMATION RETRIEVAL	No. of credits: 4 Total =48 Hrs
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COURSE OBJECTIVES:

At the end of the course, the students will be able to:

- Acquire skills required for indexing various kinds of documents;
- Get familiarized with the indexing systems;
- Retrieve documents precisely by using different search strategies; and
- Develop an understanding of the organization of information storage and retrieval systems.

COURSE OUTLINE

Unit 1	: Information Retrieval Systems: Basic concepts, Definitions, Objectives, Characteristics, Components and functions. Functional model of an IRS.	08hrs
Unit 2	: Information search: objectives of information search, information search strategies, pre search interview, search logic, search techniques: Proximity search, Phrase search, Field searching, concept searching, Wild Card search , Truncation, Searching of databases, Catalogues etc.	08hrs
Unit 3	: Indexing Systems: Indexing - Meaning, Purpose and Need. An overview of historical development in Indexing. Pre-coordinate Indexing Vs. Post-coordinate Indexing. Pre-coordinate Indexing systems – Brief outline of Chain procedure, POPSI, PRECIS and Keyword Indexing. Post-coordinate Indexing Systems – Uniterm Indexing. Citation Indexing – Meaning and importance, Different citation indexes: Shepard’s Citations, SCI, SSCI. Automatic Indexing – Techniques and methods. Uncontrolled vocabularies.	10hrs

Unit 4	: Vocabulary Control: Vocabulary control – Meaning and importance; Controlled Vs. Free text Indexing; Vocabulary control tools – Subject heading Lists, Thesauri, Thesaurifacet, Classarus. Thesaurus construction techniques. Case Study of Controlled vocabularies/ Ontologies such, ERIC, MeSH, INSPEC, UNESCO-IB, AgroVac,UMLS	08hrs
Unit 5	: IR models. Concept of Ranking. : Structural models – Boolean Model, Probabilistic retrieval model, vector space model. Evaluation of IRS: Purpose; Evaluation criteria; Design of evaluation programmes; Steps of evaluation; Evaluation experiments: Overview of the Cranfield test, MEDLARS, the SMART Retrieval Experiment, The STAIRS project, TREC.	08hrs
Unit 6	: Trends in information retrieval-development, search and retrieval, full text retrieval user information.	06hrs

Selected Reading

Atchison, J., & Alan G. A. (1972). *Thesaurus construction: a practical manual*. London: Aslib.

Austin, D. (1984). *PRECIS: A manual of concept analysis and subject indexing a manual of concept analysis and subject indexing*. (2nded.). London: British Libr. Bibliographic Services Division.

Chowdhry, G. G. (2003). *Introduction to modern information retrieval*. London: FACET Publishing.

Cleveland, D. B. (2001). *Introduction to indexing and abstracting*. Englewood, colo: Libraries Unlimited

Crawford, M. J. (1988). *Information broking: a new career in information work*. London: Library Association.

Ghosh, S. B., & Biswas, S. C. (1998). *Subject indexing systems: concepts, methods and techniques* (Rev). Calcutta: Indian Association of Special Libraries and Information Centres

Lancaster, F.W. (2003). *Indexing and Abstracting in Theory and Practice*. London: Facet Publishing.

Lancaster, F. W. (1968). *Information retrieval systems, characteristics, testing and evaluation*. London: Facet Publishing.

Pandey, S.K., (2000). *Library Information retrieval*. New Delhi: Anmol.

Seetharama, S. (1997). *Information consolidation and repackaging*. New Delhi: ESS ESS.

Van, R. C. J. (1970). *Information retrieval*. (2nded.). London: Butterworths.

Vickery, B.C. (1970). *Techniques of Information retrieval*. London: Butterworths

HardCore	RESEARCH METHODOLOGY	No. of credits: 4 Total =46 Hrs
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COURSE OBJECTIVES:

At the end of the course, the students will be able to:

- Understand the basics of research which include how to identify a research problem and do a comprehensive literature review;
- Be familiarized with different types of research design, formulation of hypotheses, sampling techniques, and how to prepare a research proposal;
- Adopt a suitable data collection method and tool based on the nature of research problem;
- Know how to test hypotheses by applying appropriate statistical tools such as T-Test, Chi-Square, ANOVA, Correlation Analysis;
- Use the statistical software package called Statistical Package for Social Sciences; and
- Prepare a research report adhering to the structural components as prescribed in style manuals like Chicago, MLA, APA, etc.

COURSE OUTLINE

Unit 1	: Foundations of Research: Concept, Meaning and definition, nature, and objectives of research, Types of research, Basic concepts of research. Ethics in research. Areas of research in Library and Information Science. Role of research in the development of scholarship.	08hrs
Unit 2	: Planning of research, The Planning process; Review of literature. Selection of a problem for research - Process of identification, Criteria of selection, Formulation of the selected problem. Hypothesis – Meaning, Types, Functions, Hypothesis; Research design - Essentials of good research design & its importance, Ethical aspects of research; Literature search – print, non-print and electronic sources. Research design / writing the research proposal.	08hrs
Unit 3	: Research methods: Quantitative and qualitative methods of LIS research - Scientific Method, Historical method, Descriptive Method, Survey method, Observation method, Experimental method, Case-Study method. Delphi method and Interview method. Research techniques and tools: Questionnaire - types of questions, structured and unstructured questions. Interview schedule – Types, Merits & limitations; Measurements indices, Pilot studies. Rating scales and checklists.	08hrs
Unit 4	: Research Techniques and Tools/Sampling & data collection: Sampling techniques, Sample design or choice of sampling techniques, sample size, Sampling and non-sampling errors. Meaning and importance of data, Sources of data, Types of data, Use of	08hrs

	secondary data	
Unit 5	: Data analysis and Interpretation/Statistical analysis of data : Descriptive Statistics – measures of central tendency, mean, median & mode; Tabulation and Generalization; measures of dispersion – Range, intermediate ranges, measures of aggregate dispersion, mean-absolute deviation, the variance and covariance , and standard deviation & normal distribution. Chi-square test. Graphical presentation of data and report writing: Meaning & importance, commonly used graphics forms-line graphs or charts. Histograms, Frequency polygons, Ogive bar charts, pie charts & pictogram. Sociometry, Statistical Packages –SPSS.	10hrs
Unit 6	: Research reporting: Organization of report, Structure, Style, Contents, Guidelines of Research Reports, Style Manual – Chicago – MLA-APA etc. E-Citation and Methods of Research Evaluation.	06hrs

Reference Books:

- Busha, C. H., & Harter, S. P. (1986). *Research methods in librarianship: techniques and interpretation*. Orlando: Academic Press.
- Charles, H. et.al (1993) *Research Methods in Librarianship: Techniques and Interpretations*. New Delhi, Sage.
- Gingras, Y. (2016). *Bibliometrics and research evaluation: uses and abuses*. Cambridge, MA: The MIT Press.
- Goode, W. & Hatt, P. K (1989). *Methods in Social Science Research*. Auckland: McGraw-Hill.
- Goode, W. J., & Hatt, P. K. (1968). *Methods of Research*. Sao Paulo: Companhia Editora Nacional.
- Gopal, M. H. (1990.). *An introduction to research procedure in social sciences*. Bombay: Asia,
- Kedage, R. R. I. (1983). *Quantitative methods in library and information science*. New Delhi: Taylor & Francis.
- Kothari, C. R. (2019). *Research Methodology* (4th ed.). New Delhi: New Age International Publishers.
- Krishnaswamy, O. R. (1993). *Methodology for Research in Social Sciences*. Delhi: Himalayan Publishing House.
- Kumar, K. (1992). *Research methods in library and information science*. New Delhi: Vikas.
- Lancaster, F. W (1993). *If you want to evaluate Your Library?*. London: LA.
- Line, M. B. (1982). *Library surveys: An introduction to the use, planning procedure and presentation of survey* (2nd ed.). London: Clive Bingley.
- Young, P. V. (1982). *Scientific Social Surveys and research* (4th ed.). New Delhi: Printice-Hall of India.

HardCore	INFORMATION SYSTEMS AND SERVICES	No. of credits: 4 Total =50 Hrs
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COURSE OBJECTIVES:

At the end of the course, the students will be able to:

- To introduce information systems and identify international organisations devoted to collection, processing and dissemination of information
- To explain the programmes and activities that are being undertaken by such organisations in promotion, coordination and development of library and information services
- To discuss different types, role and function of reference services.
- To explain the types of services library can offer to meet these information needs

COURSE OUTLINE

Unit 1	: Information Services: Concept, meaning, definitions; Scope and Types of Information Services – Traditional Library Services and Web-enabled Library and Information Services; Need and Importance of information services. Types of Information Services: Reference service: Concept and Types -Short and Long Range with examples. Reference process, Steps in providing reference services, Management, technology and resources. Referral service. Reference Collection, Knowledge, Skills and Qualities of a Reference Librarian	10 hrs
Unit 2	: Library Services: Document Delivery Services -Needs and Importance, Types of Document Delivery Services, Current Awareness Services (CAS) and Selective Dissemination of Information (SDI); Abstracting service - Abstracting techniques, Types of abstract, abstracting writing (style, content) Abstracting bulletins. Indexing services; Translation Service. Bibliographic Services, Trend Reports, State of the Art reports and Digests.	08hrs
Unit 3	: Web-Based Library and Information Services: Introduction, Need and Purpose of Web-based Library Services, Web-based Online Public Access Catalogue (Web OPAC), Library Webpage, E-mail, Subject Gateways, Subject portals, Online Bibliographic/Indexing Databases, e-resources, e-CAS and e-SDI, Institutional Repositories, Ask-a-Librarian, Alerting services – Listservs, Real Time Services, Bulletin Boards, Web Forms, FAQs - methods and techniques, Web Based User Education. Virtual Reference Desk (VRD)- Management, technology and resources. The evolution of VRD. Virtual Libraries, Developing portals and virtual Libraries. Data mining for Information.	10hrs
Unit 4	Information Systems: Basic concepts, Meaning, Objectives and Functions. Components of Information System: Structure, Libraries, Documentation Centers, Information centers, Data centers, Information analysis centers, Clearing houses, Data banks, Data Curation centers, Museums, Institutional Repositories, Open Archives, Referral, Publishing Houses.	08hrs

- Unit 5 : Understanding the different systems and their services. Understanding the user communities- Identification of user communities; Introduction to the user centered approach to Information seeking behavior. User Education - methods and techniques. User studies 08hrs
- Unit 6 : Study of National and International Information Systems and Services: NISCAIR, DESIDOC, NASSDOC, NISSAT, SENDOC, ENVIS. Consortia - OCLC, INFLIBNET, UGC-INFONET, DELNET, NICNET, ERNET, INDEST. International Information Systems - CAS, INSPEC, AGRIS, BIOSIS, INIS, MEDLINE, ASINFO, COMPENDEX.ISI. ERIC. 06hrs

Reference Books:

- Asija, S. (1998). *Documentation services in India: A review of some selected documentation centres*. New Delhi: Academic Publications.
- Guha, B. (1983). *Documentation and Information: Services, techniques and systems*. Calcutta: World Press.
- Gupta, B.M. (1991). *Handbook of Libraries, archives, Information centres in India*. New Delhi: Aditya Prakshan.
- Hirsh, S. (2015). *Information services today: an introduction* (1st ed.). Lanham: Rowman and Littlefield.
- Kumar. K. (1990). *Reference service*. New Delhi: Vikas.
- Lucas, A. (1987). *Encyclopedia of information systems and services* (ed). Detroit, MI: Gale Research.
- Maguire, C., Kazlauskas, E. J., & Weir, A. D. (2013). *Information services for innovative organizations*. Bingley: Emerald Group Publishing Limited.
- Neelameghan, A. & Prasad, K.N. (2005). *Information systems and services in India*.(ed.) Bangalore: SRELS.
- Ryan, B. (2014). *Optimizing academic library services in the digital milieu: digital devices and their emerging trends* (1st ed.). Philadelphia, PA: Chandos Pub., an imprint of Woodhead Pub.
- Smith, L. C., & Wong, M. A. (2010). *Reference and information services: an introduction* (5th ed.). Santa Barbara, CA: Libraries Unlimited
- Vickery, B. (1987). *Information systems*. London: Butterworths.

Soft Core	ACADEMIC LIBRARIES AND INFORMATION CENTERS	No. of credits: 3 Total =48 Hrs
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COURSE OBJECTIVES:

At the end of the course, the students will be able to:

- Know how to manage academic library and information centres;
- To collect, organize and dissemination information products and services in the academic libraries and information centers, thereby to provide services to academic community.
- To acquitted with the latest techniques in information processing and develop capability in retrieving information efficiently for academic library and information centers.

COURSE OUTLINE

Unit 1	: Academic Libraries. Meaning, Objectives and Functions. Types of academic Libraries. Role of UGC in academic Library development.	08hrs
Unit 2	: Collection development and collection management – Book selection principles and policies, procedures and problems.	08hrs
Unit 3	: Academic Library services: Virtual Reference Services, Documentation and Information services, Current awareness services, SDI services. Abstracting and Indexing services, Information product development services, ILL document delivery services. Literature survey and bibliography.	08hrs
Unit 4	: Academic Library Finance and Budgeting. Human Resource Management. Library Buildings and Equipments.	08hrs
Unit 5	: Academic Library networks. Library co-operations: Resource sharing, networks and consortia. International and National scenario. Academic networks: INFLIBNET and its services and activities. OCLC – Its activates and functions.	08hrs
Unit 6	: Institutional repositories: Meaning, definitions, need, and benefits. Overview of IR projects. IR software.	08hrs

Reference Books:

Applegate, R. (2010). *Managing the small college library*. Santa Barbara, Calif. :Libraries Unlimited.

Bavakutty, M. (1986). *College libraries in India: a case study* (Vol. 7). Bradford, Eng.: MCB University Press.

Bavakutty, M.(1988). *Libraries in higher education*. New Delhi: ESS ESS.

Cowley, John. (1982). *Personnel management in Libraries*.

Gelfand, M. A. (1968). *University libraries for developing countries*. (Paris, tr. Switzerland): Unesco.

Henry, M. & Morgan, S. (2002). *Practical strategies for modern academic Library*. London: Aslib-IMI.

Isaac, D. et.al. (1993). *Academic Libraries: Role in the national development*.

Jenkins, C. & Mary, M. (1996). *Collection development in academic Libraries*.

Mathu, M. V. & Arora, R. K. *Indian University Library System revitalization*.

Saini, (1976). *Library organisation for higher education*.

Singh, S., & Arora, M. (1995). *Handbook of college Libraries: Problems, finance and related aspects*.

Srivastava, S. N., & Verma, S. C. (1980). *University Libraries in India*. New Delhi: Vikas.

Trehan, G. L. (1985). *College Library development*. London : Bingley.

Soft Core	PUBLIC LIBRARIES AND INFORMATION CENTERS	No. of credits: 3 Total =48 Hrs
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COURSE OBJECTIVES:

At the end of the course, the students will be able to:

- Know how to manage public libraries
- To collect, organize and dissemination information products and services in the public libraries, thereby to provide services to users of public library clientele.
- To acquainted with the latest techniques in information processing and develop capability in retrieving information efficiently for public library users.

COURSE OUTLINE

- Unit 1 : Meaning and definition, origin, objectives, and functions of Public Libraries, History and Development of Public Libraries in India and other countries. Role of Public Libraries in 21st century. 08hrs
- Unit 2 : Role of government and non-government agencies in the development of public Libraries. Role of public Library in literacy and mass education. Public Library users. 08hrs
- Unit 3 : Public Library Finance and Budgeting: Source of public Library finance, Administration of Budget. Study of public Library legislation: Need and importance. An overview of Public Library Acts in UK, USA, and other countries. Public Library Acts in different states with emphasis on Karnataka State Public Library Act, 1965 08hrs

- Unit 4 : Public Library Services: Planning and Organization of various types of Information services to the different categories of users including the physically and mentally challenged persons and special groups: women and children. Rural Library Services; Need and importance; Library users in rural areas. Library services to rural public. 08hrs
- Unit 5 : Library publicity, exhibition, seminar, book talks, A.V. programs; Mobile Library Services; user awareness programmes. Outreach activities. 08hrs
- Unit 6 : Role of national and international associations and organizations in the promotion of public Libraries. Raja Ram Mohan Roy Library Foundation, UNESCO, IFLA etc. Internet Public Library (<http://www.ipl.org>). 08hrs

Reference Books:

- American Library Association (1966). *Minimum standards for public Library system*. Chicago: ALA.
- Atman, E. (1980). *Local library administration in association with International City Management Association*. (2nd ed.). Chicago: ALA.
- Esdails, A. (1957). *National Libraries of the world*. London: Library Association.
- Great Britain, Ministry of Education (1959). *Standards of public Library services in England & Wales*. Report. London: HMSO.
- Kesavan, B.S.(1961). *National Library of India*. Calcutta: National Library.
- McCloven, L.R. (1942). *Public Library system of Great Britain: Report on its present conditions with proposals for reorganization*. London: Library Association.
- McCloven, L.R. (1951). *Public Library extension*. Paris : UNESCO.
- Penna, C.A. et.al. (1977). *National library and information services, handbook for planners*. London: Butterworths.
- R, L.Mittal. (1971). *Public Library law*. Delhi: Metropolitan.
- Ranganathan, S.R. (1950). *Library development plan. A 30 year programme for India with draft Library bill*. Delhi: Delhi University.
- White, Carl M. (1964). *Bases of modern librarianship*. (ed.). New York: Pergmon.

Soft Core	INDUSTRIAL LIBRARIES AND INFORMATION CENTERS	No. of credits:3 Total =48 Hrs
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COURSE OBJECTIVES:

At the end of the course, the students will be able to:

- Know how to manage industrial library and information centres;
- To collect, organize and dissemination information products and services in the industrial libraries and information centers, thereby to provide services to R&D community.
- To acquitted with the latest techniques in information processing and develop capability in retrieving information efficiently for industrial library and information centers.

COURSE OUTLINE

- Unit 1 : The industry –Features, Objectives, Types and structure, Industrial policies, Industrial Information and its impotence, Roles of industrial Libraries, Function and services Industrial Library. Development of Library systems in different countries such as USA, UK and India. 08hrs
- Unit 2 : Industrial Library users- Types, Need, User study and techniques. User education – Importance and implications. 08hrs
- Unit 3 : Collection development policies and procedures. Management of industrial Library collection. Industrial Library Collection - Types, Features and procurement with special reference to parents and specifications; Standards and specifications and trade literature. Problems in collection development. 08hrs
- Unit 4 : Human Resource Management- Characteristic of personnel manager, Functional areas of personnel management, Personnel policies. Industrial Library personnel - Kinds, Qualifications, Duties and Responsibilities, Knowledge and skills. Selection and recruitment and performance. Training, Education and performance evaluation. Human Resource Development for management of industrial Information systems and services. 08hrs
- Unit 5 : Library and Information Services: Reference services, CAS and SDI services, Abstraction/ condensation and Indexing service, Bibliographic service, Document supply service, Information product development service, and Marketing service, On-line Information service. Resource sharing and networking among industrial Libraries. 08hrs
- Unit 6 : Example of industrial Library networks in different countries. Activities and services if Industrial Support Organisations and Documentation Centers- INSDOC, SIDO, SENDOC, SISI, NISSAT, CSIR, UNIDO, WIPO, INPADOC, ICICI, IBID STPI, PERA. Chambers of Commerce and Industry. Professional organizations and associations, Research associations- ASLIB, IASLIC, KSIA, TECSOK. Case study of an industrial Library. 08hrs

Reference Books:

- Ashworth, W. (1985). *Handbook of special librarianship and Information work*. (4th ed.). London: ASLIB.
- Autherton, P. (1977). *Handbook of Information systems and services*. Paris: UNESCO.
- Bakewell, K. G. B., (1969). *Industrial Libraries throughout the world*. Oxford: Pergaman.
- Burket, J. (1968). *Trends in special librarianship*. London: Clive Bingly.
- Chen, C. (1987). *Scientific and Technical Information Sources*. (2nd ed). The MIT Press.
- Claderhead, P. (1972) *Libraries for professional practice*.(ed.). London: Architectural Press.
- Conkling, T. W., & Musser, L. R. (2002). *Engineering Libraries: Building collections and delivering Services*. Haworth Press.
- Hurt, C. D. (1998). *Information sources in Science and technology*. (3rd ed.). London: Libraries Unlimited.
- Jackson, E. B. (1985). *Special librarianship: A new reader*. Metuchen: Scare crow Press.
- Krishan K. (1973). *Research Libraries in the developing countries*. Delhi: Vikas.
- Lord, C. R. (2000). *Guide to Information sources in engineering*. London: Libraries Unlimited.
- Macleod, R. A. & Corlett, J. (2005). *Information sources in engineering (Guides to Information Sources)*. (ed.). New Delhi: K. G. Saur Publications.
- Malinowsky, H. R.(1994). *Reference Sources in Science, engineering, medicine and agriculture*. Oryx Press.
- Mount, E. (1984). *Management of scientific and technical Libraries*. New York: Haworth.
- Pruett, N.J. (1986). *Scientific and Technical Libraries*. vol.2. Orlando: Academic.
- Singh, S. P., & Krishan, K. (2005). *Special Libraries in the electronic environment*. New Delhi: Bookwell.

Soft Core	HEALTH SCIENCE INFORMATION SYSTEMS AND SERVICES	No. of credits:3 Total = 48 Hrs
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COURSE OBJECTIVES:

At the end of the course, the students will be able to:

- Know how to manage academic library and information centers -health science ;
- To collect, organize and dissemination information products and services in the academic libraries and information centers-health science, thereby to provide services to users community.
- To acquitted with the latest techniques in information processing and develop capability in retrieving information efficiently for academic library and information centers-health science.

COURSE OUTLINE

- Unit 1 : Introduction to health Science Libraries: Growth and development of health Science Libraries . 08hrs
Types of health Science Libraries/Information centers.
- Unit 2 : Information services: Current Awareness Service, SDI service, Indexing and abstracting 08hrs
service, Literature search. Users of health Science Information.
- Unit 3 : Health Science Information sources: Sources of Information - Print, Non-print and Electronic 08hrs
media, Institutional Sources of Information. Electronic Sources – e-journals, e-books, databases, Websites – identification, Selection and access. Open Access Sources
- Unit 4 : Health Science Information Institutions: National Medical Library. WHO. UNICEF, ICMR. 08hrs
Department of Biotechnology. Council of Ayurveda and Siddha. Council of Homeopathy. National Institute of Health and Family Welfare. CDRI. CFRI. CFTRI. NIN.NII.NIC
- Unit 5 : Information Systems and Networks: HELLIS, MEDLARS, BIOSIS. Trends in Health Science 08hrs
Information System. Application of Hypertext, Hypermedia, Multimedia.
- Unit 6 : Expert System and Artificial Intelligence- PubMed, Open access in Biomedical. Health 08hrs
Information Networks and Resource Sharing and Consortia approaches. HELINET Consortium, HeLLIS, Northeast Florida Health Information Consortium

Reference Books:

Bakewell, K. G. B. (1969). *Industrial libraries throughout the world*. Oxford, New York: ergamon Press.

Carmel, M. (1995). *Health care librarianship and Information work*. (2nd ed.). London: LA.

Dixit, R. P. (1995). *Information management in Indian medical Libraries*. New Delhi: New Concepts.

Gupta, S. P., & others (1993). *Information technology and health Science (ed.)*. Libraries. MLAI Special Publication.

Malinowsky, H. R. (1994). *Reference sources in Science, engineering, medicine and agriculture*. OryxPress.

Prudence, W. (1993). *Library trends: Libraries and Information services in the health Sciences, Summer 1993*.(ed.). University of Illinois Graduate School.

Sasikala, C. (1994). *Industrial library systems*. New Delhi: Reliance Publication House.

Wood, M. S. (1994). *Reference and Information services in health Science Libraries*. (ed.). Scarecrow Press.

Hard Core	Literature Survey and Field Work /Work Experience	No. of credits: 6
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COURSE OBJECTIVES:

At the end of the course, the students will be able to:

- Make students confident in work in library and information centers
 - Prepare the students understand literature survey and review collected data
- a) Work experience: The M.L.I.Sc. students shall work 2 (two) hours per week in the library identified by the department and submit the work experience report before the commencement of theory examinations.
- b) The students need to submit two copies of their Literature Survey report in the format prescribed by the department.

Fourth Semester

Course Code	Type of Course	Course name	Hrs/Week	Credits
FS02L S-4C1	Hard Core- Theory	Emerging Web-based Technologies in Libraries	4	4
FS02L S-4C2	Hard Core- Theory	Digital Libraries and Digital Content Management	4	4
FS02L S-4P1	Hard Core- Practical	Digital Libraries (Practice)	6	3
FS02L S-4E1	Soft Core- Theory	Discipline Elective: (Any one) d) Users, User Studies and Information Literacy	3	3
FS02L S-4E2		e) Management of Information System		
FS02L S-4E3		f) Bibliometrics and Informetrics		
FS02L S-4WS	Hard Core- Theory	Soft Skills: Communication and Technical Writing Skills	4	4
FS02L S-4PR	Hard Core- Practical	Project work / Dissertation		6
Total Credits				24

HardCore	EMERGING WEB-BASED TECHNOLOGIES IN LIBRARIES	No. of credits:4 Total =48 Hrs
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COURSE OBJECTIVES:

At the end of the course, the students will be able to:

- Able to know the evolution of Internet and Web;
- Understand various services of Internet and Web;
- Able to comprehend the functions and features of the Web 2.0 and web 3.0 applications in Libraries
- To able to apply and use Artificial Intelligence, Expert Systems and Robotics and Social Media in Libraries

COURSE OUTLINE

- Unit 1 : Brief History of the Internet. Web: Evolution-Web 1.0, 2.0, 3.0. and Web4.0, Web resources: 08hrs
Meaning and definition, Growth and development, Evaluation Criteria.Website: History, Overview, Static website, Dynamic website, Types of Websites: Library Website - Importance and Services
- Unit 2 : Web 2.0. and Web 3.0 Definition and Characteristic features. Web 2.0 and Web 3.0 challenges 08hrs
for Libraries. Web 2.0 and Web 3.0 based Library services.
- Unit 3 : Web 2.0 Application in libraries: Social Networking Sites (SNSs): Need and Importance, 10hrs
Types: Facebook, Microbloggers / Microblogging - Twitter, Weblogs or Blogs, Wikis; Instant Messaging (IM) – WhatsApp, Facebook Messenger; Podcasts / Vodcasts: Social Photo and Video Sharing Sites - YouTube, Flickr Instagram, Pinterest, Snapchat. Documents / Presentation Sharing Sites - Slideshare, Google Docs; Academic Social Networking Sites – LinkedIn, Academia.edu. Social Bookmarking Sites and Tagging – Delicious; Mashups, Really Simple Syndication (RSS) feeds. ; Social book marking Metadata. Tags. Tag clouds. Folksonomy, Social networking Criteria for Evaluation Web Resources
- Unit 4 : Web 3.0 Application in Libraries: Mobile Technologies, Quick Response Codes (QR); Cloud 08hrs
Computing Services; GeoTagging. Mobile based Library Services and Tools – Mobile OPAC, Mobile Databases, Mobile Library Website, Library Apps, Mobile Library Instructions, Augmented Reality, SMS Alerts, Geo-Location, Reference Enquiry.)
- Unit 5 : Application of Artificial Intelligence, Expert Systems and Robotics in Libraries; Social Mobile 06hrs
Analytics Cloud (SMAC)
- Unit 6 Case studies of Web 2.0 and Web 3.0 in Libraries. 08hrs

Reference Books:

- Bell, A. (2009). *Exploring Web 2.0: second generation internet tools - blogs, podcasts, wikis, networking, virtual worlds, and more*. Georgetown, TX: Katy Crossing Press.
- Campeato, O., & Nilson, K. (2011). *Web 2.0 fundamentals with Ajax, development tools, and mobile platforms*. Sudbury, MA: Jones and Bartlett Publishers.
- Casey, M. E., & Savastinuk, L. C. (2007). *Library 2.0: a guide to participatory library service*. Medford, NJ: Information Today.
- Courtney, N. (2007). *Library 2.0 and beyond: Innovative technologies and tomorrows user*. Westport, C: Libraries Unlimited.
- Governor, J., Nickull, D., & Hinchcliffe, D. (2009). *Web 2.0 Architectures*. Sebastopol, CA: O'Reilly Media, Inc.
- Jones, K. M. L., & Farrington, P.-A. (2011). *Using WordPress as a library content management system*. Chicago, IL: ALA TechSource.
- Ndubisi, N. O. (2006). *Content management systems*. Bradford, UK: Emerald.

Shah, S. (2008). *Web 2.0 security defending Ajax, Ria, and Soa*. Boston: Course Technology

Shelly, G. B., & Frydenberg, M. (2011). *Web 2.0: concepts and applications*. Boston, MA: Course Technology.

Shuen, A. (2008). *Web 2.0: a strategy guide*. Sebastopol, CA: OReilly Media.

Solomon, G., & Schrum, L. (2010). *Web 2.0 how-to for educators*. Eugene, OR.: International Society for Technology in Education.

Vossen, G., & Hagemann, S. (2007). *Unleashing Web 2.0: from concepts to creativity*. Amsterdam: Elsevier Morgan Kaufmann.

Hard Core-	DIGITAL LIBRARIES AND DIGITAL CONTENT MANAGEMENT	No. of credits: 4 Total = 48 Hrs
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COURSE OBJECTIVES:

At the end of the course, the student should be able to:

- Design and develop digital library.
- Demonstrate the knowledge of the major design tools for e-publishing that are required for developing electronic documents
- Know the digitisation and edit text process, graphics, audio and video information;
- Acquire authoring skills required for Content Management System
- Be familiarized with the design and development principles and rules of e-publications.

COURSE OUTLINE

Unit 1	: Meaning and Definitions, Objectives, Characteristics, advantages and challenges; digital libraries vs. traditional libraries. Digital Resources: Concept, characteristics and types: Born digital, legacy documents and online resources. Digital File Format- electronic documents, e-books, audio books, e-journals, e-reference sources, files and file formats - JPEG, MPEG, GIF, TIFF and PDF: features, creation of PDF files. Digital Content creation - Digitization; tools and techniques, book scanners, scanning software, OCR, Document Management System.	08hrs
Unit 2	: Evolution of digital libraries- study of digital library initiatives and Organizations contributing to development of DL. Digital library conferences- JCDL, TPDF (ECDL) and ICADL. Role of DL in education and research. Institutional Repository (IR): Institutional Repository: Concept, Definition and Importance; Steps in Creation of Institutional Repository; Electronic Thesis & Dissertation(ETD)	08hrs
Unit 3	: Design and development of digital library: Digital library architecture, Interoperability, Compatibility, Protocols and standards and User Interfaces. Digital Rights Management (DRM) and Access Control, security, Digital Preservation and Archiving issues. Studying the	08hrs

	features of DSpace, and EPrints- Comparative evaluation.	
Unit 4	Understanding content and content management systems. Roots and Branches of CMS; CMS elements, issues, and challenges; Functionality and Interaction issues; Studying Information Architecture, Content tagging and Metatoring, and Data Interaction. Study of CMS software packages - Joomla, Drupal, Wordpress and Moodle	08hrs
Unit 5	: Digital content management: persistent identifiers – handle system, DOI, Open URL, CrossRef and other aspects. Digital Library Management: Resource linking, Security and backup.	08hrs
Unit 6	: Open Access Movement and Institutional repositories. Study of select digital Libraries and IRs –Project Gutenberg, California Digital Library, Alexandria Digital Library, ArXive; Cogprintis; Indian Scenario -Digital Library Initiatives: Shodhganga, NDLTD, Internet Archive, Digital Library of India (DLI), National Digital Library (NDL).	08hrs

Reference Books:

- Arms, W. Y. (2005). *Digital libraries*. New Delhi: Ane Books.
- Arthur, M. H. (2006). *Expanding a digital content management system: for the growing digital media enterprise*. Amsterdam: Elsevier Focal Press.
- Bhardwaj, R. K. (2016). *Digitizing the modern library and the transition from print telectronic*. Hershey, PA: IGI Global.
- Chowdhury, G. G., & Chowdhury, S. (2003). *Introduction to digital libraries*. London: Facet.
- Corrado, E. M., & Sandy, H. M. (2017). *Digital preservation for libraries, archives, and museums(2nd ed.)*. Lanham: Rowman & Littlefield.
- Eden, B. L. (2008). *Content management systems in libraries: case studies*. Lanham, MD: Scarecrow Press.
- Hussey, T. (2011). *Using WordPress*. INpolis, IN: Que Publishing/ Pearson Education.
- Mackenzie, A., & Martin, L. (2016). *Developing digital scholarship: emerging practices in academic libraries*. Chicago: Neal Schuman, an imprint of the American Library Association.
- Mauthe, A., & Thomas, P. J. (2004). *Professional content management systems: handling digital media assets*. Chichester: John Wiley & Sons.
- Paulus, T. M., Dempster, P. G., & Lester, J. N. (2014). *Digital tools for qualitative research (1st ed.)*. London: SAGE Publ.
- Purcell, A. D. (2016). *Digital library programs for libraries and archives developing, managing, and sustaining unique digital collections*. Chicago, IL: Neal-Schuman, an imprint of the American Library Association.
- Ron S., & Kenneth C. (2010). *Using Joomla*. Beijing, Cambridge:O'Reilly.
- Shreves, R., & Dunwoodie, B. (2011). *Drupal 7 bible*. Indianapolis, IN: Wiley.
- Xie, I., & Matusiak, K. (2016). *Discover Digital Libraries: Theory and Practice (1st ed.)*. San Diego, CA, USA: Elsevier Science.

Hard Core	DIGITAL LIBRARY AND CONTENT MANAGEMENT SOFTWARE (PRACTICE)	No. of credits: 3 Total = 64 Hrs
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COURSE OBJECTIVES:

At the end of the course, the student should be able to:

- Build a digital collection in a library and Information Centres.
- Digitise the process of text, audio and video
- Practically apply Digital library and Content management Software

COURSE OUTLINE

Unit 1 : Installation of DSpace/Eprint.

Unit 2 : Building collection to DSpace/Eprint.

Unit 3 : Installation of - Drupal / Joomla

Unit 4 : Customization of - Drupal / Joomla

(Note: Each student should maintain Practical Record and submit the same at the time of Practical Examination)

Note: Marks for Practical Examination:

60 Marks for practical Examination (Semester exam)

10 Marks for Practical Record

30 marks Average score of two Practical Tests conducted (Internals)

Soft Core	INFORMATION USERS, USER STUDIES AND INFORMATION LITERACY	No. of credits: 3 Total = 48 Hrs
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COURSE OBJECTIVES:

At the end of the course, the students will be able to:

- Able to know the characteristics of different users and categorise them into specific groups;
- Discuss the relation of user studies in the design of information systems, products and services;
- Explain the essential steps and methodologies necessary in planning of user study/information literacy programs;
- Explain the concept and meaning of user education;
- Critically evaluate the effectiveness of user education programmes and information literacy
- Briefly describe the user education and information literacy scenario in India and the world.

COURSE OUTLINE

Unit 1	: Information user and their needs: Categories of information users; Information seeking behavior: Concept, definitions and models of Information Seeking Behaviour (ISB).	08hrs
Unit 2	: User studies: Concept, definition, importance of user studies, Types of user's studies; Methods, techniques and Strategies of user studies. Method of Data Collection – Interview method, questionnaire, Dairy and Observation methods.	08hrs
Unit 3	: User Education: concept, meaning and definition, Need and scope, planning and designing of user education. Methods and techniques of user education programme;	08hrs
Unit 4	: Information literacy: Meaning, Definition, Need, Importance Historical perspective of Information literacy. User education to information literacy. Types of Information Literacy: Library Literacy, Technology literacy, media literacy, computer and digital literacy, research literacy. Levels of Information Literacy: Entry level, Mid-level, High level, Advanced level. Lifelong learning and its components.	10hrs
Unit 5	Partners of Information literacy. Models and Standards: Models- SCONUL model and Empowering 8 model, B-6, Seven Pillar, ELLIS. Standards- ALA, IFLA ACRL. Taskforces and forums. Information literacy programmes. Role of Libraries in Information literacy. Information literacy instructions in different types of Library and Information centers	08hrs
Unit 6	Current trends in Information literacy. Study of Information literacy programs in the world. Information Literacy Competencies. Challenges facing Information literacy.	06hrs

Reference Books:

Barker, K., & Lonsdale, R. (1994). *Skills for life: the value and meaning of literacy*. London: Taylor Graham.

Bawden, D.(2001). *Information and digital literacies: a review of concepts*. <http://gti/edu.um.es.8080/gomez/hei/intranet/bawden/pdf>.

Ercegovac, Z. (2008). *Information literacy: search strategies, tools & resources for high school students and college freshmen*. California: ABC-CLIO.

Meadows, A. J. (1991). *Knowledge and communication: essays on the information chain*. London: Library Association Pub.

Pantry, S., & Griffiths, P. (2002). *Creating a successful e-information service*. London: Facet.

Spitzer, K. L., Eisenberg, M. B., & Lowe, C. A. (2004). *Information literacy: Essential skills for information age*. London: Libraries unlimited.

Soft Core	MANAGEMENT INFORMATION SYSTEM (MIS)	No. of credits: 3 Total =48 Hrs
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COURSE OBJECTIVES:

At the end of the course, the students will be able to:

- Know the need and importance of information/knowledge in decision making
- Able to know the complex theories and practice of knowledge and intellectual capital management
- Formulate action plans for knowledge intensive organisations
- Formulate a framework for thinking about knowledge intensive organizations and work with intangibles.

COURSE OUTLINE

- Unit 1 : Introduction to fundamental issues of information systems (IS), MIS-concept, meaning and definitions, components and objectives of MIS. 08hrs
- Unit 2 : Understanding of the overall information needs of an organization: analysis of organization information requirements, and prioritizing IS project, Analysis of information needs, specification of system requirements, analysis of alternatives, design of alternatives. 08hrs
- Unit 3 : Overview of managerial applications of information technology (IT) to increase effectiveness of organizations, cooperative work, organizational competitive advantage and inter- organizational communication. 08hrs

- Unit 4 : Knowledge Management: Concept, Definition, Purpose of KM, Need and Scope, Historical Development, Role of KM, Impact on Society, Knowledge Management Approaches, Information Technology and Knowledge Management. Application of Knowledge Management in LIS centers, Role of Information Professionals in Knowledge Management. 10hrs
- Unit 5 : Information Systems planning: Use of case methods in planning Information Systems. 06hrs
- Unit 6 : Decision Support Systems, ERP, state-of-the-art techniques for information systems specifications and design, Real-time structured analysis and design, and object-oriented analysis and design. Quantitative methods and tools for analysis and decision making. 08hrs

Reference Books:

- Bocchino, W. A. (1972). *Management information systems*. London: Prentice-Hall International.
- Davis, G. B., & Margrethe, H. O. (1974). *Management information systems: conceptual foundations structure and development* (2nd ed.). New Delhi: Tata McGraw-Hill Publishing Company limited.
- Dickson, G. W., & Wetherbe, J. C. (1985). *The management of information systems*. New York: McGraw-Hill.
- Effy, O. Z., (2006.). *Management Information Systems*. New Delhi: Cengage learning India Pvt. Ltd.
- Franks, R. V. (1988). *Management information systems*. London: Kogan Page.
- Gordon, B. (1974). *Management Information System: Conceptual Foundations, Structure and Developmen*. New York: Davis, McGraw-Hill Book Company.
- Khaisar, M. K., Mallaiah, & Vishala, B. K. (2014). *Proceedings of the National Conference on 'Democratization of Information using ICT: Role of Libraries for Social Enlightenment (Demict-2014), DLISc. Mangalagangothri. ISBN:978-93-82845-33-1*
- Kroenke, D.M. (1992). *Management information systems*. New York: McGraw-Hill.
- Kulkarni, R. V., & Joshi, M. J. (2007). *Role of management information system for university administration*. New Delhi: Ess Ess Publications.
- Laudon, K. C., & Laudon, J. P. (2002). *Management information systems: organization and technology*. New Delhi: Prentice-Hall.
- Muneesh, K. (1999). *Business information systems*. New Delhi: Vikas Publishing house .
- Prajapathi, R. S. (2013). *Theories and practices of library management* (1st ed.). New Delhi: Discovery Pub. House.
- Sadagopan, J. (2007). *Management information systems*. Delhi: Prentices Hall of India Private limited.
- Singh, S. K. (2002). *Essentials of Integrated Library Management*. New Delhi: Prist Publisher.

Soft Core	BIBLIOMETRICS AND INFORMETRICS	No. of credits: 3 Total = 48 Hrs
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COURSE OBJECTIVES:

At the end of the course, the student will be able to:

- Be familiar with the concept of bibliometrics, informetrics, scientometrics, webometrics and altmetrics
- Carry out quantitative studies on various subject fields.
- Get acquainted with the concept of citation analysis, different forms of citation, impact factor etc.
- Apply qualitative as well as quantitative techniques in library and information science.

COURSE OUTLINE

Unit 1	: Concept, Meaning, Definitions, Scope, Need and Purpose. Evolution from Librametrics to infographics Basic concepts: Bibliometrics, Informetrics, Scientometrics and Altmetrics: – Meaning, definitions and scope. Study and application of Classical Bibliometric Laws – Lotka's law of scientific productivity, Bradford's law of scatter, and Zipf's law of word occurrence. Other notable regularities: 80/20 rule, Success-breeds-success model, law of Price.	08hrs
Unit 2	: Study of the citation concepts: citation analysis, citation network, citation matrix, bibliographic coupling, co-citation analysis, Journal Citation Reports. Sources of Data: Science Citation Index Expanded, Social Science Citation Index, PopLine, Arts and Humanities Citation Index, LISA, Science Direct, PubMed, Ovid, Emerald Insight, Scopus.	08hrs
Unit 3	: Growth and obsolescence of literature. Various growth models, Logistic, Power. Obsolescence, the half-life analogy, determination of aging factor and half life, real vs apparent, synchronous and diachronous.	08hrs
Unit 4	: Scientometrics: Scientific Productivity: Citation Analysis: Authorship Study, Collaboration, Techniques of authorship studies. Altmetrics: Concept, Meaning and Definitions, Advantage and Limitation, Scope criteria of Measure	08hrs
Unit 5	: Webometrics: Concept, Meaning and Definitions, URL, Web decay, Link Checker, half life, web archives.	08hrs
Unit 6	: Science Indicators and Policy. Science Indicators. Science Policy Development. Web Impact Assessment. Link Analysis. Trends in informetrics.	08hrs

Reference Books:

- Abraham, R.H. (1996). *Webometry: Measuring the complexity of the World Wide Web*. Santa Cruz: Visual Math Institute, University of Claifornia.
- Ajiferuke, I., Burell, Q., & Tague, J. (1988). Collaborative coefficient: A single measure of the degree of collaboration in research. *Scientometrics*, 14(5-6), 421–433. doi: 10.1007/bf02017100
- Ashraf, U., & Kumar V. S (2014). Measuring research output and collaboration in South Asian countries. *Current Science*, 107(1).
- Biradar, B.S. ,& Sampathkumar, B.T. (2003).Chemical Technology literature: An obsolescence study, *Annals of Library and Information Studies*, 50(4), 156-162.
- Castellano, K. E., & Ho, A. D. (2013). *A Practitioners Guide to Growth Models*. CCSSO, ERIC Clearinghouse.
- Egghe, L. ,& Rousseau, R.(2001). *Elementary statistics for effective library and information service management*. London : Aslib,
- Garfield, E.(1979). *Citation Indexing: Its theory and applications in Science, technology and humanities*. New York: John Wiley.
- Meadows, A. J. (1974). *Communication in science*. London: Butterworths.
- Neuendorf, K. A. (2002). *The content analysis guidebook*. Los Angeles: SAGE.
- Nicholas D.,& Ritchi, M. (1979). *Literature & bibliometrics*. London: CliveBingley.
- Ravichandra, R. (1985). *Quantitative methods for library and information science*. NewDelhi: Wiley Eastern
- Sangam, S.L. (2015). *Scientometrics: Quantitative Methods for Library and Information science*.Dharwad:Content Craft.
- Thelwall, M. A. (2009). *Introduction to webometrics: quantitative web research for the social sciences*. San Rafael, CA: Morgan & Claypool Publishers.

Hard Core	COMMUNICATION AND TECHNICAL WRITING SKILLS	No. of credits: 4 Total = 48 Hrs
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COURSE OBJECTIVES:

At the end of the course, the students will be able to:

- know the basics of communication and technical writing and its types along with their characteristics;
- understand how to prepare short communications, review articles, technical report, monographs, project proposals, dissertations/theses and house bulletins;
- get familiarized with the editorial process and editorial tools such as Dictionaries, Style Manuals, Standards and specifications;
- acquire the knowledge on effective presentation of ideas by using Tables, Line graphs, Bar graphs, Pie charts, Charts, and Illustrations; and
- understand the criteria for evaluation of scientific and technical communications and presentations.
- understand various workplace skills required for being a competent professional; and
- know how to acquire job related skills such as preparing personal profile, interview, and public relations.

COURSE OUTLINE

Unit 1	: Communication skills –Effective speaking. Improving vocabulary and grammar. Elements of effective speaking. Types of speaking – Briefing, teaching, lectures, speeches and others. Stages in the preparation - understanding the audience, audience analysis, subject , gathering materials, evaluating materials, presenting a talk, and other processes . Non-verbal communication and body language	08hrs
Unit 2	: Writing Skills – Principles of presentation of ideas – Techniques and tools for effective writing – Internal and External correspondence at the workplace – preparation of a project proposal/research papers. Basics of Technical Writing – Definition, Overview, Purpose, Types, Characteristics, Functions – Target group in Written Communication – Reader / Writer Relationship. Technical Writing Process: Planning, drafting, editing, finishing and producing the document, Readability and Aberrations in Technical Writing – Preparation of Short Communications, Review Articles, Technical Report, Monographs, Project proposals, dissertations/theses and House Bulletins.	10 hrs
Unit 3	: Technical Editing and Editorial Tools: Editor – Editorial process – Editorial Tools - Dictionaries, Style Manuals, Standards and specifications. Technical Writing Style: Language	08hrs

and technical Skills, styles, Semantics, Syntax, Diction, Sentence Structure, Readability. Technical Writing Techniques – Information searching and gathering skills, Summarizing, - Designing pages – Elements of page design, basic design guidelines; Designing pages: Tables, Line Graphs, Bar graphs, Pie Charts, Charts and illustrations, footnotes and end notes.

Unit 4	: Technical Communications : Structure and format of journal articles, seminars/ conference papers, review articles, technical reports, research proposals, monographs, dissertations / theses. Technical Presentations and Evaluation – Use of MS-Office for the preparation, production and presentation of scientific and technical communications – use of multimedia facilities for presentation – Criteria for evaluation of scientific and technical communications and presentations – Technical Writing Software Tools.	08hrs
Unit 5	: Workplace Skills – Telephone Skills – Group Discussion - Body Language. Leadership and working in teams. Working collaboratively. Working and sharing knowledge and experience. Team development. Meetings and negotiation skills. Different types of meetings including video conferencing, conference calls. Conducting a meeting. Getting the best out of negotiation. Negotiation strategies.	08hrs
Unit 6	Job Related Skills – Preparing Personal Profile, Portfolio, Resume – Job Interview – Public Relations; Different types of meetings and Negotiation Strategies.	06hrs

Reference Books:

Alex, K. (2017). *Soft skills: Know yourself & know the world*. New Delhi: S. Chand & Company Ltd.

Corfield, R. (2009). *Preparing the perfect CV: how to make a great impression and get the job you want*. London: Kogan Page.

Forsyth, P. (2009). *How to be better at writing. Reports and proposals*. London: Kogan Page.

Greenhall, M. (2004). *Report writing skills training course: how to write a report and executive summary and plan, design and present your report: an easy format for writing business reports*. Lancashire: Universe of learning.

Gupta, N. K. (2012). *Cracking the Job Interviews*. G4 IBC Academy.

Gupta, S. (2009). *Personality development and communication skills*. Jaipur, India: Book Enclave.

Hamp-Lyons, L., & Heasley, B. (2006). *Study writing: a course in written English for academic and professional purposes*. UK: Cambridge.

Hewings, M., & Thaine, C. (2012). *Cambridge Academic English CI Advanced Student's Book*. Cambridge University Press

Karten, N. (2010). *Presentation Skills for Technical Professionals: Achieving Excellence*. IT Governance Ltd.

Kirkman, J., & Turk, C. (2015). *Effective writing: improving scientific, technical and business communication* (2nd ed.). London: Taylor & Francis.

Riordan, D. G. (2004). *Technical report writing today* (8th ed.). Boston, MA: Wadsworth, Cengage Learning.

Rogers, J. (2011). *Job interview success: your complete guide to practical interview skills*. New York: McGraw-Hill Professional.

Society for Technical Communication. Code for communicators. (1998). Washington D C : STC.

Staples, K., Ornatowski, C., & Killingsworth, J. M. (1997). *Foundations for teaching technical communication: Theory, practice and program design*. London: Ablex Pub. Corp.

Taylor, N. (2009). *Brilliant business writing: how to inspire, engage and persuade through words* (1st ed.). Harlow England: Prentice Hall.

Winokur, J. (1986). *Writers on writing*. Philadelphia, PA: Running Press.

HardCore	PROJECT WORK / DISSERTATION	No. of credits: 6
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COURSE OBJECTIVES:

At the end of the course, the students will be able to:

- Make students confident in preparing dissertation report independently
- Prepare the students understand various practical problems in data collection, data management, analysis and interpretation
- Application of suitable statistical tools and methods studied in the programme for data analysis using Statistical software/packages.
- Develop application research methodology and report writing,

The Dissertation shall start from beginning of the III semester and it should be submitted before the End of IV Semester Exams.

At the end of the fourth semester the students need to submit two copies of their project report in the format prescribed by the department. The project Dissertation should include the details on the real situation in library and information centres, data related to the problem, the statistical methods used for the data analysis, the tenability of the hypothesis related to the problem and the inferences drawn.



List of Journals in Library and Information Science

Sl. No.	Title of The Journal	Publisher	ISSN
Indian Journals			
1.	Annals of Library and Information Studies	National Institute of Science Communication and Information Resources (NISCAIR)	09725423
2.	DESIDOC Journal of Library and Information Technology	Defence Scientific Information & Documentation Centre (DESIDOC)	09740643
3.	College Libraries	West Bengal College Librarians Association	0972-1975
4.	IASLIC Bulletin	Indian Association of Special Libraries and Information Centres	0972-1975
5.	Journal of Indian Library Association	Indian Library Association	2277-5145
6.	SRELS Journal of Information Management	Informatics Publishing Limited and Sarada Ranganathan Endowment for Library Science	0972-2467
International Journals			
7.	International Journal of Information Management	Elsevier	0268-4012
8.	Journal of Information Technology	Springer Nature	0268-3962
9.	Library Hi Tech	Emerald	0737-8831
10.	Electronic Library	Emerald	0264-0473

List of Books in Library and Information Science

Isaac, K. A. (2004). *Library legislation in India: A critical and comparative study of state Library acts book description*. New Delhi: Ess Ess Publication.

Kumar, G. (1988). *Library development in India*. New Delhi: Vikas.

Kumar, P. S. G. (2011). *Foundations of Library and Information Science. Paper I of Ugc Model Curriculum*. B.R. Publishing Corporation.

Ranganathan, S. R. (2006). *The Five Laws of Library Science*. Bangalore: ESS ESS.

Anil, D., & Yashada, R. (2005). *Learn Library Science Series*. New Delhi: ESS Publication.

Ranganathan, S. R. (1992). *Reference service* (2nd ed.). Bangalore: Sarada Rangnathan Endowment for Library Science.

Singh, G. (2013). *Information sources, Services and Systems*. India: PHI Learning Private Limited.

Parashar, R.G. (1991). *Information and its communication*, New Delhi: Medallion Press.

Dhyani, P. (1998). *Library Classification: Theory and practice*. New Delhi: VishwaPrakashan.

Kumar, P. S. G. (2003). *Knowledge organization, Information processing and retrieval theory*. Delhi: BR.

Ranganathan, S. R. (1957). *Prolegomena to Library Classification* (2nd ed.). London: LA.

Sajija M. P (2013). *The Theory and Practice of the Dewey Decimal Classification System*. New Delhi: Chandos Publishing.

Anil Kumar Dhiman&Yashoda Rani (2004) *Library Management : A Manual for Effective Management*, Ess Ess Pubns.

Kumar, K. (1987). *Library administration and management*. New Delhi: Vikas Publications.

Mittal, R. L. (1984). *Library administration: theory and practice*. New Delhi: Ess Ess Publications.

Prajapati, R. S. (2013). *Theories and practices of library management*. New Delhi: Discovery Pub. House.

ALA. (2002). *Anglo-American cataloguing rules* (2 nd rev). New Delhi: Oxford.

Barbara, M. W. (1997). *Sears list of subject headings*. New York: H.W. Wilson.

Kumar, K. (1981). *An Introduction to Cataloguing & Practice*. New Delhi : Vikas Publishing House.

Mishra A.R., & Ahmad M.D. (2004). *Issues in Digital Cataloging*. Shree Publishers & Distributors : New Delhi,

- Ranganathan, S. R. (1950). *Library Catalogue: Fundamentals and procedures*. LA: Madras.
- Ranganathan, S. R. (1955). *Headings and canons*. Madras: S Vishwanathan.
- Ranganathan, S. R. (1998). *Classified Catalogue code*. Madras : UBSPD.
- Ahmad, H., & Alam, M. (2016). *Library automation in India: an evaluative study*. New Delhi: Ane Books Pvt. Ltd.
- Banerjee, K., & Parks, B. (2017). *Migrating library data: a practical manual*. Chicago: ALA Neal-Schuman, an imprint of the American Library Association.
- Jost, R. M. (2016). *Selecting and implementing an integrated library system the most important decision you will ever make* (1st ed.). Amsterdam: Elsevier.
- Anglo-American Cataloguing Rules (2002) 2nd RevEd.
- MARC 21 and Related standards for Bibliographic Records. New York: LC.
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