

 Estd. 1962 "A++" Accredited by NAAC (2021) With CGPA 3.52	SHIVAJI UNIVERSITY, KOLHAPUR 416 004, MAHARASHTRA PHONE : EPABX - 2609000, BOS Section - 0231-2609094, 2609487 Web : www.unishivaji.ac.in Email: bos@unishivaji.ac.in शिवाजी विद्यापीठ, कोल्हापूर, ४१६ ००४, महाराष्ट्र दूरध्वनी - इपीबीएक्स - २०६०९०००, अभ्यासमंडळे विभाग : ०२३१- २६०९०९४, २६०९४८७ वेबसाईट : www.unishivaji.ac.in ईमेल : bos@unishivaji.ac.in	 
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Ref.: SU/BOS/ IDS / 606

Date: 08 - 10- 2025

To,

The Head,
 Departments of Library,
 Shivaji University, Kolhapur.

Subject : Regarding revised syllabi of **Library and Information Science** degree programme under the Faculty of Inter- Disciplinary Studies as per NEP-2020 (2.0).

Sir/Madam,

With reference to the subject mentioned above, I am directed to inform you that the university authorities have accepted and granted approval to the revised syllabi, nature of question paper and equivalence of **Library and Information Science** for follower's degree programme under the Faculty of Inter- Disciplinary Studies as per National Education Policy, 2020 (NEP 2.0).

Course
Master of Library and Information Science. Part – I
Bachelor of Library and Information Science Part – I
Ph. D. Library and Information Science

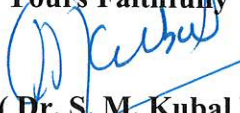
This syllabus, nature of question and equivalence shall be implemented from the academic year **2025-2026** onwards. A soft copy containing the syllabus is attached herewith and it is also available on university website www.unishivaji.ac.in NEP-2020 (Online Syllabus)

The question papers on the pre-revised syllabi of above-mentioned course will be set for the examinations to be held in October /November 2025 & March/April 2026. These chances are available for repeater students, if any.

You are, therefore, requested to bring this to the notice of all students and teachers concerned.

Thanking you,

Yours Faithfully


 (Dr. S. M. Kubal)
 Dy Registrar

Encl. : As above.

Copy to: For Information and necessary action.

1	The Dean, Faculty of IDS	7	Affiliation T. 1 & T. 2 Section
2	Director, Board of Examination and Evaluation	8	Appointment A & B Section
3	The Chairman, Respective Board of Studies	9	P.G.Seminar Section
4	All On Exam Section	10	I.T. Cell
5	Eligibility Section	11	Internal Quality Assurance Cell (IQAC)
6	P. G. Admission Section		

SHIVAJI UNIVERSITY, KOLHAPUR



Reaccredited by NAAC with 'A⁺⁺' Grade with CGPA 3.52

Syllabus For
Master of Library and Information Science
(As Per the National Education Policy, 2020)
(Faculty: Interdisciplinary Studies)

SEMESTER I AND II

(Syllabus to be implemented from A.Y. 2025-2026 onwards)

Syllabus For
Master of Library and Information Science
(Level-9) as Per the National Education Policy, 2020

1. **PROGRAMME TITLE: Master of Library and Information Science**
under the Faculty of **Interdisciplinary Studies**

2. **YEAR OF IMPLEMENTATION: -**
Revised Syllabus will be implemented from June 2025 - onwards.

3. **GENERAL INFORMATION**
The Department of Library and Information Science started the Master of Library and Information Science course in 1986-87. The programme leading to the degree of Master of Library and Information Science is primarily intended to develop the professional abilities of students in Academic, Public, Special libraries and similar Library and Information Centres.

4. **PROGRAMME EDUCATIONAL OBJECTIVES:**

1. To provide an understanding of the vital and pervasive role of information as an essential resource in all developmental activities.
2. To acquaint the students with the application of modern management techniques and ideas essential for Library and Information Science.
3. To provide a thorough insight in to all techniques of information handling with special emphasis on the application of information technology.
4. To train the students to develop their insight and skills in recent trends in collection, organization and transfer of information by using emerging technologies.
5. To provide necessary skills and ICT background for designing, implementing, operating and managing Libraries and Information Centres.

5. PROGRAMME OUTCOMES:

LIS Students:

1. Will be trained in Technological knowledge and professional skills.
2. Will be able to effectively administer and manage Libraries and Information Centers.
3. Will learn the skills of organizing information and recorded knowledge.
4. Will become competent for job opportunities in LIS and the related field.

6. PROGRAMME SPECIFIC OUTCOMES:

LIS Students:

1. Can manage information resources and the information life-cycle through the processes of collection development, organization, preservation, curation, access, and dissemination in accordance with physical, virtual, and technical infrastructure and needs.
2. Can design and implement policies essential for creating and providing information services and resources guided by the values of patron privacy, equitable access, intellectual freedom, and ethical use of information.
3. Can perform and access research based practices through the application of information literacy, inquiry, and research methods including data discovery, analytics and qualitative measures.

7. INTAKE CAPACITY: Twenty (20)

8. DURATION

- The programme shall be a full time regular programme
- The duration of programme shall be of one year of two Semesters.

9. PATTERN:-

Pattern of examination is semester with 60: 40 (100 marks) for 4 Credits and 30: 20 (50 marks) for 2 Credits (NEP-2020). 70+30 (100 Marks) for SWAYAM Course (S.N.394) [Sem.II, DSC- 5 - Science Communication: Research Productivity and Data Analytics using Open Source Software]

10. ATTENDANCE:

Minimum attendance for each semester is 75% of the total number of Theory, Tutorial, Practical, Seminar, and Group Discussion periods.

11. FEE STRUCTURE: (as applicable to self-supporting course)

Fees will be applicable as per University Rules/ Norms

12. ELIGIBILITY FOR THE PROGRAMME:

Candidates seeking admission to the Master of Library and Information Science programme must hold Bachelor of Library and Information Science Degree (level-8) of this University or equivalent thereto of any other University.

13. ADMISSION PROCESS:

- It is mandatory for students who want to seek admission to the MLISc programme; they have to apply online through the university portal.
- The admissions will on the basis on merit of BLISc programme and reservation policy of the Govt. of Maharashtra
- An application in the prescribed form along with necessary testimonials for admission to the B. Lib. and I. Sc. programme must be accompanied with prescribed fees.
- The last date of application for the admission for M. Lib. and I. Sc. programme shall be notified by the University in the newspapers and on the university Website.

14. REFUND OF MONEY:

- i. Library Deposit shall be refunded only at the end of the programme after making such deductions for loss of books etc. as may be required. A student shall withdraw his/her amount of deposit within six months after the declaration of results. If not withdrawn within the prescribed time, it may be forfeited.
- ii. No other fees are refundable.

15. MEDIUM OF INSTRUCTION:

Medium of instruction shall be in English and Medium of Examination shall be in English or Marathi.

16. HOSTEL:

There are men and women Hostels on the University premises and as per the rules in this behalf, the students will be accommodated in these hostels. Students desirous of taking admission to the University Hostels are requested to fill in the hostel admission form and complete the necessary formalities along with form of admission to the programme. Students are required to observe rules and regulations of hostel accommodation.

- **General Rules:**

- Students of this University must submit their Transference Certificate (from the College/University last attended) before 14th August without fail.
- No student will be allowed to appear for a Post-graduate Examination unless he/she has taken his/her Bachelor's Degree Certificate.
- Students from other Universities should apply for Eligibility Certificate on or before 31st August after their admission to this University.
- Seats are reserved for students belonging to Scheduled Castes, Scheduled Tribes etc. as per the Resolutions passed by the State Government from time-to-time.
- No application form for admission to an examination will be accepted unless all dues are cleared by the student.
- A candidate shall be admitted to the examination for M. Lib. and I. Sc. programme if :
 - i) He/ She has kept two semesters for the M. Lib. and I. Sc. programme satisfactorily and necessary attendance as per rules
 - ii) He/ She has satisfactorily completed the prescribed programme of Practical work, Seminars, Tutorials and Assignments.

❖ **Seminar, Project Report and Practicals**

- The candidates shall be allowed to appear for the final examination provided they fulfill the following conditions:
 - a) He/she has kept two semesters satisfactorily and necessary attendance as per the rules.
 - b) The Project report shall be on an approved topic pertaining to Library and Information Science. Each student shall work under the supervision and guidance of a teacher for his/her Project report.
 - c) The Project report (3 copies) duly approved by the Guide must be submitted through the Head of the Department One week before the commencement of the final practical Examination, failing which the candidates will not be allowed to appear for the examination. In addition, the student will have to submit a soft copy of the Project report in PDF.
 - d) A certificate stating that the Project report is the outcome of students own work of research during the academic year shall be submitted with the Project report.
 - e) The Project report shall be examined by one external examiner duly appointed as per rules of the University.
 - f) The Viva-Voce based on Project report shall be conducted by the External examiner and Internal examiner.
 - g) The Department through the Head of the Department shall send necessary details of internal work of the students to the Examination section.
 - h) The details of practical work of students duly certified by the teachers will be submitted to the Head of the Department at the end of each semester
- **Mechanism of Credit Systems:**

Credit is a kind of weightage given to the contact hours to teach the prescribed syllabus, which is in a modular form. Normally one credit is allotted to 15 contact hours. The paper wise instructional days with a norm of 4 contact hours per week per paper will be of 120 days. That is 60 days or 60 contact hours per paper shall be completed during each semester session. By converting these contact hours into credit at the rate of 15 contact hours for each subject, there will be 4 credits allotted to each paper and 2 credits allotted to Skill Enhancement Courses.

□ **The details of the Semester I and II Examinations shall be as under:**

Semester I ----- Theory = 550 Marks

Practicals = 300 Marks

Semester II ----- Theory = 550 Marks

Practicals = 300 Marks

- Total credits for M. Lib. and I. Sc. Programme

Sem.	DSC (Theory)	DSC (Practical)	DSE	SEC	Total (Credits)
I	4 Courses × 4 Credits Each= 16	3 Courses × 4 Credits Each = 12	1 Course × 4 Credits= 4	1 Course × 2 Credits = 2	34
II	4 Courses × 4 Credits Each= 16	3 Courses × 4 Credits Each= 12	1 Course × 4 Credits= 4	1 Course × 2 Credits = 2	34
Total Credits (Sem. I & II) = 68					

A candidate who fails and reappears for the Examination as Ex-Students shall be entitled to have the marks previously assigned to him/her by the Head of the Department of Library and Information Science for the record of practical work. These marks will be carried forward in respect with his/her subsequent performance of the examination. In case, however, the candidate joins the programme again as a regular student, He/she shall have to do the record of Practical work afresh.

□ **Standard for passing the examination**

1. A candidate shall have to obtain a minimum of 40% marks in each theory paper.
2. Semester Examination: For every theory and practical course (paper) a candidate should obtain a minimum of 40 % of total marks i.e., 24 marks out of 60 marks for semester end examination and for every internal evaluation, a candidate should obtain a minimum of 40 % of the total marks, i.e., 16 out of total 40 marks.
3. For Skill Enhancement Course every student should obtain minimum of 40% of total marks i.e., 12 marks out of 30 marks for semester end examination and for every internal evaluation, a candidate should obtain a minimum of 40 % of the total marks, i.e., 8 out of total 20 marks.
4. Internal Evaluation: 40 Marks (For Theory Paper)
 - a) Group Discussion -----10 Marks
 - b) Research Paper Review -----10 Marks
 - c) Open Book Examination ----- 10 Marks
 - d) Midterm Test -----10 Marks
5. Internal Evaluation: 40 Marks (For Practical Paper): Internal evaluation for practical based on Internal Test, Assessment of regular notebook etc.

6. For Swayam course (i.e. DSC – 5: Science Communication: Research Productivity and Data Analytics using Open Source Software) a candidate should obtain a minimum of 40 % of total marks i.e., 28 marks out of 70 marks.
7. For a swayam course CIE component, a candidate should obtain a minimum of 40 % of the total marks, i.e., 12 out of total 30 marks. The marks of CIE will be based on the assignments submitted by the students through their credentials on Swayam portal.
8. A candidate shall have to obtain a minimum of 40% of the total marks in the practical examination and candidate has to appear for all the sub-heads under practical examination compulsory.
9. A candidate shall be declared successful if he/she secures 40% of the total marks in the whole examination.
10. A candidate can claim exemption for each theory or practical paper, if he/she secures 40% marks in theory or practical paper.

If a candidate fails in the final result he/she will be held over to the consecutive examinations thereafter.

Conversion of Marks into grades:

Table 1: Conversion of Marks out of 100 to grade point

Sr. No.	Marks Range out of 100	Grade Point	Letter grade
1	80-100	10	O: Outstanding
2	70-79	9	A ⁺ : Excellent
3	60-69	8	A: Very Good
4	55-59	7	B ⁺ : Good
5	50-54	6	B: Above Average
6	45-49	5	C: Average
7	40-44	4	P: Pass
8	0-39	0	F: Fail
9	Absent	0	Ab: Absent

Table 2: Conversion of Marks out of 50 to grade point

Sr. No.	Marks Range out of 50	Grade Point	Letter grade
1	40-50	10	O: Outstanding
2	35-39	9	A ⁺ : Excellent
3	30-34	8	A: Very Good
4	28-29	7	B ⁺ : Good
5	25-27	6	B: Above Average
6	23-24	5	C: Average
7	20-22	4	P: Pass
8	0-19	0	F: Fail
9	Absent	0	Ab: Absent

Based on CGPA, final letter grade is assigned as follows

Final Cumulative Grade Point Average (CGPA) and Final Grade for course.

Sr. No.	CGPA Range	Grade	Grade Descriptions
1	9.50- 10.00	O	Outstanding
2	8.86- 9.49	A ⁺	Excellent
3	7.86- 8.85	A	Very Good
4	6.86- 7.85	B ⁺	Good
5	5.86- 6.85	B	Above Average
6	4.86- 5.85	C	Average
7	4.00- 4.85	P	Pass
8	0.00- 3.99	F	Fail

Scheme for B Plus/ Improvement of Class-Revised Rules

Persons who hold a pass or Second Class at the M. Lib. and I. Sc. and who wish to improve their class to secure B + Class, shall be allowed to do so as per the provisions of the following rules:

1. The concession to re-appear will be available only to: a] the holders of the Master's degree of this university.
2. Persons holding, M. Lib. and I. Sc. degree of this University in the Pass Class or Second Class and desirous of re-appearing for the same examination for improvement of class shall be given three chances to do so within a period of three years from his/her first passing the said examination in the Pass Class or Second Class.
3. A candidate intending to re-appear at the M. Lib. and I. Sc. Examination under these rules shall be allowed to do so without keeping fresh terms.
4. A Candidate intending to re-appear for M. Lib. and I. Sc. examination of this university under these rules shall be governed by the rules and regulations relating to the courses and syllabi which may be prescribed by the university authorities. It is entirely the responsibility of the candidate to ascertain that the papers he/she chooses are a part of a syllabus in force and are actually taught for the said examination.
5. A candidate is required to get his/ her name registered as an external student by submitting the prescribed registration form along with the necessary Certificates and fees within the prescribed dates under this scheme.
6. The result of the candidate appearing for M. Lib. and I. Sc. Examination under than the class he/she possesses. The marks obtained by the candidate whose class is not improved will be made known to him/her on request and on the payment of prescribed fees. So

also, the statement of marks for his/her examination will be issued on payment of prescribed fees.

7. The answer-books of the candidate appearing for this scheme can be verified and re-valued, as per University rules.
8. A candidate re-appearing for the M. Lib. and I. Sc. examination under these rules, and obtaining B+ Class shall not be eligible to appear again for the same examination in the same subjects or subject for securing a class higher than the B+.
9. A candidate passing any of the postgraduate examinations mentioned above under these rules shall not be eligible to receive any prizes, scholarships etc.

instituted by the University and he shall also not be entitled to a merit certificate from the University

10. If a candidate is unable to get a higher class under this scheme, his/ her previous performance in the corresponding examination shall hold good.
11. A Candidate who improves his/ her class under this scheme shall have to surrender his / her 'Pass Class Degree Certificate' to the Shivaji University. In the absence of this the Degree under the "Improvement of Class Scheme" will not be conferred on him/ her.

Note:

- 1) The Examination Reforms regarding matters pertaining to Examinations of the University shall be made applicable as per the policy of the University. Information regarding the same shall be notified as and when Examination Reforms are made effective.
- 2) The pattern of question papers will be as per the rules and regulations of the University. The following shall be the papers prescribed for the Examination

Note: Each theory course requires 60 hours for teaching. Teacher shall engage 10 hours altogether for conducting tests, assignments, seminars/presentations, discussion/round table, tutorial, brainstorming session, case studies, and any other activities respective teacher feels to be conducted for continuous evaluation and internal examination.

**❖ Question Paper Pattern (excluding Swayam Course) :
❖ Theory Course (Sem. I and II)**

Time: 2 Hours

Total Marks: 60

- ❖ Instructions:** 1) All questions are compulsory.
2) All questions carry equal marks.

Q.1 and Q.2): Descriptive Questions

- Solve any two descriptive questions out of four.
- All descriptive questions carry equal marks **i.e. 20 marks each** [40 Marks]

Q.3) Short Notes: [20 Marks]

- Write any four short notes out of six.
- All short notes carry equal marks **i.e. 5 marks each.**

- **Question Paper Pattern for Swayam Course: Science Communication: Research Productivity and Data Analytics using Open Source Software: (Sem.- II)**

Time: 3 Hours

Total Marks: 70

- ❖ Instructions:** 1) All questions are compulsory.
2) All questions carry equal marks.

Q.1) Multiple Choice Questions: [10 Marks]

- Solve five multiple choice questions.
- All multiple choice questions carry equal marks **i.e. 2 marks each.**

Q.2) and Q.3): Descriptive Questions [40 Marks]

- Solve any two descriptive questions out of four.
- All descriptive questions carry equal marks **i.e. 20 marks each**

Q.4) Short Notes: [20 Marks]

- Write any four short notes out of six.
- All short notes carry equal marks **i.e. 5 marks each.**

**Skill Enhancement Course (SEC)
(Semester- I and II)**

Time: 1 Hour

Total Marks: 30

Q.1 to Q4) Descriptive Questions:

[20 Marks]

- Solve any two descriptive questions out of three.
- All descriptive questions carry equal marks **i.e.10 marks each.**

Q.5) Short Notes:

[10 Marks]

- Write any two short notes out of three.
- All short notes carry equal marks **i.e. 5 marks each.**

DSC -P1: ICT Applications (Sem. - I)

Time: 2 Hours

Total Marks: 60

- All questions carry equal marks
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Q.1) Question on any modules of Library Automation Software [20 Marks]

Q.2) Internet Searching Techniques [15 Marks]

Q.3) Searching OPAC/Use of Search Engines/ Use of Web 2.0 Tools. [15 Marks]

Q. 4) Viva- Voce [10 Marks]

DSC –P2: E-Publishing (Sem. - I)

Time: 2 Hours

Total Marks: 60

- ☐ All questions carry equal marks

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- Q.1) Design a web page using any open source platform
[15 Marks]
- Q.2) Create an informative blog using any open source blogging platform
[15 Marks]
- Q.3) Use of Calibre software [15 Marks]
- Q. 4) Application of OJS [15 Marks]

DSC –P3: Documentation Services: Abstracting and Indexing (Sem. - I)

Time: 2 Hours

Total Marks: 60

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- Prepare descriptive/indicative abstract for the given article. [15 Marks]
 - Design of IR Thesaurus on given topic (Use and Generation of BT, NT, RT, ST, SN, UF, SA etc.) [15 Marks]
 - Preparation of different types of Indexes [15 Marks]
 - Searching of online thesaurus [15 Marks]

DSC–P4: Open Source Softwares and Services (Sem.-II)

Time: 2 Hours

Total Marks: 60

Q.1) Use of Open Access Self Archives.	[15 Marks]
Q.2) Measuring Research Productivity Using OSS	[15 Marks]
Q.3) Use of the Citation Databases	[15 Marks]
Q.4) Viva voce	[15 Marks]

DSC–P4: Designing Database and Searching (Sem.-II)

Time: 2 Hours

Total Marks: 60

Q.1) Create a Digital Library / IR by using any open source software Dspace or Greenstone	[20 Marks]
Q.2) Searching Web OPAC's	[15 Marks]
Q.3) Scholarly Database Searching	[15 Marks]
Q. 5) Viva- Voce	[10 Marks]

Practical P6: Project Report

- The project report consists of 100 marks.
 - **Final Assessment (60 marks):** Forty (30) marks will be awarded for the project report, and twenty (30) marks will be based on the Viva-voce conducted by the external and internal examiners.
 - **Internal Assessment (40 marks):** Twenty (20) marks will be awarded for each seminar — one seminar presentation for the synopsis and another after the completion of work but before final printing (spiral scrutiny).

Master of Library and information Science

The following shall be the courses prescribed for examination

(Semester- I)

Course Type & No.	Title of the Course	Examination Marks			Credits	Teaching Hours per Week
		Max. Marks	Internal Marks	Total Marks		
DSC: Discipline Specific Core Course (Theory) (CGPA) [Lectures & Internal – Seminars, Home Assignments, Internal Tests etc.] (All courses are compulsory)						
DSC – 1	Information Retrieval, Repackaging and Consolidation	60	40	100	4	4
DSC -2	Research Methodology	60	40	100	4	4
DSC-3	Information & Communication Technology Applications	60	40	100	4	4
DSC-4	Web Technologies	60	40	100	4	4
DSC: Discipline Specific Core Course (Practical) [Practical & Internal – Seminars, Home Assignments, Internal Tests, Projects etc.]						
DSC -P1	ICT Applications	60	40	100	4	8
DSC -P2	E-Publishing	60	40	100	4	8
DSC -P3	Documentation Services: Abstracting and Indexing	60	40	100	4	8
DSE - Discipline Specific Elective Course (Theory) (CGPA) [Lectures & Internal – Seminars, Home Assignments, Internal Tests etc.] (Note: - Student has to take one DSC(E) from same discipline i.e. from this group)						
DSE -1	E-Publishing	60	40	100	4	4
DSE -2	Scientometrics	60	40	100	4	4
SEC- Skill Enhancement Course (Note:- Student from same as well as other department may take any one SEC from pool of 2 credit courses of our university OR the SEC prepared by the department)						
SEC-1	Research and Publication Ethics	30	20	50	2	2
Total Credits					34	

DSC – 1: Information Retrieval, Repackaging and Consolidation

Course Objectives/Outcome (CO)

1. To become familiar with the standard methods used to organize and store collections of terms.
2. To become able to analyze and evaluate ISAR tools and systems.
3. To understand the concept and various types of Databases and various search strategies to retrieve relevant information.
4. To know the different steps of Information Consolidation and ways of information repackaging with user benefits.

Course Content (CC)

Unit 1: Information Storage and Retrieval System (ISAR)

- Information Retrieval (IR) : Concept, Characteristics, Objectives, Process, Purpose and Functions
- Users of IR System: Nature, Types of Information needs, Information needs in different areas of activity.
- Information Extraction: Introduction, architecture, types, application, tools and services for Information extraction.
- Evaluation of ISAR System

Unit 2: Information Storage and Retrieval (ISAR) System: Functions and design

- Introduction, User Interface system, and query processing system
- Man and Machine retrieval techniques
- Abstracting: Meaning and Definition, Steps in preparation of abstract, Types of abstracts
- Indexing: Pre-coordinate and Post coordinate Indexing, POPSI, PRECIS, KWIC, UNITERM etc.

Unit 3: Database and DBMS

- Database: Meaning, Definition, Types, Structure, Steps in preparation of Database
- Database Management System: Advantages and Types
- Search strategies

Unit 4: Information Repackaging and Consolidation

- Information repackaging: Meaning and Definition, need, Ways to repackage information
- Information consolidation: Meaning and Definition, steps in information consolidation
- User benefits of Information Repackaging and Consolidation.
- **Recommended Books:**

1. Atchison, J. Gilchrist: Thesaurus Construction, a practical manual, 1972.
2. Austin D., Precis, A Manual of concept analysis and subject indexing: 2nd ed. 1984.
3. Chowdhary G.C. Introduction to Modern Information Retrieval, London.Facet Publising, 2009.
4. Dhawan, K.S. Principles of Information Retrieval. New Delhi, Commonwealth Publication, 1997.
5. Ellis, D.New Horizons in Information Retrieval, London: Library Association, 1990.
6. Fosket, A.C. Subject Approaches to Information 5th Ed. London: Clive Bingley, 1996.
7. Ghosh, S.B. and Satpathi, J.N. Subject Indexes: Methods and Techniques.
8. Gopinath, M.A. Preparation of an Index to a Book: Case study Lib.Sci with a slant to Documentation, 1967, Paper E.
9. Kesarwani, S.K. Information Access to contributions from LIS feschrifts published from India. New Delhi, EssEss Publication, 2011.
10. Kumbhar, Rajendra. Thesaurus of Library and Information Science terms. New Delhi, EssEss Publication, 2004.
11. Lancaster, F.W. Vocabulary Control for Information Retrieval, New York: Information Resources Press, 1972.
12. Prashar, R.G. Index and indexing system, New Delhi, Medollian Press, 1990.
13. Sengupta, B. and others. Documentation and Information Retrieval, Calcutta, World Press, 1972.
14. Sutar D.B. A Compendium of Library and Information Science.Part-I.Varanasi, ABS Publications,2013.

DSC – 2 : Research Methodology

Course Objectives/Outcome (CO)

1. Understanding the value of research in Library and information Science.
2. To make students acquainted with research process.
3. To introduce the students with various research methods.
4. Identify and utilize appropriate data collection tools and techniques.

Course Content (CC)

Unit 1: Basic concepts of Research

- Concept, Meaning, Need and Process of Research
- Types of Research: Pure, Applied and Action Research
- Spiral of Scientific Method
- Literature Search
- Research Ethics

Unit 2: Research Design

- Research Design: Meaning , Definition and Steps in Research Design
- Synopsis- concept and essential Components
- Criteria for selection of research problem
- Identification and formulation of Problem
- Hypothesis: Meaning, Definitions, types and qualities of good hypotheses

Unit 3: Research Methods

- Historical Method.
- Descriptive Method
- Case Study Method
- Experimental Method
- Delphi Technique

Unit 4: Data Collection Tools & Techniques

- Types of data: Primary & Secondary
- Questionnaire
- Interview
- Observation
- Recent data collection Techniques

Recommended Books:

1. Kumar (PSG) (2004) Research Methods and Statistical Techniques, Delhi, B.R. Publishing.
2. Kothari, C . R. (1990), Research Methodology: Methods and Techniques 2 - Ed, New Delhi.
3. Allen, (T) (Harrel): New Methods in Social Science Research, 1978.
4. Kaul, Lokesh (1997). Methodology of Educational Research, New Delhi, Vikas Publishing House.
5. Kumar, Krishan (1992). Research Methods in Library & Information Science. Delhi Har- Anand Publications.
6. Good, W. J. and Hatt, P.K. (1986). Methods in Social Science Research. New Delhi, McGraw Hill,
7. Slater, M (1990). Research Methods in Library and Information Studies. London, L.A.
8. Powel, Ronald R.(1985). Basic Research methods for Librarians, New Jersey, albex, Greenwood.
9. Mohsin, S.M.(1984).Research Methods in Behavioral Science, New Delhi, Orient Logman.
10. Fwler, F.J.(1993). Survey Research Methods. New Delhi: Sage Pub.
11. Lihitkar, S. R. (2014). Edited workshop proceeding on *Research Methodology in Social Science*. Sai Publication: Nagpur

DSC – 3: Information and Communication Technology Applications

Course Objectives/Outcome (CO)

1. To be acquainted with the ICT technology.
2. To train students about the Advanced ICT Applications.
3. To develop acquaintance for effective implementation of ICT in libraries.
4. To make the students acquainted with digital library technology.

Course Content (CC)

Unit 1: Information and Communication Technology

- Concept, Meaning, Definitions, Scope, Need, Advantages and Use
- Communication channels : Formal and Informal
- Barriers in Information communications
- Basics of communication Technology: Transmission media, Modes etc.

Unit 2: Networking

- Network: Concept, Need, Advantages and Types
- Network Media
- OSI model, ISDN, Wi-Fi, Li-Fi
- Networking Techniques
- Switching Systems: Techniques and Types
- Networking Security: Authentication, Firewalls, Virus & Spyware

Unit 3: ICT applications in Libraries and Information Centers

- Advanced tools: AI, Virtual reality, Augmented technology, Robotics
- Barcode, RFID, QR Code, Biometrics and Smart Card: Features and Applications

Unit 4: Development of Digital Library

- Digital Library : Concept , Meaning, Definition, Need & Characteristics
- Major components of Digital Library
- Digital Library Architecture
- Technical infrastructure
- Digital Library Software: DSpace, E-print, Greenstone, Fedora etc.

Recommended Books:

1. Phadke, D. N. (2018). *Library & Information Technology*. Pune: Universal.
2. Shubham, B.A.(2001). Issues for Libraries and information science in the internet age.Englewood: Libraries Unlimited Inc.
3. Balasubramanian, P. (2012).Web technologies in Library & Information Science. New Delhi: Regal publications.
4. Westman, S.R. (2009).Creating data based-backed library and web pages using open source tools.Chicago: American Library Association.
5. Chowdhury, G.G. & Chowdhury, S. (2003). *Introduction to digital libraries*. London: Facet.
6. Lihitkar,S.R. (2017).*Information landscapes: A scenario*. New Delhi: Ess. Ess.
7. Kumar, P.S.G. (2004). *Information technology: Applications (Theory and Practice)*. Delhi: B.R Publishing.

DSC – 4: Web Technologies**Course Objectives/Outcome (CO)**

1. To introduce the students with basic concepts of Web technology.
2. To familiarize the students with the concepts of web page design.
3. To know the basics of storage technology.
4. To know the current trends and services of Cloud Computing.

Course Content (CC)**Unit 1: Internet Basics/Web Technology**

- World Wide Web: History and Evolution, Uniform Resource Locator (URL), Open URL, Web Servers, Network Protocols: TCP/IP, FTP, SSHD, SOAP, etc.
- Web Browsers- Netscape Navigator, Internet Explorer and Mozilla Firefox
- Search Engines: Google and Yahoo
- Security Issues

Unit 2: Application of Cloud Computing in Libraries

- File, Folder, Sharing and Organization in Cloud Computing
- Drive Synchronization
- Collaborative Team work in Docs, Spreadsheets
- Effective use of Forms, Slides etc.

Unit 3: Web 2.0/ Web 3.0 Concepts and Applications

- Web OPAC, Web 2.0 functions and features,
- Web 2.0 Tools and their application in Libraries: RSS Feed, Blogs/Weblogs, Tags, Folksonomy,
- Mashups, Podcasts, Instant Messaging, Flickr, Wikis and Social Networking
- Library 2.0, Web 3.0
- Semantic Web

Unit 4: Current Trends

- Cloud computing: Concept, types
- Vender/Players in cloud computing: Google, Amazon, Microsoft, Rackspace etc.
- M-computing: Concept and Applications

Recommended Books:

1. Hahn, Harley: The Internet Complete Reference. 2nd Ed. New Delhi: Tata Mcgraw Hill, 2002.
2. Young, Margaret, Levine and others: The complete Reference Internet, Millennium Ed. New Delhi: McGraw-Hill, 1999.
3. Singh, J.N. and others: Internet and Information Technology. Bangalore: Subhas Stores, 2003.
4. Williamson, Heather: The Complete Reference XML. New Delhi: Tata McGraw-Hill, 2004.
5. Manohar, V. & Lihitkar, Shalini (2017). *Web 2.0 in Libraries*. Delhi: Studera

DSC – P1: ICT Applications

Course Objectives/Outcome (CO)

1. To provide practical hands on training in library automation softwares.
2. To develop the internet searching skills & techniques among the students.
3. To train the students about effective use of search engines.
4. Identify the major components and architecture of a digital library system.

Course Content:

Unit- 1: Library Automation Software

- Any commercial or open source Library Automation software (SOUL, KOHA or Greenstone) : Hands on training in Acquisition, Circulation, Cataloguing, Serial Control, OPAC and Administrative

Unit: 2 - Internet Searching tools:

- Basic, Advanced Search Techniques, Google Searching Tools

Unit: 3 - Information Sources searching:

- WorldCat, WebOPACs, Library of Congress (LC) Online Catalog, British Library Catalogues, Indcat etc.
- Information Searching – E-Books and E-Reference Sources

DSC –P2: E- publishing

Course Objectives/Outcome (CO)

1. To provide practical hands on training on webpage designing.
2. To train the students in creation of blogs
3. To make students acquainted with Calibre software & OJS.
4. To provide practical hands on training on Open Journal System (OJS).

Course Content (CC)

- **Unit- 1:** Webpage designing of Library
- **Unit- 2:** Creation of Blog for Library/ Personal
- **Unit- 3:** Application of Calibre - E-Book Management Software
- **Unit- 4:** Application of Open Journal System (OJS)

DSC –P3: Documentation Services: Abstracting and Indexing

Course Objectives/Outcome (CO)

1. To provide students with the foundational skills to design and develop a structured Information Retrieval (IR) thesaurus.
2. To enable students to prepare different types of abstracts, specifically indicative and descriptive, for various documents.
3. To instruct students on the principles and application of KWIC (Keyword-in-Context) for creating accurate and effective title indexes.
4. To equip students to effectively use online thesauri to search for and generate subject terms for information organization.

Course Content:

- **Unit- 1:** Design and Development of IR Thesaurus.
- **Unit- 2:** Preparation of Indicative Abstracts, Preparation of Descriptive Abstracts
- **Unit- 3:** Preparation of Title Index using KWIC and derivatives
- **Unit- 4:** Online Thesaurus Search and generating of Terms

DSE -1: E-Publishing

Course Objectives/Outcome (CO)

1. To make the students acquainted with the basic concepts E- Publishing.
2. To familiarize the students with the current issues in E-Publishing.
3. To make the students acquainted with open access publishing.
4. To introduce the students with the technologies used for E-Publishing.

Course Content (CC)

Unit 1: Basics of E-Publishing

- Concept, Definitions , Scope, & Evolution of E-Publishing
- Advantages & Problems of E-Publishing
- Kinds of E-Publishing Products/Models
- Business Models of E- Publishing

Unit 2: Current Issues in E-Publishing

- Issues like Commissioning and Peer Review, Editing and Proofreading, Design and Typesetting, Printing, Sales and Marketing, Warehousing and Distribution etc.
- Social, Economic, & Legal Issues in Electronic Publishing
- Access, Use & Usability Issues, & Pricing Issues

Unit 3: Open Access Publishing

- Open Access Publishing: Concept, Models, Advantages & Disadvantages
- Open Science: Concept, Principles, Open Science Schools of Thought,

Advantages & Challenges, Major Initiatives

- Predatory Open Access Publishing: Concept, Meaning & Growth
- Global & Indian Initiatives to Control the Menace of Predatory Open Access Publishers

Unit 4: Technologies for E-Publishing

- Software & Hardware Requirements
- Concept of Markup Languages: SGML, HTML and XML.
- Digital Content Types, File Formats, Encoding Systems : ASCII, UNICODE and ISCII
- E-Publishing Standards.
- Open Journal System.

Recommended Books/Articles

1. Kist, J. (1989). *Electronic publishing : Looking for a blue print*. New Delhi: Sterling
2. Standera, O. (1987). *The electronic era of publishing: An overview of concepts, technology & methods*. New York: Elsevier Science.
3. Karen, S. W. , Marilyn, B. & Stone, T. A. (2003). *Electronic publishing: The definitive guide*. UK: Hard Shell Word Factory.
4. Schuster, C. (2011). *E-publishing for writers: Trends and opportunities*/Fall 2011 (Kindle Edition). UK: Books to Go Now.
5. Kadam, S. D. & Veer, D. K. (2014). *Digital libraries, E-resources and e-publishing* (Set of 2 Volumes). New Delhi: EssEss.
6. Henke, H. (2001). *Electronic books and e publishing: A practical guide for authors*. London: Springer-Verlag.
7. Patwardhan, B. & Others (2018). A critical analysis of the UGC approved list of journals. *Current Science*, 114(6), 1299-1303.
8. Seethapathy, G.S., Kumar, J.U.S., & Hareesha, A.S. (2016). India's scientific publication in predatory journals: need for regulating quality of Indian science and education. *Current Science*, 111(11), 1759-1764.
9. Patil, S. B. (2016). Predatory Open-Access Journals in India: A Study. *Pearl: A Journal of Library and Information Science*, 10(2), 94-97.
10. Beall, J. (2013). Predatory publishing is just one of the consequences of gold open access. *Learned Publishing*, 26(2), 79–83. doi:

<http://dx.doi.org/10.1087/20130203>

11. <https://publicationethics.org/>

DSE- 2: Scientometrics

Course Objectives/Outcome (CO)

1. To make the students acquainted with the basics of metric studies.
2. To familiarize students with laws related to the metrics.
3. To develop competency about citation analysis and databases.
4. To understand the recent trends in metric studies.

Course Content (CC)

Unit I: Introduction to Metrics Studies

- Concept of Librametry
- Concept of Bibliometrics
- Concept of Scientometrics
- Concept of Informetrics
- Concept of Webometrics
- Concept of Altmetrics

Unit II: Laws related to Metrics

- Classical Laws of Bibliometrics
- Bradford's Law: Concept, formula & Application
- Lotka's Law: Concept, formula & Application
- Zipf's Law: Concept, formula & Application

Unit III: Citation Analysis and Databases

- Citation Analysis: Concept, Definition, need, types, applications.
- Web of Science - Science Citation Index Expanded , Social Sciences Citation Index, Arts & Humanities Citation Index, Emerging Sources Citation Index
- Scopus, Google scholars, PubMed, Dimensions, Lens, Scite.ai

Unit IV: Impact Factor, Research Visibility and Software for metric studies

- Impact Factor: Meaning, Definitions, It's calculation.
- Research Visibility: Meaning, Definitions, and tools: academic and Social networking sites, ORCID, Research Gate, Mendeley, Vidwan Expert database
- Software for metrics studies: Hiscite, Vosviewer, Publish or Perish, Soscibot etc.
- Altmetrics.com, Impact story, Plum Analytics, PLOS Article Level Metrics.
- Ranking and case studies with examples

Recommended Books:

1. Egghe, L. and Rousseau, R.(2001). *Elementary statistics for effective Library and Information services management*. London: Aslib
2. Garfield, E. (1979). *Citation Indexing: Its theory and applications in Science, technology & humanities*. New York: John Wiley.
3. Meadows, A.J.(1974). *Communication in Science*. London: Butterworths.
4. Neuendorf, K. (2002). *The content analysis guidebook*. London: Sage.
5. Nicholas D. and Ritchi, M. (1979). *Literature & bibliometrics*. London: Clive Bingley.
6. Ravichandra Rao, I.K. (1985). *Quantitative methods for Library and Information Science*. New Delhi: Wiley Eastern, 1985.
7. Thelwall, M. (2009). *Introduction to webometrics: Quantitative web research for the social Sciences*. Morgan and Claypool Publishers.

SEC-1: Research and Publication Ethics

Course Objectives/Outcome (CO)

1. To understand the values of ethics in research
2. The student will have awareness about the publication ethics and publication misconducts

Unit 1: Publication Ethics

- Ethics: definition, moral philosophy, nature of moral judgments and reaction
- Publication ethics: definition, introduction, Violation and importance
- Best practices /Standards setting initiatives and guidelines: COPE. WAME, etc.,
- Conflicts of interest
- Authorship and contributorship

Unit 2: Scientific Conduct

- Intellectual honesty and research integrity
- Scientific misconducts: Falsification, Fabrication, and Plagiarism(FFP)
- Publication misconduct, complaints and appeals
- Redundant publications: duplicate and overlapping publications, salami slicing
- Selective reporting and misrepresentation of data.
- Predatory publishers and journals

• **References**

1. Nicholas H. Steneck. Introduction to the Responsible Conduct of Research. Office of Research Integrity. 2007. Available at: <https://ori.hhs.gov/sites/default/files/rcrintro.pdf>
2. The Student's Guide to Research Ethics By Paul Oliver Open University Press, 2003
3. Responsible Conduct of Research By Adil E. Shamoo; David B. Resnik Oxford University Press, 2003
4. Ethics in Science Education, Research and Governance Edited by Kambadur Muralidhar, Amit Ghosh Ashok Kumar Singhvi. Indian National Science Academy, 2019. ISBN : 978-81-939482-1-7.
5. Anderson B.H., Dursaton, and Poole M.: Thesis and assignment writing, Wiley Eastern 1997.
6. Bijorn Gustavii: How to write and illustrate scientific papers? Cambridge University Press.
7. Bordens K.S. and Abbott, B.b.: Research Design and Methods, Mc Graw Hill, 2008.
8. Graziano, A., M., and Raulin, M.,L.: Research Methods – A Process of Inquiry, Sixth Edition, Pearson, 2007.

Master of Library and information Science Semester- II

The following shall be the courses prescribed for examination

Course Type & No.	Title of the Course	Examination Marks			Credits	Teaching Hours per Week
		Max. Marks	Internal Marks	Total Marks		
DSC: Discipline Specific Core Course (Theory) (CGPA) [Lectures & Internal – Seminars, Home Assignments, Internal Tests etc.] (All courses are compulsory)						
DSC – 5 (Swayam Course)	Science Communication: Research Productivity and Data Analytics using Open Source Software	70	30	100	4	4
DSC -6	Statistical Techniques and Report Writing	60	40	100	4	4
DSC-7	Marketing of Library and Information Products and Services	60	40	100	4	4
DSC-8	Electronic Information Sources & Services	60	40	100	4	4
DSC: Discipline Specific Core Course (Practical) [Practical & Internal – Seminars, Home Assignments, Internal Tests, Projects etc.] (All courses are compulsory)						
DSC –P4	Open Source Software and Services	40	100	4	8	
DSC –P5	Designing Database and Searching	40	100	4	8	
DSC –P6	Project Work	40	100	4	8	
DSE - Discipline Specific Elective Course (Theory) (CGPA) [Lectures & Internal – Seminars, Home Assignments, Internal Tests etc.] (Note: - Student has to take one DSC(E) from same discipline i.e. from this group)						
DSE -3	Agricultural Information System	40	100	4	4	
DSE -4	Industrial Information System	40	100	4	4	
SEC- Skill Enhancement Course (Note:- Student from same as well as other department may take any one SEC from pool of 2 credit courses of our university OR the SEC prepared by the department)						
SEC-2	Technical Writing	20	50	2	2	
Total Credits including SEC				34		

DSC – 5 (Swayam Course): Science Communication: Research Productivity and Data Analytics using Open Source Software

Course Objectives/ Outcomes (CO):

1. To apply bibliometric and scientometric techniques for research analysis.
2. To understand Science Mapping and Data visualization.
3. To gain hands-on experience using R and RStudio for data analysis.
4. To understand Academic Integrity and Ethical Guidelines in Science Communication.

Course Contents (CC)

Unit 1: Science Communication; Academic Visibility and Research Impact; Data Sources and Extraction; Working with R and RStudio

- Science Communication - Introduction to Science Communication, Channels of Science Communication, Open Science and Open Access, Open Research Data and Open Peer Review ,
- Academic Visibility and Research Impact: Overview of Tools for Maximizing Academic Visibility and Impact of Research Output, Understanding Research Metrics: Author, Journal and Article Level Metrics
- Data Sources and Extraction: Abstract and Citation Database: Scopus, Abstract and Citation Database: Web of Science, Health Science Database: PubMed, Free Academic Search Engine: Google Scholar,
- Working with R and RStudio: Installation of R and RStudio, Basic Operations, data types, etc., Installation of R, Installation of RStudio, Object and Different types, Vector and Data Frame, Lists, Matrices, Factor, Array, Packages and Help

Unit 2: Bibliometrics and laws of scientometrics in mapping of science communications; Descriptive Analysis: Publication and Citation related metrics; Science Mapping; Data Visualization

- Introduction and application of bibliometrics and laws of scientometrics in mapping of science communications: Science Communication and Different Metrics, Lotka's Law, Bradford's Law, Zipf's Law
- Descriptive Analysis: Publication and Citation related metrics: Descriptive Analysis – I, Descriptive Analysis – II, Descriptive Analysis – III, Analysis of Bradford and Lotka Law
- Science Mapping: Co-citation, bibliographic coupling, co-authorship, PageRank, etc., Science Mapping – I, Science Mapping - II
- Data Visualization: Data visualization: an overview, history, and skills for researchers, Data visualization: types, tools, and technologies, Visualization of scientific research with VOSviewer and CiteSpace

Unit 3: Text Mining; Best Practices in Academic Rankings; Ethical Guidelines, Academic Integrity in Science Communication; Case Studies

- Text Mining: Topic Modelling of research productivity: Text Mining – Introduction, Regular Expression, Text Pre-processing, Topic Modeling
- Best Practices in Academic Rankings in reference to Times Higher Education (THE), QS, Sanghai (ARWU) and National Institutional Ranking Framework (NIRF) Ranking
- Ethical Guidelines, Academic Integrity in Science Communication: Academic Integrity and Ethical Guidelines in Science Communication: Ensuring Credibility and Honesty, IPR/Copyright Issues and Practices in Print & Digital Environment , Predatory Publishing: issues, challenges, and the road ahead
- Case Studies: Case Study - I (Domain), Case Study – II (Author), Case Study – III (Journal & Institution)

Unit 4: Recent Trends in Science Mapping and Scholarly Communication

- Overview of Forensic Scientometrics
- Citation metrics- Immediacy Index, Half-Life Journals, Impact factor analysis
- Current Issues- Citation curtailing and manipulation, self-citation, Gender disparity etc.
- Research profile platforms: ORCID, Google scholar, RG etc.

Recommended Books

1. Andrés, A. (2009). Measuring academic research: How to undertake a bibliometric study. Elsevier.
2. Gingras, Y. (2016). Bibliometrics and research evaluation: Uses and abuses. MIT Press.
3. Ball, R. (2017). An introduction to bibliometrics: New development and trends. Chandos Publishing.
4. Cronin, B., & Sugimoto, C. R. (Eds.). (2014). Beyond bibliometrics: Harnessing multidimensional indicators of scholarly impact. MIT press.
5. Teetor, P. (2011). R Cookbook: Proven recipes for data analysis, statistics, and graphics. " O'Reilly Media, Inc."
6. Ahmi, A. (2022). Bibliometric Analysis using R for Non-Coders: A practical handbook in conducting bibliometric analysis studies using Biblioshiny for Bibliometrix R package.
7. Tattersall, A. (Ed.). (2016). Altmetrics: A practical guide for librarians, researchers, and academics. Facet Publishing

DSC – 6: Statistical Techniques and Report Writing

Course Objectives/Outcome (CO)

1. To develop research skills in students and enable them to carry out research in Library & Information Science.
2. To understand on both qualitative & quantitative techniques for data analysis and consolidation.
3. To familiarize the art and style of writing a research report.
4. To utilize statistical software packages and reference management tools effectively in research projects.

Course Contents (CC)

Unit 1: Data Processing and Presentation

- Sampling Techniques: Concept, Purpose, Principles and Key terms in sampling terms
- Types of Sampling
- Processing of Data: Editing, Coding and Classification
- Data Presentation Techniques: Tabulation and Graphical Presentation.

Unit 2: Statistics and its Applications

- Types of Scales
- Descriptive statistics: Measures of Central Tendency and Dispersion
- Inferential statistics: Statistical estimation & Testing of Hypothesis
- Chi Square Test, T- test, Z- test etc.

Unit 3: Statistical Packages

- SPSS
- MS- Excel
- Web-based Statistical Analysis Tools: R Studio etc.
- Online Reference Management Tools

Unit 4: Research Reporting

- Purpose, Structure, Style, Contents
- Guidelines for Research Reporting
- Style Manuals: APA, ACS, IEEE and Chicago
- Plagiarism: Concept, Types, Ways to avoid plagiarism, Overview of Anti plagiarism softwares
- Current trends in LIS research.

• Recommended Books:

1. Ahuja, A.: Research Methods, Rawat Publication: Jaypur and New Delhi, 2001.
2. Anglo American Cataloguing Rules (2002). 2nd Ed. Rev. available online at <http://www.oclc.org/oclc/bib/toc.htm>
3. Anglo-American Cataloguing Rules. (Latest Edition). London: Library Association.
4. Carpenter Ray, & Vasu Ellen Story : Statistical Methods for Librarians, Chicago, and American Library Association, 1978
5. Das S.K : Introduction to research Bombay A Mukherjee & Co. Pvt. Ltd. 1986.
6. Goods W. J. & Hatt P.K. : Methods in Social research New York, McGraw Hill Co., 1952
7. Gupta C.B. & Ratan: Statistical calculations Delhi Vikas pub House, 1973.
8. Gupta C.B. Introduction to Statistical methods Delhi chand 1974.
9. Kothari, C. R. Research Methodology: Methods & Techniques, New Age International: New Delhi, 2004
10. Kumbhar, R. M.: Library and Information Science Research : Methods and Techniques, Universal Prakashan: Pune, 2014
11. Ravichandra I.K. : Quantitative Methods for library and information science Calcutta Wiley Eastern, 1985
12. Sadhu A.N. & Amargitsingh: Research methodology in social sciences Bombay Homalayan 1980
13. Sardana J. L. & Sehgal R. L. : Statistical methods for Libraries, New Delhi ESS publication 1981
14. Savanur, S.K.(2008). Research methodology for information sciences.Pune:Universal.
15. Sehgal R.L.: Applied statistics for Library science research vol.1&2 New Delhi, ESS publication, 1998.
16. <https://www.apa.org/>

DSC–7: Marketing of Library and Information Products & Services

Course Objectives/Outcome (CO)

1. To introduce the students with the basic concepts of marketing.
2. To make the students acquainted with the process of planning of information products and services, marketing segmentations and marketing of E- resources.
3. To acquaint students with concept and features of Information Society and Knowledge Society.
4. To impart knowledge about marketing of E- resources.

Course Contents (CC)

Unit 1: Marketing of Information Products and Services

- Marketing: Concept, Definitions, Need, Purpose, Functions, Elements and Benefits
- Marketing Mix: Seven P's, Kotler's Four C's, Marketing Plan & Strategy
- Branding and Advertising
- Pricing – Pricing of information products and services

Unit 2: Information Products and Services as marketable commodity

- Planning and development of information products and services
- Information as a commodity
- Information as a resource
- Information Society: Concept and Features
- Knowledge Society: Concept and Features

Unit 3: Information Marketing Segmentations

- Methods of Segmentation: Geographical segmentation, Psychographic segmentation, Behavioral segmentation, Demographic Segmentations, Marketing niche
- Barriers in Information Marketing: Access barriers, linguistic barriers, legal barriers, economic barriers and cultural barriers

Unit 4: Marketing of e-resources

- Library website
- Internal marketing to staff
- Promoting the use by traditional methods
- Face to face interaction
- Promoting through the web / Intranet

Recommended Books:

1. Cawkell, A.E., Ed. (1987). Evolution of an Information society. London: ASLIB.
2. Cronin, B.(1981). Marketing of Library and Information services. London: ASLIB.
3. Eileen, E. D.S. (2002). Marketing concepts for Libraries and Information services. 2nd Ed.London: Facet Publishing.
4. Jain, A.K and others Ed. (1995). Marketing of Information products and services. Ahmedabad:IIM.
5. Kotler, P. (1975). Marketing for non-profit organization. Prentice-Hall.
6. Saez, E.E. (1993). Marketing concepts for Libraries and Information services.
7. George Yi, Zhixian. (2017). Marketing Services and Resources in Information Organizations / 1st ed., Chandos Publishing.
8. Helmic, Samantha C. (2015). Mobile Social Marketing in Libraries. Rowman & Littlefield Publishers.
9. Rea, Gavin. "Promoting the Library Services". In Chris Pinder and Maxine Melling (Eds): Providing Customer- Oriented Services in Academic Libraries. London: Library Association Publishing, 1996.

DSC – 8: Electronic Information Sources & Services

Course Objectives/Outcome (CO)

1. To familiarize the students with electronic information sources.
2. To know the electronic information services rendered by the libraries.
3. To make the students acquainted with the open access movement.
4. To make the students acquainted with recent trends in electronic information sources/services useful for research.

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Course Contents (CC)

Unit 1: Electronic Information Sources

- Meaning, Definition, Characteristics and Advantages
- Growth and development of Electronic Information Sources
- Types and Examples of Electronic Information Sources.

- Evaluation criteria for Electronic Information Sources
- Citing Electronic Information Sources with Special Reference to APA Seventh Edition

Unit 2: Electronic Information Services

- Meaning, Definition and Need
- Types of Electronic Information Services
- Emerging Trends and Technologies useful for Electronic Information Services

Unit 3: Open Access Information

- History of the Open Access Movement
- Meaning, Need, Purpose and Benefits of Open Access
- Copyright and Open Access
- Impact of Open Access on Scholarly Publishing
- Future of Open Access

Unit 4: Electronic Information Sources/Services useful for Research

- Research Visibility: Meaning & Definitions, Tools for Enhancing Research Visibility - Academic Social Networking Sites, ORCID, Vidwan, Impact Story Preprint Servers etc.
- Measuring Research Productivity Using Open Source Software/Tools – VOSviewer, Publish or Perish Software, Biblioshiny etc.
- Research Data Repositories –Concept and Examples - Mendeley Data, Figshare, Dryad, Zenoda etc.

Recommended Books:

1. Chowdhury, G.G. and Chowdhury, Sudatta (2000). *Searching CD-ROM and online Information sources*. London: Library Association.
2. Cooper, M. D. (1996). *Design of Library automation systems: File structures, data structures and tools*. New York: John Wiley.
3. Dickson, G.W. and Desantis, G. *Information technology and the future enterprise: New models for managers*. New Jersey: Prentice Hall.
4. Ferris, Jeffrey A. (2000). *Windows 2000: Development and desktop management*. Indiana: New Riders.
5. Gallimore, A. (1997). *Developing an IT strategy for your Library*. London: Library Association.
6. Sharma, Jitendra Kumar (2003). *Print Media and Electronic Media: Implications for the future*. Delhi, Authorspress.
7. <http://www.infolibrarian.com>
8. <http://www.Libraryspot.com>
9. <http://www.refdesk.com>

DSC-P4: Open Source Softwares and Services

Course Objectives/Outcome (CO)

1. To introduce students to the concept of open access self-archiving and familiarize them with platforms like SHERPA/RoMEO for understanding publishers' copyright and self-archiving policies.
2. To provide students with an understanding of preprint servers and their role in the early dissemination and visibility of research outputs.
3. To make students acquainted with different tools of measuring research productivity.
4. To familiarize students with effective use of citation databases for conducting scientometric and bibliometric studies for research evaluation and academic impact assessment.

Course Content (CC)

Unit- 1: Open Access Self Archives -SHERPA/RoMEO,

Unit- 2: Preprint Servers.

Unit- 3:Tools for Measuring Research Productivity – VOSviewer, Publish or Perish Software, Biblioshiny etc.

Unit- 4: Use of citation databases for Scientometric/ Bibliometric Study

DSC-P5: Designing Database & Searching**Course Objectives/Outcome (CO)**

1. To provide practical hands on training in digital library software.
2. To make students acquainted with skill of digitalization and its process
3. To train the students in searching the different scholarly databases.
4. To explore government-supported educational platforms for academic content.

Course Contents (CC)**Unit 1: Digital Library Creation by using any Open Source Software**

- Digital Library Softwares (Dspace or Greenstone)
- Creation & Maintenance of Databases using Library Software Package.

Unit 2: Digitization Techniques

- Selection of Material for Digitization, Steps in the Process of Digitization
- Optical Character Recognition (OCR), Compression Protocols, File Formats and Media Types

Unit 3: Searching the Different Scholarly Databases

- Scopus, Web of Science, PubMed, J – Gate, DOAJ, DOAR, Library Networks, ETD, LIS Gateways, Information Systems, Digital Libraries, NDL, SWAYAM , E-PG Pathashala, InfoSys Springboard, OCLC Database, etc.

DSC-P6: Project Report

Course Objectives/Outcome (CO)

1. To make the students to get acquainted the research methodology.
2. Acquire practical experience in designing, conducting, and documenting research or field-based work under faculty supervision.
3. To make aware about statistical techniques in LIS research.
4. To familiarize the art and style of writing a research report.

Course Contents (CC)

- The Project report shall be on an approved topic pertaining to Library and Information Science. Each student shall work under the supervision and guidance of a teacher for his/her Project report.
- The Project report (3 copies) duly approved by the Guide must be submitted through the Head of the Department. One week before the commencement of the final practical Examination, failing which the candidates will not be allowed to appear for the examination.
- The student has to prepare a synopsis on chosen topic and present before the departmental committee. Two presentations on Project report is compulsory i. e. One for Synopsis and One after the completion of Work but before final printing.
- The Department through the Head of the Department shall send necessary details of internal work of the students to the Examination section.

DSE- 3: Agricultural Information System

Course Objectives/Outcome (CO)

1. To provide an understanding of the growth of agricultural education and research in India.
2. To familiarise students with the distinct information needs of various agricultural stakeholders.
3. To teach students how to develop, organise, and manage diverse agricultural information sources using traditional and modern methods of information retrieval.
4. To equip students with the necessary management skills to effectively plan, staff, and finance an agricultural library or information centre.

Unit I: Agricultural Education and Research

- Growth and development of Agricultural Education in India
- Growth and development of Agricultural Research in India
- Role of Libraries in Agricultural Education, Research and Extension
- Development of Agricultural Libraries in India

Unit II: Information Needs

- Information requirement of Agricultural faculty
- Information requirement of Agricultural Research Workers, Farmers Extension Workers
- Study of Local Agricultural Libraries and Preparation of Report
- User Education

Unit III: Information Resource Development, Organization of Sources

- Collection Development
- Sources of Information:
 - Documentary
 - Non-Documentary
 - Electronic Resources
 - Agricultural Databases
- Internet as a source of information
- Organization and Documentary Sources
- Classification
- Cataloguing
- Indexing
- Storage of document

Unit IV: Management Aspects

- Management of Agricultural Libraries and Information centres
- Planning of Library and Information Centres
- Human Resource Development-Staffing, Training and Development
- Professional Skills
- Financial Management- Budgetary Provisions, Resource Generation

Recommended Books

1. Alan Chard, J.R. and Farrel, Lois. Guide to Agricultural and Biological Research. Berkeley: University of California, 1981.
2. Banerjee, S.R. and Moitra, S. Agricultural Documentation Services in India. New Delhi: ICAR Library (Unpublished).
3. Deshmukh, P.P. Indian Council of Agricultural Research (Delhi). Agricultural University Libraries on Committee, Find Report, New Delhi: ICAR, 1969.
4. Gupta, S.R. Stock Verification in Libraries; Problems and Solutions. Delhi: Ken Pub, 1990.
5. Kumar, P.S.G. Agricultural Librarianship MLISc Elective paper; Kumar's curriculum series in Library & information science 12, 2008 x, 380 B.R. Publication, New Delhi.
6. Lihitkar, Shalini. R. Information Systems & Networks in India. Today& Tomorrow's printer & publishers, New Delhi, 2012
7. Lihitkar, Shalini, R. Libraries and Information centres in Maharashtra. Pimplapure Publication. Nagpur, 2012.

8. Lilley, G.P. Information Sources in Agriculture and Food Science. London: Butter Worths, 1981.
9. Maharashtra Government of: Report of the Advisory Committee for Establishment of Agricultural University, Maharashtra, November, 1965, Bombay: Govt. of Maharashtra.
10. Ramtirth, Agris. Information System for Agriculture Science and Technology in perspective in Library and Information Science. 1, 1982. Pp211-214.
11. Rokde, S.M. Agriculture Education and Libraries in India. Masford Publication. New Delhi, 2009.

DSE-4: Industrial Information System

Course Objectives/Outcome (CO)

1. To be acquainted with the Industrial Information System.
2. To train students about the Industrial Information Sources, products and services.
3. To develop acquaintance with the national and International level industrial Institutions.
4. To introduce students to the various types of information systems used in industrial settings, including databases, text retrieval, and decision support systems.

Course Contents (CC)

Unit -1: Industrial Information

- Nature, Characteristics, Role, Generation and utilization
- Components of Industrial Information System: resources, Centers, Consultants, Suppliers, Financial Organisations, Industrial Promoters
- Users of Industrial Information: Categories, Role, Functions, and needs
- Industrial Libraries and Information Centres: Characteristics and Roles

Unit- 2: Industrial Information Sources, products and services

- Management of Industrial Libraries and Information Centres, Information Resource Development
- Information Sources: Conventional, Non-conventional, Neo conventional and Meta Documents
- Information Sources specific to Industries: Government Document, Technical Report, Market Research Reports, Trade Literature, Technical notes, Company Profile
- Information Services: Computerized Services, CD-ROM search, CAS, SDI and Technical Enquiry Service
- Intellectual Property Rights: Copyright, Patents, Trademarks and Design
- E-commerce: concepts and scope

Unit-3: Information Systems: National & International

- CSIR and its National Laboratories, CSIR-NIScPR, SENDOC, NICDC, IIFT, ITPO, CII, FICCI, etc.
- Role of International Organizations in Industrial Information: UNIDO, UNCTAD, UNDP, OECD etc.
- Standards related to Industries: ISO etc.

Unit-4: Organizing Industrial information for end-user support:

- Database system, Industrial Management system, Industrial planning System
- Text Management System, Text retrieval system, Office system
- Management Support System, Decision support systems

Recommended Books:

1. Blakewell, K.Y. Industrial Libraries throughout the World. Oxford, Pergamon Press, 1969.
2. DRTC Annual Seminar-17 Industrial Information Systems and Services, Bangalore, Documentation Research and Training Centre, 1979.
3. Gopinath, M.A. and Seetarama, S. Industrial Information Systems and Services, DRTC, Annual Seminar (17), 1979, Bangalore: DRTC, 1979.
4. Houghton, Bernhard, Technical Information services. 2nd ed. London, Clive Bingley, 1972.
5. Jackson, E.B. and Jackson, R.L. Industrial Information Systems: A Manual for Higher Management and their information officers/ Librarian Associates.
6. Kumar, P.S.G. Business/Industrial Librarianship, New Delhi, B.R.Publishing Corporation, 2008. Library Association Industrial group: Industrial and commercial Library, An Introductory guide. London, Library Association, 1986.
7. Lihitkar, Shalini, R. Libraries and Information Centres in Maharashtra. Pimplapure Publication. Nagpur, 2012.
8. Neelameghan, A: Information for small enterprises. Bangalore, Sarda Ranganathan Endowment for Library Science, 1994.
9. Sutar, D. B. Granthalaya Aani Mahitishashtra. Ed.2.Kolhapur, Sneha Sutar, 2013.

SEC- 2: Technical Writing

Course Objectives/Outcome (CO)

1. To train the students to use the assistive technologies for writing.
2. To aware the students about the rationale of scholarly writing

Course Content (CC)

Unit 1: Basics of Technical Writing

- Technical Writing: Meaning, Concept and Definitions, Characteristics, Stages and Structure
- Style Manuals: APA, IEEE, ACS, Chicago
- Online Reference Management Tools: Mendely, Zotero, Refwork etc.
- Copyright and Fair Use

Unit 2: Effective Technical Writings

- Review articles
- Preparation of Articles
- Writing Research Proposals
- State- of –the Art Report
- Technical reports

• Recommended Books:

1. Neelamegha A 1975 – Presentation of Ideas in Technical Writing ed. 1, Delhi, Vikas Pub. House
2. Billie A Williams (2007). Characters in Search of an Author, New York: Filbert Publishing
3. Carrie Hannigan, Carrie Wells, Tanya Peterson (2008). Technical Writing: A Resource for Technical Writers at All Levels
4. Henry Miller, Thomas H Moore (1964). Henry Miller on Writing, New Direction Publishing Corporation, London.
5. Thomas Smith, Dominic Thompson (2005). APA/MLA Guidelines for Students Laminated Reference Chart