Estd. 1962
"A++" Accredited by NAAC (2021)
With CGPA 3.52

SHIVAJI UNIVERSITY, KOLHAPUR
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दूरध्वनी - इपीबीएक्स - २०६०९०००, अभ्यासमंडळे विभाग : ०२३१- २६०९०९४, २६०९४८७
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Ref.: SU/BOS/ *IDS* / 292 **Date: 08 - 05- 2025**

To,

The Head/Co-ordinator/Director
Department of Library
Shivaji University, Kolhapur.

Subject : Regarding revised syllabi of Ph. D. 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 Ph. D. programme under the Faculty of Inter- Disciplinary Studies as per National Education Policy, 2020 (NEP 2.0).

1.	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	P.G.Admission Section
3	The Chairman, Respective Board of Studies	9	Appointment A & B Section
4	B. Sc. Exam Section	10	P.G.Seminar Section
5	Eligibility Section	11	I. T. Cell
6	Computer Centre	12	Internal Quality Assurance Cell (IQAC)

SHIVAJI UNIVERSITY, KOLHAPUR

Reaccredited by NAAC with **'A^{++}'** Grade

Ph. D. Course Work Syllabus

Subject: Library and Information Science

Faculty: Interdisciplinary Studies

From- June 2025 Onwards

(Subject to the modifications to be made from time to time)

Shivaji University, Kolhapur

Department of Library and Information Science
Ph.D. Course Work Syllabus

- **PREAMBLE :**

  The course work of Ph. D. programmes primarily intends to develop the professional abilities and skills of researchers and LIS professionals working in Academic, Public, Special Libraries and similar Library Systems and Information/ Documentation Centres. In particular, it enhances and enriches their professional knowledge and research insight as well.

- **Programme Objectives:**
  1. To enable the students to find solution to the problems in the field of LIS.
  2. To strengthen the skills and competencies among LIS Students in handling the ICT tools useful for research.
  3. To make familiar with modern trends and services rendered in LIS.

1. SUBJECT: Library and Information Science

2. FACULTY: Interdisciplinary Studies

3. YEAR OF IMPLEMENTATION: - New/Revised Syllabus will be implemented from June 2025 onwards.

4. DURATION: The rules for Ph. D. adhere to the prospectus of said course revised from time to time by the University.

5. PATTERN OF EXAMINATION: Semester/ Annual pattern

6. MEDIUM OF INSTRUCTION: The medium of instruction shall be English. The Student shall write the answers in the examination either in **English or Marathi**

7. A Ph.D. scholar must obtain a minimum of 55% marks or its equivalent grade in the UGC 10-point scale in the course work to be eligible to continue in the programme and submit his or her thesis.

Question Paper Pattern: Theory Course

Time: 3 Hours **Total Marks: 80**

Instructions: 1) Attempt any three descriptive questions from Que. 1 to 5.

2) Que. 6 is compulsory (Short Notes)

3) All questions carry equal marks.

Que. 1) to Que.5): Descriptive Questions

Que. 6) Short Notes: (Write any two short notes out of four)

Structure of the course work for Ph. D. in Library and Information Science

- **THEORY PAPER MARKS:**

  The Ph. D. course work consists of Three Theory Papers each of 80 marks (Total 240 Marks)

- **INTERNAL MARKS:**

  1. For paper number 1 and 2, the internal evaluation will include Two (02) seminars of 10 marks each. Total 20 marks for each paper.
  2. For paper number 3, The internal evaluation will include:
     a) One Seminar on research topic (Submission and Presentation) - 10 Marks
     b) Review of Literature on research topic: (Submission and Presentation) - 10 Marks

- **Important Note:** Papers will have separate passing head for the theory examination and internal evaluation. **32 + 8 = 40**

Total Marks: : 300 Marks

Sr. No.	Title of the Course	Examination Marks			Teaching Hours
		Max. Marks	Internal Marks	Total Marks	
01	Research Methodology, Statistical Techniques and Computer Applications	80	20	100	60
02	ICT Applications in Libraries and Information Centres	80	20	100	60
03	Modern Library & Information Services and Products	80	20	100	60

PAPER - I: RESEARCH METHODOLOGY, STATISTICAL TECHNIQUES AND COMPUTER APPLICATIONS

Course Outcomes:

1. To strengthen the ability of LIS Students in research applications.
2. To make LIS Students aware about various research methods and data collection tools.
3. To impart knowledge about the application of statistics and use of computer in research.

Unit No. 1 – Fundamentals of Research (12 Periods)

- Basic principles of research and theory building
- Steps in the process of Research
- Types of Research: Pure (Basic) and Applied (Action), Experimental and Evaluation, Qualitative and Quantitative, Longitudinal and Comparative
- Literature search and Review of Literature
- Research Design: Meaning, definition and Steps
- Current Trends in LIS research

Unit No. 2 – Research Methods, Data Collection Tools and Techniques (12 Periods)

- Research Methods: Scientific Method, Historical Method, Experimental Method, Case Study Method, Descriptive Method, etc.
- Citation Metrics: Authors, Journal and Institutional
- Citation Analysis: Meaning, Definitions, Applications, Obsolescence of Literature
- Metric Studies: Bibliometrics, Informetrics, Scientometrics, Webometrics, Altmetrics etc.
- Population and Sampling: Concept, Types and Sample size.
- Data Collection Tools & Techniques: Questionnaire, Schedule, Interview, Observation, Content Analysis, Projective Techniques, Check list, Delphi technique etc.

Unit No. 3 - Quantitative Techniques and Data Analysis (12 Periods)

- Data processing and presentation techniques.
- Measures of Central Tendency: Mean, Mode and Median.
- Measures of Dispersion: Range, Interquartile Deviation, Mean Deviation, Standard Deviation, Skewness etc.
- Reliability and Validity
- Correlation and Regression
- Hypothesis and its Testing- Concept, definition, Types and nature of

Hypothesis, Criteria for construction of Hypothesis

- Testing of Hypothesis
  - Parametric Tests: T- Test, F- Test, Z- Test etc.
  - Non-parametric tests: Chi-Square, ANOVA, Mann-Whitney U- Test, Kruskal- Wallis H- Test etc.

Unit No. 4- Report Writing (12 Periods)

- Research and Publication Ethics: Plagiarism, Redundant publication, Conflict of interest, Duplicate publication, Salami slicing etc.
- Reference Style: APA, Chicago, IEEE, MLA, ISA etc.
- Report Writing: Guidelines, Contents of reports and Steps in writing research report
- Responsible use of AI based tools for academic writing

Unit No. 5 - Computer Applications in Research (12 Periods)

- Use of MS-Office for Data and Graphical Processing
- Use of Softwares for Research: SPSS, Bibexcel, R-Studio, Web-Based Statistical Analysis tools, Online Citation tools (Reference Style Management tools) etc.
- Use of Anti-plagiarism Softwares: iThenticate, DrillBit and Turnitin etc.

Recommended Books:

1. Kothari, C . R. (1990), Research Methodology: Methods and Techniques 2 -Ed, New Delhi.
2. Allen, (T) (Harrel): New Methods in Social Science Research, 1978.
3. Kaul, Lokesh (1997). Methodology of Educational Research, New Delhi, Vikas Publishing House.
4. Kumar, Krishan (1992). Research Methods in Library & Information Science. Delhi Har- Anand Publications.
5. Ahuja, R.: Research Methods, Rawat Publication: Jaypur and New Delhi, 2001.
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. Kumbhar, R. M.: Library and Information Science Research : Methods and Techniques, Universal Prakashan: Pune, 2014
9. Sardana J. L. & Sehgal R. L. : Statistical methods for Libraries, New Delhi

ESS publication 1981

10. Savanur, S. K. (2024). Research Methodology for Information Sciences. Pune: Universal.
11. American Psychological Association. (2020). Publication manual of the American Psychological Association: The official guide to APA style (Seventh edition). American Psychological Association.
12. Satija, M. P., Martinez-Ávila, D., & Swain, N. K. (Eds.). (2019). Plagiarism: An international reader. Ess Ess Publications.
13. Phadake, D.N. (2023). Research Methodology and Information Literacy. Ess Ess Publications.
14. Ravichandra Rao I. K. (1985). Quantitative Methods for Library and Information Science. Wiley Eastern, New Delhi.
15. सुतार, धनंजय भगवान (२०२४) ग्रंथालय आणि माहितीशास्त्र : वर्णनात्मक व वस्तुनिष्ठ. ए. बी. एस. पब्लिकेशन्स, वाराणसी

Paper II: ICT APPLICATIONS IN LIBRARIES AND INFORMATION CENTRES

Course Outcomes:

1. To impart knowledge about various ICT trends and related services to LIS Students.
2. To make LIS Students aware about various networks and network related library services.
3. To provide knowledge about various library automation softwares as well as discovery tools.

Unit 1: Fundamentals of Information and Communication Technology (ICT) (12 Periods)

- ICT: Components, Channels and Use
- Internet and World Wide Web: Components, Services, Browsing, Search engines
- Database: Concept, Definition, Types, Structure and Use, DBMS, RDBMS, SQL, MySQL etc.
- Role of ICT in the Development of LIS centers.

Unit 2: Network/Web Technology and Security Measures (12 Periods)

- Network: Concept, Types, Topology and Components/Medias
- Networking Techniques, Switching Systems: Techniques and Types
- Planning of computer network in Library and Information centers
- Library Networks, Consortia etc.: National and International
- Network Security Measures: Authentication, Firewalls, Virus & Spyware, Digital Rights Management (DRM) etc.
- Internet Systems: Web browsers, Web Servers and its functions & Internet Security
- Internet Searching tools and Techniques, DOI etc.

Unit 3: Library Automation and Software Management (12 Periods)

- Introduction to various Integrated Library Management Softwares (ILMS): SOUL 3.0, KOHA, NewGenlib
- Modules of ILMS: Acquisition, Circulation, Cataloguing, Serial Control, Administration, OPAC, Web OPAC and M-OPAC
- Introduction to Library Discovery Tools: Knimbus, EZProxy, VuFind, Backlight etc.
- Evaluation of ILMS packages

Unit 4: ICT Services (12 Periods)

- Electronic Information Sources and Services: Electronic Resource Management Systems (ERMS), Digital Information Management, E-content, M-Library/Services, Barcode, RFID, MOOC Technologies etc.

- Content Management System (CMS): Content Management Architecture, Content Development: Content Authoring, Content Review, Content Version Management, Crowdsourcing, Syndication.
- Retrieval in CMS: Search Development and Metadata Tagging
- Portals and Subject Gateways
- Data Management : Research Data Management (RDM), Data Curation Standards and Models, Linked Open Data.

Unit 5: Current Trends (12 Periods)

- Generative AI and its implications in the Libraries
- Internet of Things (IoT): Concept, History and its Growth, Essential Technologies, Impact on the libraries, Challenges and Issues, Examples and Future of IoT in Libraries
- Network Authentication: IP based authentication, Shibboleth, Open Athens, etc.
- Open Journal System, Big Data and Open Data
- Blockchain Technology: Concept, Scope, Need and its implications for the libraries
- Library Makerspace: Concept, Need and Examples

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. Hahn, Harley: The Internet Complete Reference. 2nd Ed. New Delhi: Tata Mcgraw Hill, 2002.
8. Singh, J.N. and others: Internet and Information Technology. Bangalore: Subhas Stores, 2003.
9. Williamson, H. (2004). The Complete Reference XML. New Delhi: Tata McGraw-Hill.
10. Koltay, T. (2022). Research data management and data literacies. Elsevier.

https://doi.org/10.1016/C2020-0-02068-2

11. Green, D. (n.d.). Open journal systems | ojs hosting, support, customization. Open Journal Systems. Retrieved March 13, 2025, from https://openjournalsystems.com/
12. Hosseini, M., & Holmes, K. (2023). The evolution of library workplaces and workflows via generative AI. College & Research Libraries, 84(6). https://doi.org/10.5860/ crl.84.6.836
13. Bradley, P. (2000). *World Wide Web: How to design and construct web pages*. London: ASLIB.
14. सुतार, धनंजय भगवान (२०२४) ग्रंथालय आणि माहितीशास्त्र : वर्णनात्मक व वस्तुनिष्ठ. ए. बी. एस. पब्लिकेशन्स, वाराणसी.

Paper –III: MODERN LIBRARY & INFORMATION SERVICES AND PRODUCTS

Course Outcomes:

- To acquaint the students with planning of electronic information products and services.
- To develop acquaintance with the semantic and web based library services.
- To make the students acquainted with the emerging trends and technologies used in the Libraries and Information centres.

Course Contents (CC)

Unit 1: Electronic Information Services (12 Periods)

- Types and Emerging Trends and Technologies of Electronic Information Services
- One Nation One Subscription (ONOS)
- Bibliographic Full text Services : Concept, Need, Major Players, Full text Sources and Future Trends
- Virtual Reference Service : Concept, Definition, Types and Modes
- Paradigm Shift: Integrated Library System (ILS) to Library Service Platform (LSP)

Unit 2: Design & Development of Digital Library (12 Periods)

- Digital Library: Concept, Characteristics and components
- Content creation for Digital Library: Digitization process and preservation, Search and Browser Interface
- Digital Library Architecture, Digital Library Protocols and Standards.
- Development of Digital Library: Hardware and Software (DSpace, E-print, Greenstone, Fedora etc.)
- Semantic Digital Library Services, Architecture of Semantic Digital Libraries, Semantic Library Projects-JeromeDL Project, BRICKS Digital Library Infrastructure, MarcOnt Initiative, SIMILE Project etc.

Unit 3 : Emerging Trends and Technologies for Library services (12 Periods)

- Sustainable Libraries and Services : Concept, Importance, Indian & Global Initiatives, Sustainable Development Goals (SDGs) and it's impact of Libraries
- Data Repositories : Concept, Need, Indian and Global Scenario
- Library Makerspace: Concept, Need , Examples
- Gamification: Concepts and its implication in Library
- Registry of Digital Repositories: OpenDOAR, GetaGrainger, Open Archives.com etc.
- Embedded Librarianship

Unit 4: Web based Library & Information Services (12 Periods)

- Application of Social Media for Library Services : Concept, Need and Types : Communication, Collaborative Content Building, Multimedia Sharing, Review & Opinion, Entertainment and Monitoring
- Web 2.0 Tools and their application in Libraries: RSS Feed, Streaming Media, Blogs/Weblogs, Tags, Folksonomy, Mashups, Podcasting, Vodcasting, SMS Inquiry Service, Instant Messaging, Flicker, Wikis and Social Networking, Social Bookmarking, Ajax, Application Programming Interface (API) , Library Tool Bars, Crowdsourcing etc.
- Web 3.0 : Concept and Major Applications.
- Assistive Technologies in Libraries for the users' with disabilities : Concept, Need, different types of Hardware and Software.

Unit 5: Digital Initiatives in LIS (12 Periods)

- Open Access and Digital Library - Open Access Journals, Institutional Repositories, Open Courseware, Metadata Harvesting Services
- Digital Archives: IR, IPR: Meaning and Definition, Copyright Acts, Cyber Laws and Cyber Security, IT Act 2000 and its amendments (GOI)
- Electronic Agreements/Contracts
- Digital Signature and Digital Certificates

Recommended Books:

1. Bopp, R E., & Smith, L. C. (2011). Reference and Information services: An introduction, 4th Ed. Santa Barbara, Calif.: Libraries Unlimited.
2. Manohar, V., & Lihitkar, S.R. (2017). *Web 2.0 in libraries*. New Delhi: Studera Press.
3. Lihitkar, S.R. *Information landscapes: A scenario (Dr. PSG Kumar Festschrift).* New Delhi: Ess Ess Publications.
4. Miller, J. (2019). *Internet technologies and Information Services* (2nd ed.). Libraries Unlimited.
5. Tripathi, A., Ansari, M., & Gupta, J. (2019). *Recent trends in libraries in networked environment.* New Delhi: Ess Ess Publications.
6. Śrīvāstava, P., & Srivastava, P. (2008). Copyright in academic libraries in digital environment. Ess Ess Publications.
7. सुतार, धनंजय भगवान (२०२४) ग्रंथालय आणि माहितीशास्त्र : वर्णनात्मक व वस्तुनिष्ठ. ए. बी. एस. पब्लिकेशन्स, वाराणसी