Library and Information Science

Based on NEP-2020

Model Curriculum for Three/Four Year Degree Course

(With Multiple Entry /Exit Option)

(2024-25 Batch)

Sambalpur University

Jyoti Vihar-768019

APPROVED

VICE-CHANCELLOR
SAMBALPUR UNIVERSITY

Controller of Examination
Sambalpur University

Contents

1. **Structure and Regulation.....**

2. **Core Courses (*4 Credits each*).....**

3. **Multidisciplinary Courses.....**

   *(3 courses to be chosen from **baskets of Multidisciplinary** for Semester-I/II/III with 3 credits each)*

4. **Ability Enhancement Courses.....**

   (Odia and English are the compulsory courses under Semester-I/II respectively with 4 Credits each)

5. **Skill Enhancement Courses (SEC).....**

   *(3 courses to be chosen from **baskets of SEC** for Semester-I/II/III respectively with 3 credits each)*

6. **Value Added Courses.....**

   a. ***Environmental Studies and Disaster management compulsory under Semester-I with 3 Credits***

   b. *3 courses to be chosen from **baskets of VAC** for Semester-III/V/VI with credits each*

7. **Summer Vocational Course .....**

   (Students may choose vocational courses after 2nd Semester and 4th Semester for Certificate Course or Diploma Course respectively with 4 credit each opt for exit)

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Programme Outcome:

- Understand the fundamentals of Library and Information Science including the knowledge on organization of library resources through classification and cataloguing, various types of information sources and services, digital library and library automation.
- Understand the usefulness of library information system sources and services, academic and public library systems, storage and retrieval of information, management of library and information centres, electronic resources management, information seeking behavior, library automation process and information search strategies.
- Comprehend various information processing skills, research methodology, ICT application, library digitalization, data analysis and knowledge management.
- Apply the knowledge and skills obtained to classify, organize, store, and retrieve the information to cater the need of different user communities.
- Analyze various user needs, information seeking behavior, different issues and challenges relating to acquisition, processing, automating and digitalizing library resources for easy access and retrieval.
- Identify pertinent research problems in different areas of LIS and to undertake research to find out solutions of such problems.
- Design and evaluate solutions for limitations and problems in classification, cataloguing, storage retrieval of written and digital contents, web technology and library management.
- Apply various skills learned such as preservation and conservation process, bibliometrics & scientometrics techniques to find out solutions to various issues.

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Semester-I

Paper-1 **Foundations of Library & Information Science**

Course Outcome:

- Understand the origin and development of libraries.
- Apprehend the five laws and their implications in ICT era.
- Recognize details about library legislation and Library Acts.
- Understand different types of national/international library organisation.
- Comprehend professionalism and professional ethics.

Unit-I:

Libraries: Definition, Origin and History, Historical Development of Libraries in India, Committees and Commissions on Libraries in India, Role of Libraries in the Society, Types of Libraries – Academic, Public, Special and National, Library Public Relation and Extension Activities.

Unit-II:

Five Laws of Library Science, Library Legislations and Library Acts in India: The Press and Registration of Books Act; the Delivery of Books and Newspapers (Public Libraries) Act, Copyright Act and Right to Information Act.

Unit-III:

Library and Information Science Profession - Librarianship as a Profession, Professional Skills and Competences; Professional Ethics. Library and Information Science Education in India. Contributions of Dr. S. R. Ranganathan to Library Profession in India.

Unit-IV:

Professional Associations - National – ILA, IASLIC, IATLIS; International – IFLA, ALA, CILIP, ASLIB, ARL, SLA; Role of UGC, RRRLF, UNESCO, National Knowledge Commission, and National Mission on Libraries in the Promotion and Development of Libraries.

Text Books
Suggested Readings:

- ✓ *Khanna, J. K. (1984). Fundamentals of Library Organization. New Delhi: Ess Ess Publications*
- ✓ *Ranganathan, S. R. (2006). Five Laws of Library Science. (Reprint). New Delhi: Ess Ess Publications.*
- ✓ *Kumar, P. S. G. (2003). Foundation of Library and Information Science. New Delhi: BR Publishing.*

Reference Books:

- ✓ *https://egyankosh.ac.in/bitstream/123456789/35226/5/Unit-4.pdf*
- ✓ *https://egyankosh.ac.in/bitstream/123456789/34898/1/Unit-2.pdf*
- ✓ *https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=9JW4FTxyrU+Wsr8xl8vgiw==*
- ✓ *https://ebooks.inflibnet.ac.in/eadhyayan/site/genre?id=Library%20and%20Information%20Science*

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Paper-2 **Information and Communication**

Course Outcome:

- Understand the theoretical aspects of information and communication channels and processes.
- Learn different ICT tools for smarter and faster communication of information.
- Apprehend the knowledge of societal benefits of information communication.

Unit-1:

Data, Information, Knowledge and Wisdom, Information Life Cycle - Generation, Collection, Storage and Dissemination. Information Industry - Generators, Providers and Intermediaries.

Unit-2:

Information: Definition, Properties, Role of Information; Information Science - Relationship with other subjects, Information Society and Knowledge Society.

Unit-3:

Communication – Concept, Types, Theories, Models, Channels and Barriers; Economics of information vs. Information economy; Trends in Scholarly Communication

Unit-4:

Tools of Modern Communication: Social media, Asynchronous and Synchronous communication tools; direct messaging, Instant Messaging, Blogging, Email, Voice and Video Calling, Online Chatting

Suggested Readings:

Text Books

- ✓ *Khanna, J. K. (1987). Library and Society. New Delhi: Ess Ess Publications*
- ✓ *Chowdhury, G. G. (2011). Information users and usability in the digital age. New York:Neal- Schuman Publishers, Inc.*

Reference Books

- ✓ *https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=9JW4FTxyrU+Wsr8xl8vgiw==*
- ✓ *https://egyankosh.ac.in/handle/123456789/7156*
- ✓ *https://ebooks.inflibnet.ac.in/eadhyayan/site/genre?id=Library%20and%20Information%20Science*

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Semester-II

Paper-3 **Information Sources**

Course Outcome:

- Understand different types of primary, secondary and tertiary information sources
- Identify and explore the use of different types of reference sources

Unit-I:

Information Sources - Nature, Characteristics, Format, and Types- Primary, Secondary and Tertiary; Documentary and Non-Documentary; Institutional sources, Human sources

Unit-II:

Primary Information Sources - Journals, Conference Proceedings, Patents, Standards, Theses & Dissertations, Trade Literature

Unit-III:

Secondary Information Sources (Print and Electronic) - Dictionaries, Encyclopedias, Bibliographies, Indexing & Abstracting, Statistical sources, Handbooks and Manuals; Tertiary Information Sources (Print and Electronic)- Directories, Year Books, Almanacs.

Unit-IV:

Reference Sources - Bibliographical, Biographical, Educational, Language and Geographical. Evaluation of Reference Sources

Suggested Reading:

Text Books:

- ✓ *Singh G. (2013). Information Sources, Services and Systems. PHI Learning Pvt.*
- ✓ *Kumar, P S G. (2004). "Information Sources and Services". Delhi; B.R.Publishing Corporation.*
- ✓ *Kaul, H K (1999). "Library Resource Sharing and Networks". New Delhi; Virgo Publications.*

Reference Books:

- ✓ *https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=9JW4FTxyrU+Wsr8xl8vgiw==*
- ✓ *https://egyankosh.ac.in/handle/123456789/32997*
- ✓ *https://ebooks.inflibnet.ac.in/eadhyayan/site/genre?id=Library%20and%20Information%20Science*

Paper-4 **Information Services**

Course Outcome:

- Acquire skills in providing reference and information services.
- Analyse and develop various information services and products for different categories of users

Unit-I:

Information services - Definition, Need, Nature, Types and Function, Implications of Five Laws of Library Science, Community Information Services

Unit-II:

Abstracting services – Definition, Need, Types and Guidelines; Indexing services- Definition, need, process; Translation services- Definition, need, process; Literature search and selection of documents – search strategies

Unit-III:

Alerting Services - CAS, SDI, Inter Library Loan and Document Delivery Service

Unit-IV:

Reference Services – Concept and Types- Short range and Long range reference service; Referral Services, Reference Service: Theories and tools

Suggested Reading:

Text Books:

- ✓ *Katz, A. (1992). Introduction to Reference Work. 2V. 6th Ed. New York: McGraw Hill.*
- ✓ *Krishan Kumar (1989). Reference Service. New Delhi: Vikas.*
- ✓ *Ranganathan, SR. (1960). Reference Service and Bibliography, Ed.2. Bombay: UBS Publishing.*
- ✓ *Bose, H. (1986). Information Service: Principles and Practice. New Delhi: Sterling.*

Reference Books:

- ✓ *https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=9JW4FTxyrU+Wsr8xl8vgiw==*
- ✓ *https://egyankosh.ac.in/handle/123456789/32998*
- ✓ *https://ebooks.inflibnet.ac.in/eadhyayan/site/genre?id=Library%20and%20Information%20Science*

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Semester-III

Paper-5 **Library Management-I**

Course Outcome:

- Understand basic management principles applied in Libraries
- Know different library housekeeping operations and their flow of work
- Learn management practices with regard to human and financial resources.

Unit-I:

Management - Principles, Functions and Schools of thought. Book Selection Tools and Principles, Library Committee and its role and functions

Unit-II:

Library House Keeping Operations -; Library Acquisition, Technical Processing, Circulation, Serials Control, Maintenance and Stock Verification; Preservation and Conservation; Hazards and Control Measures of Library Materials.

Unit-III:

Human Resource Management – Planning, Job Analysis, Job Description, Job Evaluation, Selection, Recruitment, Motivation, Training and Development, Performance Appraisal; Staff Manual

Unit-IV:

Financial Management in Libraries - Sources of Finance, Resource Mobilisation, Budgeting Methods; Cost Effective and Cost Benefit Analysis, Annual Reports & Statistics; Library Authority and Committee.

Suggested Reading:

Text Books

- ✓ *Narayana, G. J. Fundamentals of Library Management. New Delhi: Prentice Hall.*
- ✓ *Mittal, R.L. (1984). Library administration: Theory & practice. New Delhi: Metropolitan.*
- ✓ *Krishna Kumar (1991). Library Organization. New Delhi: Bikash Publish House.*

Reference Books

- ✓ *https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=9JW4FTxyrU+Wsr8xl8vgiw==*
- ✓ *https://egyankosh.ac.in/handle/123456789/32992*
- ✓ *https://ebooks.inflibnet.ac.in/eadhyayan/site/genre?id=Library%20and%20Information%20Science*

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Paper-6 **Knowledge Organization**

Course Outcome:

- Understand the basic principles and theories of library classification
- Acquainted with subject representation techniques and faceted approaches knowledge organization
- Familiar with internationally adopted library classification system

Unit-I:

Definition, Need, Purpose and Functions of Classification, Basic Terminologies and historical perspectives, Basic Terminologies of Library Classification, Species of Library Classification-Enumerative vs. Faceted, Call Number: Class Number, Book Number and Collection Number, Organization of Universe of knowledge, Classification vs Ontology

Unit-II:

Classification – Theories, Cannons, and Principles; Taxonomies, Folksonomy, APUPA arrangement of subjects, Fundamental Categories, Phase Relations, Modes of Formation of Subjects

Unit-III:

Notations: Definition, Purpose, Types, Qualities, Canons of Notational Plane, Design of Depth Classification Scheme: Basic considerations and methodology

Unit-IV:

Dewey Decimal Classification (DDC): Salient Features, Structure and layout, organization-DDC Summaries, Relative Index, Table Schedules Summaries, Notation; Colon Classification: Salient features and Components. Facet analysis, principles, Phase Relations, Common Isolates

Suggested Reading:

Text Books:

- ✓ *Krishan Kumar (1980). Theory of Classification, 4 Ed. New Delhi: Vikas.*
- ✓ *Kumar, P.S.G.(2003). Knowledge organization, Information processing and retrieval theory.Delhi: BR.*
- ✓ *Ranganathan, S.R. (1960).Colon Classification, 6th ed. Bangalore: Sarada Ranganathan Endowment for Library Science.*
- ✓ *Ranganathan, S.R. (1957 &1965). Prolegomena to Library Classification, Ed2, London: LA.*

Reference Books:

- ✓ *https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=9JW4FTxyrU+Wsr8xl8vgiw==*
- ✓ *https://ebooks.inflibnet.ac.in/eadhyayan/site/genre?id=Library%20and%20Information%20Science*
- ✓ *https://egyankosh.ac.in/handle/123456789/32993*

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Paper-7 **Library Classification Practice**

Course Outcome:

- Understand the structure and mapping of subjects in DDC
- Learn practical steps in classification of books
- Apply the knowledge and skills of classification in classifying library resources.

Unit-I:

Introduction to Three Summaries and Steps in Classifying Documents as per DDC-19th Edition, Classification of Simple Subjects

Unit-II:

Use of Schedules, add instructions for number synthesis, Classification of complex subjects

Unit-III:

Use of the seven Tables and instructions to add the core numbers with numbers from different tables

Unit-IV:

Practical steps in using Colon Classification, Main Classes, Basic Classes, Facets and Isolates, Classification Simple Numbers

Suggested Reading:

Text Books:

- ✓ *Raju., A.A.N. (1985). Universal decimal and colon Classification.*
- ✓ *Satija, M.P. and Comaromi, J.P.(1998). Exercises in the 21st Edition of Dewey decimal classification. New Delhi: Concept.*
- ✓ *Dewy Decimal Classification System - 23rd Edition*

Reference Books:

- ✓ *https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=9JW4FTxyrU+Wsr8xl8vgiw==*
- ✓ *https://egyankosh.ac.in/handle/123456789/32993*

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Semester-IV

Paper-8 **Computer Fundamentals**

Course Outcome:

- Understand the basics of computer technology including both hardware and software
- Acquainted with computer networks and telecommunication channels
- Apply and work with MS Windows and Office tools

Unit-I:

Introduction to Computers: Characteristics, Generations and Classification-Super computers, mainframes, mini and microcomputers, Basic Architecture, Character Representation (ASCII, ISCII, Unicode) Computer Hardware: Input, Output & Storage devices

Unit-II:

Computer Software: System and Application software, Operating System- Types, functions, Programming Languages – Object Oriented, Procedural, High Level, Scripting; Web Languages. Open-Source vs. Commercial Software

Unit-III:

Computer Networks - Topologies, Types of Networks – LAN, MAN, WAN. Network Hardware-Network interface card, hubs/switches, Getaways/Bridges, routers, modem

Unit-IV:

Telecommunication - Transmission Channels, Mode, and Media, ISDN, PSDN, Multiplexing, Modulation, Standards and Protocols; Wireless Communication – Media, Wi-fi, Li-fi, Satellite Communication, Mobile Communication

Practical Component:

- Operating Systems
- Office Management Suite (Word Processing, Spreadsheet, Slide presentation)

Suggested Reading:

Text Books:

- ✓ Nair, R. (2002). Accessing Information through Internet. New Delhi: Ess Ess Publications.
- ✓ Rajaraman, V. (1999). Fundamentals of Computers. New Delhi: Prentice Hall.
- ✓ Sinha, P. K. (2003). Computer Fundamentals. New Delhi: BPB Publications.

Reference Books:

- ✓ *https://egyankosh.ac.in/handle/123456789/32999*
- ✓ *https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=9JW4FTxyrU+Wsr8xl8vgiw=*
- ✓ *https://ebooks.inflibnet.ac.in/eadhyayan/site/genre?id=Library%20and%20Information%20Science*

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Paper-9 **Resource Description**

Course Outcome:

1. Understand the basic principles and theories of library cataloguing
2. Acquainted with subject cataloguing, different types entries using AACR-II and CCC
3. Familiar with computerized cataloguing and metadata standards

Unit-I:

Catalogue: Concept, Purpose and Objectives of Library Catalogue, Forms of Catalogue: Outer and Inner Forms- Outer Forms: Conventional and Non-Conventional; Inner forms: Alphabetical, Classified and, Alphabetico-Classified Catalogue. Entries: Types, Formats & their functions, Data elements in different types of Entries

Unit-II:

Cannons and Principles; Centralized and Co-operative Catalogue; Library Cataloguing Codes: Basic Features of AACR-II and CCC; Subject Cataloguing- Concept, Objectives, General Principles, Subject Heading Lists & their features: Library of Congress Subject Headings (LCSH) and Sears List of Subject Headings (SLSH), Subject Cataloguing through Chain Indexing.

Unit-III:

Standards of Bibliographic Record Formats and Description – ISBD, MARC 21, CCF, RDA, FRBR; Standards for Bibliographic Information Interchange & Communication – ISO 2709, Z39.50, Z39.71. Bibliographic data models (Library Reference Model of IFLA, BIBRAME 2.0)

Unit-IV:

Metadata Standards: Dublin Core; MARC21, METS, MODES, EAD; Domain-specific metadata schemes (LRMI, LIDO, VRA Core etc.)

Suggested Readings:

Text Books:

- ✓ *Bowman, J.H. (2002). Essential cataloguing: The basics. London: Facet Publications.*
- ✓ *Chambers, Sally (Ed.) (2013). Catalogue 2.0: The future of library catalogue. London: Facet Publications.*
- ✓ *Chaudhary, G. G. & Chaudhary, Sudatta (2007). Organizing information: From the shelf to the web. London: Facet Publications.*

Reference Books:

- ✓ https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=9JW4FTxyrU+Wsr8xl8vgiw==
- ✓ https://egyankosh.ac.in/handle/123456789/32995
- ✓ https://ebooks.inflibnet.ac.in/eadhyayan/site/genre?id=Library%20and%20Information%20Science

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Paper-10 **Library Cataloguing Practice**

Course Outcome:

- Understand the structures and rules of AACR-II Code
- Learn practical steps in cataloguing in different entry formats
- Apply the knowledge and skills of cataloguing in creating catalogue records for library resources.

Unit-I:

AACR-2R: Cataloguing of Titles with Single Author and multiple authors (Both Main and Added entries)

Unit-II:

AACR-2R: Cataloguing of Titles of Edited volumes, composite books, multi volume publications (Both Main and Added entries)

Unit-III:

AACR-2R: Cataloguing of Titles with corporate authorship (Both Main and Added entries)

Unit-IV:

AACR-2R: Cataloguing of Non-book materials- cartographic materials and audio-visual materials (Both Main and Added entries)

Suggested Readings:

Text Books:

- ✓ *ALA et al. (2006). Anglo-American Cataloguing Rules: AACR (2nd rev ed.). London: Library Association.*
- ✓ *Library of Congress. (2011). Library of Congress Subject Headings (33rd ed). Washington, D.C.: Library of Congress, Cataloging Distribution Service.*
- ✓ *Fritz, Deborah A. (2007). Cataloging with AACR2 & MARC21: For books, electronic resources, sound recordings, video recordings, and serials. 2nd ed., Chicago: American Library Association.*

Reference Books:

- ✓ *https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=9JW4FTxyrU+Wsr8xl8vgiw==*
- ✓ *https://egyankosh.ac.in/handle/123456789/32995*
- ✓ *https://ebooks.inflibnet.ac.in/eadhyayan/site/genre?id=Library%20and%20Information%20Science*

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Semester-V

Paper-11 **Internet and Web Technologies**

Course Outcome:

- Understand the fundamentals of internet technologies, protocols and services
- Acquainted with data security tools and technologies
- Work with web browsers, email and videoconferencing applications

Unit-I:

Internet - Web browsers, WWW, E-mail; Subject directories, Search Engines, Meta and Entity Search engines

Unit-II:

Internet Protocols and Standards – HTTP, HTTPS, FTP, SMTP, TCP/IP, URI, URL, OSI Model, Client-Server Architecture, CGI, REST/API

Unit-III:

Hypertext, Hypermedia, Multimedia, Video conferencing, Virtual Reality, Augmented Technologies.

Unit-IV:

Data Security, Network Security, Firewalls, Cryptographic Techniques, Anti-virus software, Anti-spyware, Intrusion Detection System.

Practical Component:

- Use of web browsers for searching online information, simple, advanced search
- Use of Videoconferencing with Google meet
- Use of Email for sending and receiving messages

Suggested Reading:

Text Books

- ✓ *Kumar, P. S. G. (2004). Information Technology Application. Delhi: B.R.Publishing Corporation*
- ✓ *Nair (R Raman). (1992). Computer Application to Library and Information Services. New Delhi;EssEss Publications.*
- ✓ *Jaiswal, S. (2000). Information Technology Today. New Delhi: Galgotia Publication.*

Reference Books:

- ✓ *https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=9JW4FTxyrU+Wsr8xl8vgiw==*
- ✓ *https://egyankosh.ac.in/handle/123456789/32999*
- ✓ *https://ebooks.inflibnet.ac.in/eadhyayan/site/genre?id=Library%20and%20Information%20Science*
- ✓ *https://kp.kiit.ac.in/pdf_files/06/5th-Sem_Cse__Internet-Web-Technology_SM.pdf*

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Paper-12 **Web based Information Services**

Course Outcome:

- Acquired skills in providing Web based and mobile based library services.
- Use social networking tools for information communication and academic collaboration.
- Understand and apply discovery service tools in libraries

Unit-I:

Web based information services: Web 2.0 and 3.0 - Library 2.0- Concept, Characteristics, Components; Instant Messaging, RSS Feeds, Podcasts, Vod casts, Ask a Librarian

Unit-II:

Web-scale Discovery Services- Definition, Need, Purpose, Features, Mechanism, Discovery tools and Service Providers

Unit-III:

Mobile based Information Services and Tools – Mobile OPAC, Mobile Databases, Mobile Library Website, Library Apps, Mobile Library Instructions, Augmented Reality, SMS Alerts, Geo-Location, Reference Enquiry, Chat Bot

Unit-IV:

Collaborative Services- Social Networks, Academics Social Networks, Social Tagging, Social Bookmarking

Suggested Readings:

Text Books:

- ✓ *Anderson, P. (2012). Web 2.0 and Beyond: Principles and Technologies. Chapman and Hall/CRC*
- ✓ *Suber P. (2012). Open Access. MIT Press*
- ✓ *Paliwal, P K. and Balkrishnan, S. (2001). "Systems and Practices of Effective Library". New Delhi; Anmol Publications.*

Reference Books:

- ✓ *https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=9JW4FTxyrU+Wsr8xl8vgiw==*
- ✓ *https://ebooks.inflibnet.ac.in/eadhyayan/site/genre?id=Library%20and%20Information%20Science*

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Paper-13 **Information Systems**

Course Outcome:

- Understand the fundamentals of information systems and their types
- Known about information systems at national and international level
- Understand resource sharing practices through library consortia

Unit-I:

Information System: Basic Concept, Categories of information systems: libraries, documentation centres, referral centres, information analysis centres, databanks etc. their structure and functions.

Unit-II:

National Information Systems and Networks: NISCAIR, DESIDOC, SENDOC, ENVIS, INFLIBNET, DELNET, NICNET, ERNET, National Knowledge Network (NKN),

Unit-III:

International Information Systems and Networks: INIS, AGRIS, INSPEC, MEDLARS, BIOSIS, ERIC, Patent Information System (PIS), Biotechnology Information System (BIS).

Unit-IV:

Library Resource Sharing and Library Consortia – National-E-Sodh Sindhu, NKRC, FORSA, CeRA and International-ICOLC

Suggested Readings:

Text Books:

- ✓ *Bose, K. (1994). "Information Networks in India: Problems and Prospects." New Delhi Ess Ess Publications.*
- ✓ *Singh G. (2013). Information Sources, Services and Systems. PHI Learning Pvt*
- ✓ *Kaul, H K (1992). "Library Networks: An Indian Experience". New Delhi; Virgo Publications.*

Reference Books:

- ✓ *https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=9JW4FTxyrU+Wsr8xl8vgiw==*
- ✓ *https://ebooks.inflibnet.ac.in/eadhyayan/site/genre?id=Library%20and%20Information%20Science*
- ✓ *https://egyankosh.ac.in/handle/123456789/4857*

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Semester-VI

Paper-14 **Library Automation**

Course Outcome:

- Understand process and concept of automated housekeeping operations in libraries
- Acquaint with the planning and selection of software and hardware for library automation
- Analyse various standards used for automation of library operations
- Acquaint with current computing technologies related to library automation

Unit-I:

Library Automation: Definition, purpose and different automated housekeeping operations, Planning, Selection of Hardware and Software, Implementation and Evaluation

Unit-II:

Study of Individual Automation Software Packages and their features: Koha, SOUL and E-Gra

Unit-III:

Standards for Library Automation; Barcode, RFID, QR Code, Biometric, Smartcard: Features and Applications.

Unit-IV:

Application of Artificial Intelligence, Expert Systems and Robotics in Libraries; Social Mobile Analytics Cloud (SMAC); Cloud Computing

Practical Component:

Hands on experience with Library Management Software Koha

- Installation
- Customization
- Working with different modules

Suggested Readings:

Text Books:

- ✓ *Haravu, L. J. (2004). Library automation design, principles and practice. New Delhi: Allied Publishers.*
- ✓ *Pandey, S. K. (2000). Organization of Library Automation. New Delhi: Anmol Publications.*
- ✓ *Reddy, S. (2001). Automated Management of Library Collections. New Delhi: Ess Ess.*

Reference Books:

- ✓ *https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=9JW4FTxyrU+Wsr8xl8vgiw==*
- ✓ *https://ebooks.inflibnet.ac.in/eadhyayan/site/genre?id=Library%20and%20Information%20Science*
- ✓ *https://egyankosh.ac.in/handle/123456789/4883*

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Paper-15 **Digital Library Systems**

Course Outcome:

- Understand the concept of digital library and its architecture, standards and formats
- Aquent with the process of creation of digital libraries and institutional repositories
- Create an awareness on management of digital resources and their preservation
- Familiar with digitization techniques and apply these techniques in digitization of library materials

Unit-I:

Digital Library: Genesis, Characteristics, Types, Architecture; Standards, Formats and Protocols, Persistent identifiers: DOI, CNRI handle, Orcid, ROR

Unit-II:

Digitization – Planning, Selection of Materials, Hardware, Software, Process, Issues

Unit-III:

Institutional Repositories - Need, Purpose, Types and Tools; Institutional Repositories in India; ROAR, DOAR, Sherpa/RoMEO, Sherpa/ Juliet

Unit-IV:

Digital Preservation - Need, Purpose, Standards, Methods, Techniques, Projects (National and International)

Practical Component:

Hands on experience with Digital Library Software- GSDL and DSpace

- Installation
- Customization
- Functionality

Suggested Readings:

Text Books:

- ✓ *Chowdhury, G.G. (2003). Introduction to Digital Libraries. London: Facet Publishing*
- ✓ *ICADL: Tutorials on Digital Libraries. Bangalore, 2001. 40*
- ✓ *Leona Carpenter, Simon Shaw & Andrew Prescott: Towards the Digital Library. London: LA, 1998.*
- ✓ *Lee, Stuart D: Digital imaging: A practical handbook. 2000.*

Reference Books

- ✓ *https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=9JW4FTxyrU+Wsr8xl8vgiw==*
- ✓ *https://ebooks.inflibnet.ac.in/eadhyayan/site/genre?id=Library%20and%20Information%20Science*

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Semester-VII

Paper-16 **Library Management – II**

Course Outcome:

- Understand modern management concepts and strategies
- Learn principles of knowledge management

Unit-I:

Management Information System (MIS), MBO, Change Management, Disaster Management, Crisis Management.

Unit-II:

Total Quality Management (TQM) - Concepts, Principles and Techniques, Six Sigma; Evaluation of Services of Libraries and Information Centers, Quality Indicators: ISO 9000, LibQUAL+, COUNTER, SUSHI

Unit-III:

Project Management- SWOC, PEST, PERT / CPM.

Unit-IV:

Knowledge Management – Principles, Tools, Components and Architecture.

Suggested Readings:

Text Books:

- ✓ *Singh, M. (1983). Library and information management: Theory and practice. Delhi: IBT.*
- ✓ *Singh, R. S. P. (1990). Fundamentals of library administration and management. Delhi: Prabhat Publications.*
- ✓ *Stueart, R. D. & Moran, B. B. (2013). Libraries and information center management. 8th ed. London: Libraries Unlimited.*

Reference Books:

- ✓ *https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=9JW4FTxyrU+Wsr8xl8vgiw==*
- ✓ *https://egyankosh.ac.in/handle/123456789/4791*
- ✓ *https://ebooks.inflibnet.ac.in/eadhyayan/site/genre?id=Library%20and%20Information%20Science*

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Paper-17 **Electronic Information Resources**

Course Outcome:

- Familiar with different categories of information Resources in electronic & Web media
- Skilled in handling databases for retrieving information efficiently
- Able to evaluate e-resources for necessary validation and ranking

Unit-I:

E-resources: Definition, evolution, characteristics and types, E-Resource Life Cycle, Electronic Resource Management- Concept, need and systems; Copyright and E-Resources, Copyright vs Copy left

Unit-II:

E-Books-Definition, Types, features, advantages and disadvantages; E-Journals- Definition, Types, features, advantages and disadvantages; Selection policies and subscription models

Unit-III:

Databases: Bibliographic, Numeric, Full text, Multimedia; Open Access Databases (DOAJ, DOAB, Open DOAR, ROAR), Citation Indexing Databases - WoS, Scopus, Google Scholar, Semantic Scholar, BASE, Open Alex

Unit-IV:

Web based information resources: Subject Gateways, Web Portals, Bulletin Boards, Discussion Forums /Groups; Evaluation of e-resources and Web Resources.

Practical Component:

- Searching for e-books and journals online
- Use of Google Scholar Database
- Evaluation of e-resources

Suggested Reading:

Text Books

- ✓ *Cole, L. (2013). Electronic Resource Management: A Handbook. Facet Publishing.*
- ✓ *Holly, Y. (2008). Electronic Resource Management in Libraries: Research and Practice. IGI Global.*
- ✓ *Lee, S. D. Building an Electronic Resource Collection: A practical guide. London: Facet Publishing*

Reference Books

- ✓ *https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=9JW4FTxyrU+Wsr8xl8vgiw==*
- ✓ *https://ebooks.inflibnet.ac.in/eadhyayan/site/genre?id=Library%20and%20Information%20Science*
- ✓ *https://ebooks.inflibnet.ac.in/eadhyayan/site/genre?id=Library%20and%20Information%20Science*

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Paper-18 **Research Methodology**

Course Outcome:

- Understand the basic concept of research and research methods, types of research
- Acquaint with various research techniques and tools applicable to Library & Information Science
- Develop and apply the skills for data analysis and interpretation
- Acquire knowledge and skills for effective report writing

Unit-I:

Research - Concept, Purpose, Functions, Scope and Ethics; Types of Research– Basic and Applied, Interdisciplinary and Multidisciplinary. Research Methods: Historical, Descriptive, Experimental and Delphi

Unit-II:

Research Design - Selection of Research Problem, Review of Literature; Formulation of Research Problem; Hypothesis – Formulation, Types and Testing, Sampling Techniques

Unit-III:

Methods of Data Collection: Questionnaire, Interview, Observation, Library Records, Scales and Checklist, Data Analysis and Interpretation - Presentation of Data; Statistical Methods/ Techniques;

Unit-IV:

Research Report Writing and Citation Tools – Structure, Style, Contents, Guidelines; Style Manuals; Online Citation Tools; Reference Style Management Tools; Similarity Checking Tools; Evaluation of Research Report

Suggested Readings:

Text Books:

- ✓ *Kumar, P. S. G. (2004). Research method and statistical techniques. New Delhi: BR Publications.*
- ✓ *Sehgal, R. L. (1998). Designing and evaluation of research in Library science. New Delhi: Ess Ess Publications.*
- ✓ *Kothari, C. R. (1990). Research methodology: methods and techniques. New Delhi: Wiley Eastern.*
- ✓ *Krishna Kumar. (1992). Research method in Library and information science. New Delhi: Harhand Publications.*

Reference Books:

- ✓ *https://ebooks.inflibnet.ac.in/eadhyayan/site/genre?id=Library%20and%20Information%20Science*
- ✓ *https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=9JW4FTxyrU+Wsr8xl8vgiw==*
- ✓ *https://egyankosh.ac.in/handle/123456789/4812*

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Paper-19 **Research Evaluation Metrics**

Course Outcome:

- Understand different laws of bibliometrics and their application
- Familiar with different research evaluation metrics and their methods of calculation
- Acquaint with research ethics and awareness of research misconducts
- Apply knowledge of research metrics to evaluate research productivity both an individual and institutional level

Unit-I:

Metric Studies in LIS – Bibliometrics- Laws of Bibliometrics- Lotka's Law, Bradford;s Law, Zipf's Law, Scientometric, Webometrics, Altmetrics, Informetrics

Unit-II:

Concept of Citation, Citat ion count, Self-citation, Co-citation, Bibliographic Coupling, Journal Impact Factor, Citation and Quality Indicators: H-index, i10 - index, G-index

Unit-III:

Citation Databases: Web of Science, Scopus, ICI, Google Scholar, Publish or Perish, SCImago Journal and Country Rank, Webometric tools & techniques, Research impact analysis: IRINS

Unit-IV:

Principles of Research Ethics, Research Misconduct, definition, types: Falsification, Fabrication, Plagiarism, Conflict of Interest, and Salami Slicing, Plagiarism and its detection

Suggested Readings:

Text Books:

- ✓ *Sehgal, R. L. (1998). Applied statistics for Library science research. New Delhi: Ess Ess Publications.*
- ✓ *Arora, P. N., & Arora, S. (2010). Comprehensive Statistical Methods. New Delhi: S.Chand.*
- ✓ *Creswell, J. W. (2002). Research Design: Qualitative, quantitative, and mixed method approaches. New Delhi: SAGE Publications*

Reference Books:

- ✓ *https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=9JW4FTxyrU+Wsr8xl8vgiw==*
- ✓ *https://ebooks.inflibnet.ac.in/eadhyayan/site/genre?id=Library%20and%20Information%20Science*
- ✓ *https://egyankosh.ac.in/handle/123456789/4812*
- ✓ *https://egyankosh.ac.in/handle/123456789/4835*

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Semester-VIII

Paper-20 **Library Systems and Specialised Services**

Course Outcome:

- Understand features and function of academic, public, and special libraries.
- Familiar with specialized library systems in different domains of subjects.
- Acquaint with other forms of organizations related to libraries including Archive and Museums

Unit-I:

Library Systems- Academic, Public and Special- their distinguishing feature and functions

Unit-II:

Health Science Library System-Features and Functions, Resources and services

Unit-III:

Engineering, Technological, and Agricultural Library System- Features and Functions, Resources and services

Unit-IV:

Archive, Museums and Oriental Library Systems- Features and Functions, Resources and services

Suggested Readings:

Text Books:

- ✓ *Raval, A. K. (2013). Handbook of Public Library System. Discovery Publishing House. ISBN-9789350563854*
- ✓ *Dayal, B. (2011). Managing Academic Libraries. Isha Books ISBN- 978-8182055223*
- ✓ *Hoffman, F & Wood, R. J. (2005). Library Collection Development Policies: Academic, Public, and Special Libraries, Scarecrow Press, ISBN- 978-0-8108-5180-1*

Reference Books:

- ✓ *https://nios.ac.in/media/documents/vocational/CLS/Certificate_Course_in_Library_Science_english/M1_PDF/M1L4.pdf*
- ✓ *https://egyankosh.ac.in/bitstream/123456789/33045/1/Unit-8.pdf*
- ✓ *https://egyankosh.ac.in/bitstream/123456789/34898/1/Unit-2.pdf*
- ✓ *https://epgp.inflibnet.ac.in/epgpdata/uploads/epgp_content/S000021LI/P000102/M004257/ET/1498804480ModuleIDSRL-1-etext-SpecialLibraryCharacteristicsandFunctions.pdf*
- ✓ *https://nios.ac.in/media/documents/SrSecLibrary/LCh-002.pdf*
- ✓ *https://ebooks.inflibnet.ac.in/lisp12/chapter/history-and-development-of-special-libraries/*

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Paper-21 Library Users and Information Literacy

Course Outcome:

- Identify user communities and their information need
- Understand the concept of user education, user study and information literacy
- Apply and design different methods to promote user education and information literacy

Unit-I:

Composition of User Community, Classification of Users: Planners, Policy Makers, Managers, R&D Personnel, People at Grass Root, Academics; Assessment of Information Needs of Users, Information Seeking Models

Unit-II:

User Study: Its Need, Types, benefits, and Steps in Planning User Studies, impact on LIS; Methods of Users' study- Questionnaire Method, Case Study Method & Interview Method, Observation Method and Survey Method

Unit-III:

User Education: Concept, need, Methods of User Education; Information Seeking Behaviour (ISB): Concept and Models.

Unit-IV:

Information Literacy: Meaning and Concept, Salient Features of Information Literacy, Digital Information literacy, Information Literacy Models

Suggested Readings:

Text Books:

- ✓ *Kumar, P.S.G. (2004) Library and users: theory and practice. Delhi: B. R .Corporation*
- ✓ *Laloo, B.T. (2002). Information need, information seeking behaviour and users". New Delhi:EssEss publications .*
- ✓ *Prasad, H. N. (1992). Information needs and users. Varanasi: Indian Bibliographic Center.*
- ✓ *Ramaiah,L. S. et .al .(1997) Information and Society. New Delhi: EssEss publication.*

Reference Books:

- ✓ *https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=9JW4FTxyrU+Wsr8xl8vgiw==*
- ✓ *https://ebooks.inflibnet.ac.in/eadhyayan/site/genre?id=Library%20and%20Information%20Science*

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Paper-22 **Marketing of Library Products and Services**

Course Outcome:

- Understand basic tenets of marketing and related concepts
- Learn about information marketing and its strategies
- Apply different techniques to develop information products and promote their marketing.

Unit-I:

Marketing- Meaning, importance, core concept, market segmentation, marketing mix, The 7Ps of marketing

Unit-II:

Information Marketing- Information as a marketable commodity, Demand and Supply of information, need for information marketing

Unit-III:

LIS Products and Services -Pricing, Distribution Channels and Communication Strategies, Information Analysis, Consolidation and Repackaging

Unit-IV:

Advertising, Sales Promotion, Public Relations and E-Marketing/ Digital Marketing

Suggested Readings:

Text Books

- ✓ *Seetharama, S. (2015). Marketing in Libraries and Information Centres. New Delhi: Ess Ess Publications.*
- ✓ *Thomsett-Scott, B. C. (2013). Marketing with Social Media. Facet Publishing*
- ✓ *Rowley, J. (2016). Information marketing. (2nd ed.). New York: Routledge.*
- ✓ *Dalkir, K. (2005). Knowledge management in theory and practice. UK: Elsevier.*

Reference Books

- ✓ *https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=9JW4FTxyrU+Wsr8xl8vgiw==*
- ✓ *https://ebooks.inflibnet.ac.in/eadhyayan/site/genre?id=Library%20and%20Information%20Science*
- ✓ *https://ebooks.inflibnet.ac.in/lisp6/chapter/marketing-of-library-and-information-services/*
- ✓ *https://egyankosh.ac.in/bitstream/123456789/35350/5/Unit-14.pdf*
- ✓ *https://epgp.inflibnet.ac.in/epgpdata/uploads/epgp_content/S000021LI/P000203/M002012/ET/1463474839ModuleIDAL-13-et.pdf*

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Paper-23 **Information Retrieval Systems**

Course Outcome:

- Understand the concepts of information retrieval systems, indexing systems and vocabulary control.
- Learn about information retrieval models and theories
- Evaluate different information retrieval systems and analyze their compatibility issues

Unit-I:

Information Retrieval System (IRS): Definition, Concept, Components, Functions, and Qualities, ISRS Systems: Types of IRS- Design and Operation

Unit-II:

Indexing Systems and Techniques: Assigned - Pre-coordinate; Post-Coordinate; Derived- Title-based; Vocabulary Control

Unit-III:

Classical Models of Information Retrieval: Basic Concept, Term matching vs. Similarity matching, Boolean Model, Vector Space Model, Probabilistic Model, Semantic search (Vectorization)

Unit-IV:

Evaluation of ISRS: Purpose, Criteria and Steps, Common Evaluation Measures: Recall vrs Precision; Compatibility of Information Storage and Retrieval System: Areas of Compatibility, Retrival metrics (F1@K, NDCG)

Suggested Readings:

Text Books

- ✓ *Alberico, R. and Micco M. (1990). Expert systems for reference and Information retrieval. West Port: Meckler.*
- ✓ *Chowdhruy, G.G. (2003). Introduction to modern Information retrieval. 2nd Ed. London, Facet Publishing.*
- ✓ *Lancaster, F. W. (1968). Information retrieval systems, characteristics, testing and evaluation. London: Facet Publishing*

Reference Books

- ✓ *https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=9JW4FTxyrU+Wsr8xl8vgiw==*
- ✓ *https://ebooks.inflibnet.ac.in/eadhyayan/site/genre?id=Library%20and%20Information%20Science*
- ✓ *https://egyankosh.ac.in/handle/123456789/4866*

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