

SYLLABUS
POST GRADUATE PROGRAMME
LIBRARY AND INFORMATION SCIENCE
(SEMESTER SYSTEM)

2026-2027



SCHOOL OF LIBRARY AND INFORMATION SCIENCE
GANGADHAR MEHER UNIVERSITY
AMRUTA VIHAR
SAMBALPUR-768004
ODISHA

J. K. Sanyal
01.09.2026

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R. Roy
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S. B. S.
01/09/2026

Vision

To become a centre of excellence for imparting quality education in the field of library and information science and to prepare efficient, skilled professionals who are ready to meet the technological challenges of a contemporary, ever-growing knowledge society with credibility, integrity and ethical standards.

Mission

M1: The mission of the school is to impart technology-intensive skill-based quality education in the field of library and information Science to create capable and dynamic professionals who can meet evolving national and global challenges.

M2: It is the endeavour of the school to contribute in the construction of knowledge, enhance innovations, quality research, publications, team spirit, digital literacy, ethical responsibilities and promote life-long learning.

M3: To provide a learning ambience and empower students with essential skills in the use of emerging technology in libraries and information centres.

Program Educational Objectives (PEOs)

1. To provide a high-quality education in the discipline of Library and Information Science through class work, independent research and experiential learning that fosters scholarly and critical approaches to the understanding of issues and practices in LIS.
2. To prepare students to select, evaluate, and use current and emerging information and communication technologies in constantly changing information workplaces.
3. To equip students with an excellent academic environment to demonstrate high levels of communication skills, creativity, critical thinking, responsibility, teamwork and leadership in their career.

Programme Outcomes (POs)

PO-1: Disciplinary Knowledge: Show a critical understanding of the most recent developments in the field and the capacity to apply accepted methods of analysis and inquiry within the subject domain. Gain a systematic, thorough, and coherent knowledge and understanding of their academic discipline as a whole, its applications, and links to related subject domain.

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PO-2: Professional skills: Capacity to catalogue all document types using standard metadata and catalogue codes; Ability to classify simple, compound, and complex documents using standard classification schemes; Ability to perform housekeeping operations in Library; Ability to provide library and information services using information and communication technologies; Ability to search OPAC, Internet, and electronic databases for information.

PO-3: Analytical thinking and problem solving: Show that you can learn on your own and that you can think critically and analytically about a variety of concepts as well as intricate complex problem and issues.

PO-4: Skilled Communicator: Showcase proficient oral and written communication abilities to convey disciplinary knowledge and effectively convey the findings of research projects in a variety of settings by utilizing the key ideas, frameworks, and methodologies of the subject.

PO-5: Research, Innovation and Ethics: In order to produce a well-researched written work that engages with various sources using a range of disciplinary techniques and applicable scientific methods, one must demonstrate comprehensive knowledge about current research and innovation as well as acquire the techniques and skills necessary for identifying problems, issues, and scientific method applicable.

PO-6: Digitally literate: Able to utilize digital technology for online databases, OPAC, and housekeeping tasks in addition to communication and housekeeping functions in libraries.

PO-7: Lifelong learners: Able to learn at their own speed and with autonomy in order to advance personally; able to re-skill through ongoing education opportunities and enhance existing knowledge and skills.

Programme Specific Outcomes (PSOs)

After completing this course the students will have some specific skills: -

PSO-1 To exhibit knowledge, understanding and skills that offer job opportunities in different types of libraries and information centres.

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PSO-2 To inculcate in students the ability to acquire knowledge on research, analytical, scientific skills; teaching and communication skill; computer skills including information and digital literacy; and critical thinking through assignments, projects and internship.

PSO-3 To develop conceptual and applied skill as well as competencies required for self-learning, effective problem solving and right decision making in relevant activities of libraries and information science profession.

PSO-4 To demonstrate the practice of professional ethics and standards for societal and environmental well-being.

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**Post Graduate
Programme Structure
School of Library and Information Science
Gangadhar Meher University, Amruta Vihar
Sambalpur-768004
Syllabus 2025-26**

The Post Graduate Programme comprising two years, will be divided into 4 (four) semesters each of six months' duration.

Year	Semesters	
	Semester I	Semester II
First Year		
Second Year	Semester III	Semester IV

The details of title of papers, credit hours, division of marks etc of all the papers of all semesters is given below.

1. There will be two elective groups namely:

- Discipline Specific Elective in Sem II.
- Interdisciplinary Elective in Sem III.

A student has to select one of the DSE paper in Sem II and one of the paper in Sem III as offered by the respective department at the beginning of semester II and semester III respectively.

2. Each paper will be of 100 marks out of which 70 marks shall be allocated for semester examination and 30 marks for internal assessment (Mid Term Examination).
3. There will be four lecture hours of teaching per week for each paper.
4. Duration of examination of each paper shall be three hours.
5. Pass Percentage:
 - The minimum marks required to pass any paper shall be 40 percent in each paper and 40 percent in aggregate of a semester.
 - No students will be allowed to avail more than three (3) chances to pass in any paper inclusive of first attempt.

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Semester-I: Part-I

Papers		Marks		Total Marks	Duration (Hrs)	Credit Hours
Paper No	Title	Mid Term	End Term			
101	Foundation of Library and Information Science	30	70	100	3	4
102	Organization of Knowledge – Classification Theory	30	70	100	3	4
103	Organization of Knowledge – Cataloguing Theory	30	70	100	3	4
104	Management of Library & Information Centres	30	70	100	3	4
105	Organization of Knowledge – Classification Practice and Cataloguing Practice	-	100	100	3	4
Total				500		20

Semester-II: Part-I

Papers		Marks		Total Marks	Duration (Hrs)	Credit Hours
Paper No	Title	Mid Term	End Term			
201	Search Strategies and Techniques	30	70	100	3	4
202	Information Sources & Services	30	70	100	3	4
203	Basics of Information and Communication Technology & Application in Libraries	30	70	100	3	4
204	Personality Development & Communication Skill	30	70	100	3	4
205	ICT & Library Management Software-Practice	-	100	100	3	4
DSE Papers* (Any one)						
206 A	Preservation & Conservation of Library Materials	30	70	100	3	4
206 B	Community Information Service	30	70	100	3	4
206 C	Information Resource Development	30	70	100	3	4
Total				600		24

*Discipline Specific Elective Paper. Any one paper can be opted by students of this Department.

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Semester-III: Part-II

Papers		Marks		Total Marks	Duration (Hrs)	Credit Hours
Paper No	Title	Mid Term	End Term			
301	Research Methodology	30	70	100	3	4
302	Digital Library and Content Management	30	70	100	3	4
303	Academic Library System	30	70	100	3	4
304	Web Technologies	30	70	100	3	4
305	Internship and Content Management Software - Practice	-	100	100	3	4
IDSE Papers**						
306 A	Intellectual Property Rights & Copyright	30	70	100	3	4
306 B	Internet & Its Applications	30	70	100	3	4
306 C	Electronic Publishing (E-Publishing)	30	70	100	3	4
306 D	Open Access & Scholarly Communications	30	70	100	3	4
Total				600		24

**Inter Discipline Specific Elective Paper. Any one paper can be opted by students of other Departments.

Semester-IV: Part-II

Papers		Marks		Total Marks	Duration (Hrs)	Credit Hours
Paper No	Title	Mid Term	End Term			
401	Information Retrieval	30	70	100	3	4
402	Information System and Networks	30	70	100	3	4
403	Knowledge Management	30	70	100	3	4
404	Information Literacy	30	70	100	3	4
405	Dissertation/Project and Viva-voce	-	100	100	3	4
Total				500		20
Grand Total				2200		88
22 Papers						

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Employability

Entrepreneurship

Skill Development

VALUE-ADDED COURSES

S. No	Value Added Courses	Course Code
1	Management of E-Resources	VLIS-001
2	Library Automation and Digitization	VLIS-002
3	Digital Literacy	VLIS-003
4	Academic Information Seeking and Use	VLIS-004

Papers		Marks			Total Marks	Duration (Hrs)	Credit Hours
Paper No	Title	Mid Term	End Term				
			Theory	Practical			
LIS-001	Management of E-Resources	20	40	40	100	3	2
LIS-002	Library Automation and Digitization	20	40	40	100	3	2
LIS-003	Digital Literacy	20	40	40	100	3	2
LIS-004	Academic Information Seeking and Use	20	40	40	100	3	2
Total					400		6

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**SEMESTER-I
PART-I**

Paper No: 101
Paper Name: FOUNDATION OF LIBRARY AND INFORMATION SCIENCE

Credit Distribution			Total Credits	Mid-Term	End-Term	Total Marks
L	T	P	L+T+P	30	70	100
3	1	0	04			

Objectives:

1. To acquaint the students with the basic concept and philosophy of Librarianship
2. To acquaint with the basic concept of Information Communication Technology.

Course Outcomes: After completion of the course, students will be able:

- CO-1 Understand the basic concept and philosophies of the subject.
CO-2 To analyze the role of professional associations.
CO-3 To apply the concept of data, information and knowledge
CO-4 To implement the different models and their application in information science.

Unit 1: Libraries- Concepts, Types, Their Role and Development

- Types of Libraries: Features and Functions, Five Laws of Library Science
- Growth & Development of Libraries in UK, USA and India
- Library Extension Services
- Library Legislation, Press and Registration of Books Act, Delivery of Books and Newspapers Act

Unit 2: Professional Associations and Organizations

- Professional Ethics in Librarianship
- Professional Associations: IFLA, ILA, IASLIC, SLA
- Information and Documentation Organizations: UNESCO, NISCAIR, DESIDOC, NASSDOC

Unit 3: Information and Communication

- Data, Information and Knowledge: Conceptual Difference
- Information Transfer Cycle, Information as Resource
- Communication: Channels, Media, Models and Barriers
- Information Society and National Information Policy

Unit 4: Library and Information Users'

- Information Users': Types and Characteristics

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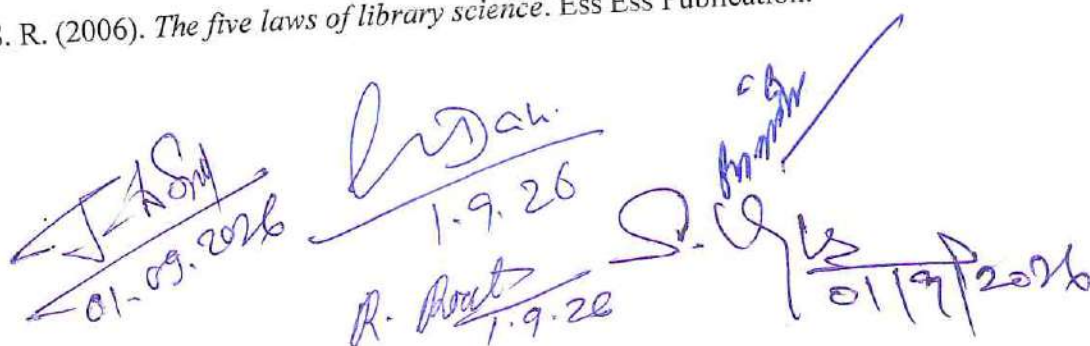
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- Information Needs, Information Seeking Behaviour Models
- User Education & User Study
- Electronic/Digital Literacy

RECOMMENDED BOOKS

1. Amudhavalli, & Singh, A. & J. (2010). *Challenges and changes in librarianship papers in honour of professor sewa singh in 2 vols.*
2. Brynteson, S., & Information, C. for N. (1991). *Information policies: A compilation of position statements, principles, statutes, and other pertinent statements.* Washington, D.C. : Coalition for Networked Information.
3. Esperanza, M. (1994). *Perspective of library movement in india: An account of various facets and phases of indian library movement and the work and contribution of prof. P.N. kaula, a tribute on his 71st birthday.*
4. Evans, W., & Baker, D. (2011). *Libraries and society: Role, responsibility and future in an age of change.* Elsevier.
5. Feather, J. (1998). *The information society: A study of continuity and change.* Library Assn Pub Limited.
6. Khan, R. (2006). *Introduction to library science.* SBS Publishers.
7. Khanna, J. K. (1987). *Library and society.* New Delhi: EssEss Publications.
8. Kumar, P. S. G. (2003). *Foundations of library and information science [vol.1] Paper 1 of ugc model curriculum.*
9. Kumar, S. & Sah, Leena. (2000). *Public Library Act in India,* New Delhi: Ess Ess Publications.
10. McBride, P. K. (2003). *Career award information and communication technology: Foundation level.* Cambridge University Press.
11. Ngurtinkhuma, R. K. (2011). *Public library in india: Impact on socio-cultural and educational development of mizoram.*
12. Prasher, R. G. (1991). *Information and its communication.* New Delhi: Medallion Press.
13. Rai, A. N. (2000). *Communication in the digital age.* New Delhi: Author Press.
14. Ranganathan, S. R. (2006). *The five laws of library science.* Ess Ess Publication.



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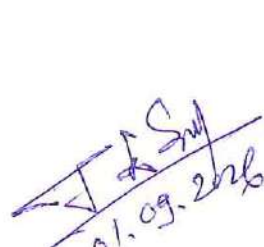
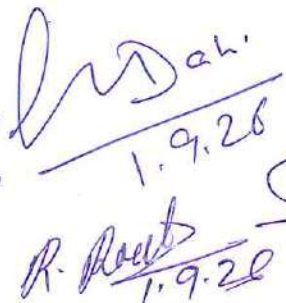
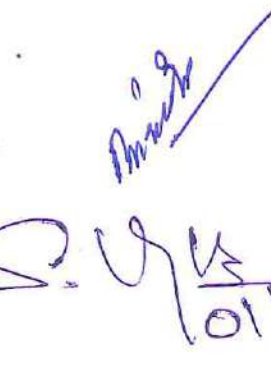
 S. G. / 01/9/2026

15. Rubin, R. E., & Rubin, R. G. (2020). *Foundations of library and information science: Fifth edition*. ALA Neal-Schuman.

CO-PO & PSO Mapping (P-101)

PAPER CODE-LIS-101 Foundation of Library and Information Science											
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	1	3	1	3	2	2	3	2	1	1	2
CO-2	3	2	1	1	3	2	1	3	1	3	1
CO-3	2	1	2	1	2	1	3	2	3	2	1
CO-4	1	2	3	2	1	3	1	1	2	1	3

(1=Low, 2= Medium, 3= High)


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Paper No: 102

Paper Name: ORGANIZATION OF KNOWLEDGE – CLASSIFICATION THEORY

Credit Distribution			Total Credits	Mid-Term	End-Term	Total Marks
L	T	P	L+T+P	30	70	100
3	1	0	04			

Objectives:

1. To apprise the students with the organization of knowledge with different basic concepts and philosophies of library classification.
2. Grasp the meaning of terms and their use in the theory and practice of library classification.
3. Know the different schemes of library classification being used today for the organization of knowledge.
4. Obtain an insight into the application of the postulation approach to library classification

Course Outcomes: After completion of the course students will be able:

CO-1 Explain the nature and attributes of universe of knowledge.

CO-2 To Understand the functions of different classification schemes.

CO-3 Express the meaning, purpose, functions, theories, and canons of library classification.

CO-4 To become aware of the recent trends and developments in Library Classification.

Unit 1: Knowledge Organization

- Universe of Knowledge/Subjects: Nature and Attributes
- Modes of Formation of Subjects
- Knowledge Classification and Library Classification; Static & Dynamic Theories of Classification

Unit 2: Classification Schemes

- Species of Library Classification Schemes
- Salient Features of DDC, UDC, and CC
- Mapping of Subjects in DDC, UDC and CC

Unit 3: Library Classification Theory

- Definition, Need and Purpose of Classification
- Planes, Canons, Principles, Fundamental Categories, Postulates, Facet Analysis and Facet Sequence
- Phase Relation, Common Isolates, Devices, Mnemonics

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Unit 4: Notational Techniques and Recent Trends

- Notation: Definition, Types, Functions, Qualities and Techniques
- Design and Development of Classification Schedules
- Recent Trends in Library Classification

RECOMMENDED BOOKS

1. Broughton, V. (2004). *Essential classification*. Facet Publishing.
2. Husain, S. (1993). *Library classification: Facets and analyses*. B. R. Publishing.
3. Kao, M. L., & Carter, R. C. (2003). *Cataloging and classification for library technicians*. Mumbai: Jaico.
4. Ranganathan, S. R. (2006). *Philosophy of library classification*. Ess Ess Publication.
5. Sonal, S. (1998). *Universe of knowledge: Structure & development*. Raj Publishing.
6. Sood, S. P. (1998). *Universe of Knowledge and Universe of Subjects*. G. Star Printers.
7. Dhiman, A. K., & Rani, Y. (2005). *Learn library management: Learning library science series*. Ess Ess Publication.
8. Kumar, P. S. G. (2003). *Knowledge organization, information processing and retrieval: Theory*. B. R. Publishing.
9. Jennex, M. E. (2008). *Knowledge management: Concepts, methodologies, tools, and applications*. IGI Global.
10. Pathak, L. P. (2000). *Sociological terminology and classification schemes*. Mittal Publications.
11. Taylor, A. G., Joudrey, D. N., & Miller, D. P. (2015). *Introduction to cataloguing and classification*. Libraries Unlimited.

CO-PO & PSO Mapping (P-102)

PAPER CODE-LIS-102 Organization of Knowledge – Classification Theory											
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	1	2	2	2	1	2	2	1	2	1	2
CO-2	3	3	2	1	3	3	1	2	1	3	1
CO-3	2	1	3	3	2	2	2	3	3	2	3
CO-4	2	3	2	2	1	1	3	3	1	1	1
CO-5	2	1	3	3	2	1	3	1	3	2	1

(1=Low, 2= Medium, 3= High)

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Paper No:
Paper Name:

103

ORGANIZATION OF KNOWLEDGE – CATALOGUING THEORY

Credit Distribution			Total Credits	Mid-Term	End-Term	Total Marks
L	T	P	L+T+P	30	70	100
3	1	0	04			

Objectives:

1. To acquaint the students with the organization of knowledge with various concepts and philosophies of library cataloguing.
2. To explain different types of catalogues, Catalogue codes as well as Laws, Canons and Principles in the context of cataloguing.
3. To discuss the need and importance of bibliographic standards, filing rules and subject headings.
4. To describe different types of bibliographic record format and its importance.

Course Outcome: After studying this paper, students shall be able to:

CO-1 Recognize and understand the fundamental concepts of Library Cataloguing, various forms of catalogue, catalogue code, laws, canons, principles and its importance in knowledge organisation.

CO-2 Analyse the importance of catalogue codes, filing rules and subject headings in performing cataloguing work in libraries.

CO-3 Apply the knowledge of different standards of bibliographic description in information exchange.

CO-4 Implement knowledge on different forms of catalogue, catalogue code, bibliographic stands and bibliographic record format.

Unit 1: Cataloguing Principles

- Catalogue: Definition, Objectives, Functions
- Types of Catalogue and Physical Forms of Catalogue
- Principles of Cataloguing: Ranganathan's Cannon, Paris Principles
- Introduction to Catalogue Codes: CCC, AACR-IIR

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Unit 2: Entry Elements, Filing Rules & Subject Headings

- Kinds of Entries and their Elements of Description
- Elements of Bibliographic Description of Non-Book Material (AACR-IIR)
- Rules for Choice and Rendering of Headings in AACR –IIR
- Subject Heading Lists: Sears List & LCSH

Unit 3: Standards of Bibliographic Description

- ISBD, FRAD (Functional Requirements for Authorized Description), GARR (Guidelines for Authority Records and References), RDA (Resource Description and Access)
- Standards for Bibliographic Information Interchange and Communication- ISO 2709, Z39.50, Z39.71
- ISBN & ISSN

Unit 4: Bibliographic Record Formats & Other Aspects

- Bibliographic Records Format- MARC 21, UNIMARC, CCF
- Cataloguing of E-Resources- Metadata Standards (Dublin Core)
- Derivatives of Cataloguing (Copy Cataloguing)

RECOMMENDED BOOKS

1. Andrew, P. G. (2014). *Cataloging sheet maps: The basics*. Routledge.
2. Association, A. L., Association, C. L., & Britain), C. I. of L. and I. P. (Great. (2004). *Anglo-American cataloguing rules*. Amer Library Assn.
3. Aswal, Rajinder Singh. (2004). *Marc 21: Cataloguing format for 21st century*. Ess Ess Publication.
4. Carter, R. C., & Kao, M. L. (2020). *Cataloging and classification for library technicians, second edition*. Routledge.
5. Dhawan, K. S. (1997). *Online cataloguing systems*. Commonwealth Publication.
6. Dhiman, A. K. (2004). *Cataloguing of non book materials*. Ess Ess Publication.
7. Gredley, E., Hopkinson, A., Association, C. L., & Association, A. L. (1990). *Exchanging bibliographic data: MARC and other international formats*. Canadian Library Association ; London : Library Association ; Chicago : American Library Association.
8. Hagler, R. (1997). *The bibliographic record and information technology*. American Library Association.
9. Kumar, G., & Kumar, K. (2004). *Theory of cataloguing*. Delhi : Vikas Publishing House.

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10. Leigh, Gernert. (2003). *A Text Book of Cataloguing*. (2003). Dominant Publishers.
11. Mitchell, A. M., & Surratt, B. E. (2005). *Cataloging and organizing digital resources: A how-to-do-it manual for librarians*. Neal Schuman Pub.
12. Roe, S. K. (2013). *The audiovisual cataloging current*. Routledge.
13. Singh, S. N., & Prasad, H. N. (1985). *Cataloguing manual AACR-II*. B. R. Publishers.
14. Sood, S. P. (1999). *Theory of Library Cataloguing*. Raj Publishing House
15. Taylor, A. G., Joudrey, D. N., & Miller, D. P. (2015). *Introduction to cataloging and classification*. Libraries Unlimited.
16. Viswanathan, C. G. (2008). *Cataloguing theory and practice: A guide to the student of library science*. Ess Ess.

CO-PO & PSO Mapping (P-103)

PAPER CODE-LIS-103 Organization of Knowledge – Cataloguing Theory											
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	3	3	2	1	2	1	1	3	2	3	3
CO-2	3	3	2	1	2	2	1	3	1	2	1
CO-3	3	3	3	1	3	2	2	3	1	2	1
CO-4	3	3	3	1	3	2	2	3	2	2	2

(1=Low, 2= Medium, 3= High)

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Paper No: 104
Paper Name: MANAGEMENT OF LIBRARY & INFORMATION CENTERS

Credit Distribution			Total Credits	Mid-Term	End-Term	Total Marks
L	T	P	L+T+P	30	70	100
3	1	0	04			

Objective: To apprise the students and make them aware of the various management techniques in the organisation of library & information centres.

Course Outcomes: After studying this paper, students shall be able to:

- CO-1 To remember the concept of modern Library & Information Centres.
CO-2 To understand the Library and Information center resources and operations.
CO-3 To analyze the skills of Library Professionals required by the Human Resources Managers.
CO-4 To apply the financial rules and regulations for managing the Libraries after passing out.

Unit 1: Management: Concept and Principles

- Schools of Management Thought
- Principles of Scientific Management in Libraries and Information Centers
- Elements of Management Process (POSDCORB)
- Total Quality Management, Change Management, Disaster Management, Crisis Management, Marketing of Library & Information Services
- Project Management- PERT/CPM, SWOT Analysis, MIS, DSS
- Library Committee- Types and Functions

Unit 2: Physical Resource Management and Library Operations

- Library Building: Site, Selection, Planning
- Furniture, Fittings and Equipments: Standards and Specifications
- System Analysis and Design in Library Operations
- Collection Development and Management – Acquisition, Maintenance, Stock Verification, Weeding out Policy and Procedures
- Preservation and Conservation

Unit 3: Human Resource Management

- Organizational Structure
- Job Description and Analysis: Job – Evaluation
- Inter – Personal Relations
- Recruitment Procedures
- Motivation: Group Dynamics

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- Training and Development
- Performance Appraisal

Unit 4: Financial Resource Management

- Resource Mobilization and Outsourcing
- Budgeting, Accounting and Auditing
- Budgetary Control

RECOMMENDED BOOKS

1. Beardwell, I., & Holden, L. (1997). *Human resource management: A contemporary perspective*. Pitman Publishing.
2. Bryson, J. (1990). *Effective library and information centre management*. Jaico Pub. House
3. Drucker, P. F. (2001). *Management challenges for the 21st century*. HarperBusiness.
4. Evans, G. E. (2019). *Management basics for information professionals* (2nd ed.). Libraries Unlimited.
5. Ginn, M. L., Smith, J. R., & Kallaus, N. F. (2004). *Records management (7th ed.) With disk and practice set with disk: (2 books with disks)*. South-Western Pub.
6. Johnson, P. (2009). *Fundamentals of collection development and management*. American Library Association.
7. Kotler, P. (2006). *Marketing management* (11th ed.). Pearson.
8. Narayana, G. J. (1991). *Library and information management*. Prentice Hall of India.
9. Paton, P. R. A., & McCalman, J. (2008). *Change management: A guide to effective implementation*. SAGE.
10. Ramaswamy. (2009). *Marketing management: Global perspective, indian context*. Macmillan.
11. Rowley, J. (2016). *Information marketing*. Routledge.
12. Stueart, R. D., Moran, B. B., & Morner, C. J. (2012). *Library and information center management, 8th edition*. ABC-CLIO.

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CO-PO & PSO Mapping (P-104)

PAPER CODE-LIS-104 Management of Library & Information Centres											
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	1	2	1	2	1	1	1	2	1	3	1
CO-2	3	2	3	3	2	1	3	2	2	2	3
CO-3	2	3	2	1	2	3	2	1	3	1	2
CO-4	1	1	2	3	3	2	3	3	3	2	3

(1=Low, 2= Medium, 3= High)

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Paper No: 105

Paper Name: ORGANIZATION OF KNOWLEDGE – CLASSIFICATION PRACTICE AND CATALOGUING PRACTICE

Credit Distribution			Total Credits	Mid-Term	End-Term	Total Marks
L	T	P	L+T+P	-	100	100
0	0	4	04			

Objective: To familiarise the students with the building class numbers of various titles using DDC and cataloguing of various types of library resources.

Course Outcomes: After completion of the course students will be able:

CO-1 Develop practical knowledge to classify and catalogue library resources.

CO-2 Analyse and demonstrate the importance of classification, catalogue main entry, added entries and reference entries in cataloguing library materials.

CO-3 Implement the suitable principles of DDC for assigning class numbers to documents representing simple, compound, and complex subjects.

CO-4 Create catalogue for different types of libraries using AACR II (R) and use subject headings.

(A) Assigning Class Numbers representing Simple, Compound, Complex Subjects according to DDC (Latest available edition)

(B) Preparation of Main and Added Entries of Documents according to AACR – IIR (Latest edition) having the following items,

- Single Responsibility and Shared Responsibility, Mixed Responsibility
- Corporate Author, Continuing Resources (Serials), Pseudonyms and Anonymous works
- Classics, Non-Book Materials (Cartographic Materials & e-resources)
- Assigning Subject Heading to Documents according to Sears List of Subject Heading (Latest edition)

(C) **Note:** In Practical Paper total marks will consist as under:

End Term Examination – [A (40 marks) + B (40 marks) + Viva-Voce (20 marks) =100 marks]

RECOMMENDED BOOKS

- Association, A. L. (1999). *Anglo-American cataloging rules*. American Library Association.

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- Bristow, B. A., & Farrar, C. S. (2014). *Sears list of subject headings*. H. W. Wilson.
- Dewey, M. (2011). *Dewey Decimal Classification and Relative Index: Relative index*. OCLC Online Computer Library Center.
- Dhyani, P. (2002). *Classifying with dewey decimal classification (ed. 19th and 20th)*. Ess Ess Publications.
- Kaushik, S. K. (2012). *Dewey decimal classification: A practical manual of 23rd edition*. Ess Ess Publication.
- Khan, M. T. M. (2005). *Anglo-American cataloguing rules: AACR*. Shree Publishers.
- Kumar, K., & Garg, B. S. (2005). *Advanced cataloguing practice: Based on anglo-american cataloguing rules 2nd ed*. Har-Anand Publications.
- Mortimer, M. (2007). *Learn dewey decimal classification first north american edition*. Total Recall Publication Incorporated.
- Ranganathan, S. R. (1958). *Classified catalogue code: With additional rules for dictionary catalogue code*. Sarada Ranganathan Endowment for Library Science.
- Ranganathan, S. R., & Neelameghan, A. (2006). *Classified catalogue code: With additional rules for dictionary catalogue code*. Ess Ess Publication.
- Satija, M. P. (2012). *Exercises in the 23rd edition of dewey decimal classification*. Ess Ess Publication.
- Satija, M. P. (2019). *User's guide to sears list of subject headings*. Rowman & Littlefield Publishers.
- Singh, S. N., & Prasad, H. N. (1985). *Cataloguing manual AACR-II*. B. R. Publishing.

CO-PO & PSO Mapping (P-105)

PAPER CODE-LIS-105 Organization of Knowledge – Classification Practice and Cataloguing Practice											
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	3	3	2	0	1	1	1	3	1	3	1
CO-2	3	3	2	0	1	1	1	3	1	3	1
CO-3	3	3	3	0	1	3	1	3	0	2	0
CO-4	3	3	3	0	1	3	1	3	0	2	0

(1=Low, 2= Medium, 3= High)

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**SEMESTER-II
PART-I**

Paper No: 201
Paper Name: SEARCH STRATEGIES AND TECHNIQUES

Credit Distribution			Total Credits	Mid-Term	End-Term	Total Marks
L	T	P	L+T+P	30	70	100
3	1	0	04			

Objective: To acquaint the students about the different types of search strategies to find information online and the indexing techniques.

Course Outcomes: After studying this paper, students shall be able to:

CO-1 Understand the fundamental concepts of search strategies, search techniques, vocabulary control tools and its importance in information searching and retrieval.

CO-2 Demonstrate the features and functionalities of different online searching tools, federated searching, web searching and automatic indexing

CO-3 Analyse different kind of indexing system, vocabulary control tools and learn its application.

CO-4 Implement the knowledge of online searching, searching tools, vocabulary control tools and different indexing system.

Unit-1: Search Strategies

- Search Strategies: Concept, Need, Development
- Process for Searching: Preparing to search, Feedback and Refining
- Basic Search Techniques: Word and Phrase, Boolean, Truncation, Proximity, Field, Metadata, Limit Search Techniques

Unit-2: Online Searching

- Online Searching and Retrieval: Definition, Historical development, basic features; Searching vs. browsing
- Online Search tools: Search Engines- Primary Search Engines, Meta search Engines, Focused crawler- based search engines and Directories, Subject Gateways
- Google Search tools and techniques,
- Federated search: Concept, Need, Functions, Advantages, Disadvantages, Federated Search Engine vs Meta search engine; Cluster Based Web search

Unit-3: Indexing Language and Vocabulary Control

- Indexing Language: Types and Characteristics
- Vocabulary Control: Definition and Purpose. Tools of Vocabulary Control
- Thesaurus: Structure and Function; Design/Construction of Thesaurus.

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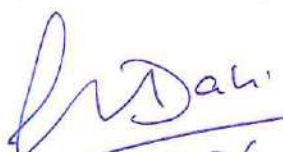
Unit-4: Indexing techniques

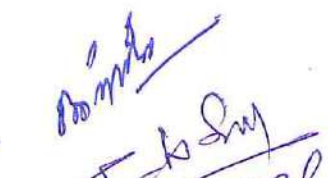
- Pre-Coordinate & Post Coordinate Indexing,
- Assigned Indexing vs Derived Indexing
- Assigned Indexing Systems: Pre-Coordinate (PRECIS, POPSI and Chain Indexing)
- Derived Indexing Systems: Keyword Indexing (KWIC, KWOC and KWAC)
- Automatic Indexing: Concept and Process; Manual vs Automatic Indexing
- Automatic Term Extraction and Weighing, Automatic Text Retrieval

RECOMMENDED BOOKS

1. Bobick, J. E., & Berard, G. L. (2011). *Science and technology resources: A guide for information professionals and researchers*. ABC-CLIO.
2. Borowick, J. N. (2000). *Technical communication and its applications*. Prentice Hall; 2nd edition (June 11, 1999).
3. Burroughs, S., Brocato, K., Hopper, P. F., & Sanders, A. (2009). Media literacy: A central component of Democratic citizenship. *The Educational Forum*, 73(2), 154-167. <https://doi.org/10.1080/00131720902739627>
4. Chowdhury, G. G., & Chowdhury, S. (2001). *Searching CD-ROM and online information sources*. Library Assn Pub Limited.
5. Foskett, A. C. (1996). *The subject approach to information*. Facet Publishing.
6. Guha, B. (1983). *Documentation and information: Service, techniques and systems* (2nd ed.). World Press.
7. Hague, B. N., & Loader, B. D. (2005). *Digital democracy: Discourse and decision making in the information age*. Routledge.
8. Hutchins, J. (1997, May). Translation technology and the translator. In *Proceedings of the Eleventh Conference of the Institute of Translation and Interpreting* (pp. 113-120).
9. Kent, A., Lancour, H., & Daily, J. E. (1978). *Encyclopedia of Library and Information Science: Volume 24 - Printers and Printing: Arabic Printing to Public Policy: Copyright, and Information Technology*. CRC Press.
10. Lancaster, F. W. (1979). *Information retrieval systems: Characteristics, testing, and evaluation*. New York ; Toronto : Wiley.
11. Large, J. A., Tedd, L. A., & Hartley, R. J. (1999). *Information seeking in the online age: Principles and practice*. K G Saur Verlag GmbH & Company.


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12. McGrath, M. (2004). Interlending and document supply: A review of recent literature – XLVIII. *Interlending & Document Supply*, 32(1), 50–54. <https://doi.org/10.1108/02641610410520279>
13. Mitchell, E., & Walters, S. (1994). *Document delivery services: Issues and answers*. Information Today.
14. Rowley, J. E. (1998). *The electronic library*. Library Assn Pub Limited.
15. Saracevic, T., Spink, A., & Wu, M.-M. (1997). Users and intermediaries in information retrieval: What are they talking about? In *User Modeling* (pp. 43–54). Springer Vienna. http://dx.doi.org/10.1007/978-3-7091-2670-7_6
16. Singer, C. A. (2012). *Fundamentals of managing reference collections*. American Library Association.
17. Walford, A. J., Harvey, A. P., & Drubba, H. (1980). *Walford's guide to reference material*. London : Library Association.
18. Walford, A. J. (1993). *Walford's Guide to Reference Material: Science and technology*. London : Library Association.

CO-PO & PSO Mapping (P-201)

PAPER CODE-LIS-201 Search Strategies and Techniques											
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	3	3	1	0	1	2	3	3	2	2	2
CO-2	3	3	2	1	1	2	3	3	2	3	0
CO-3	3	3	1	0	2	1	2	3	1	3	0
CO-4	3	3	1	0	2	1	2	3	1	3	1

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Paper No: 202
Paper Name: INFORMATION SOURCES & SERVICES

Credit Distribution			Total Credits	Mid-Term	End-Term	Total Marks
L	T	P	L+T+P	30	70	100
3	1	0	04			

Objective: To acquaint the students about the different types of information sources with their specific features and characteristics.

Course Outcomes: After completion of the course students will be able

CO-1. Understand the various types of Information resources.

CO-2. Analyze the importance of various E-Resources and their use in the library.

CO-3 Apply the various types of information services provided to users.

CO-4. Implementation and use the various types of collaborative service platform.

Unit 1: Information Sources

- Documentary and Non-Documentary Sources (Human & Institutional)
- Reference Sources: Categories, Characteristics and Usefulness
- Evaluation of Reference Sources: Print and Electronic

Unit 2: Electronic Sources of Information

- e-Documents, OPAC, Web-OPAC
- Subject Gateways/Portals, Bibliographical Sources, Full text Databases, Bulletin Boards, Discussion Groups/Forums
- Open Access Resources, List Serves, Social Networking Sites

Unit 3: Information Services

- Information Services: Definition, Scope, Need and Functions
- Types of Information Services: Reference Service, Referral Service, Bibliographic Service, Translation Service, Indexing & Abstracting Services, Reprographic Service
- CAS/Alerting Service, SDI, DDS

Unit 4: Internet based Information Services

- Library 2.0: Concepts, Characteristics & Components
- Synchronous Communication & Content Delivery: Instant Messaging, RSS Feeds, Streaming Media, Podcasts, Vodcasts, SMS Enquiry Service
- Collaborative Publishing Tools: Blogs & Wikis
- Collaborative Service Platforms: Social Networks, Tagging, Social Bookmarking

RECOMMENDED BOOKS

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1. Association, L. (1984). *Printed reference material*. London : Library Association.
2. Chowdhury, G. G., & Chowdhury, S. (2001). *Information sources and searching on the world wide web*. Library Assn Pub Limited.
3. Guha, B. (1978). *Documentation and information: Services, techniques and systems*. World Press.
4. Gupta, , S. (Ed.). (2012). *Innovative Challenges in Information Services: Changing Paradigm for the sustenance of Library and Information Centers in the Digital Era*. Kutub Publishers.
5. Kumar, K. (1989). *Reference service*. Vikash Publication.
6. Lancaster, F. W. (1998). *Indexing and abstracting in theory and practice*. University of Illinois, Graduate School of Library & Information Science.
7. London : Library Association.
8. Padhi, P. (1994). *Reference sources in Modern Indian Languages: A study on Oriya language*. Gayatri Devi Publication.
9. Panda, K. C., & Gautam, J. N. (1999). *Information Technology on the Cross Road from Abacus to Internet*. Y. K. Publishers.
10. Ranganathan, S. R. (2006). *Reference service*. Ess Ess Publication.
11. Riordan, D. (2013). *Technical report writing today*. Cengage Learning.
12. Seetharama, S. (1997). *Information consolidation and repackaging: Framework methodology planning*. Ess Ess Publications.
13. Singer, C. A. (2012). *Fundamentals of managing reference collections*. American Library Association.
14. Walford, A. J. (1993). *Walford's Guide to Reference Material: Science and technology*.
15. Walford, A. J., Harvey, A. P., & Drubba, H. (1980). *Walford's guide to reference material*. London : Library Association.

CO-PO & PSO mapping (P-202)

PAPER CODE-LIS-202 Information Sources & Services											
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	1	2	1	2	1	1	1	2	1	3	1
CO-2	3	2	3	3	2	1	3	2	2	2	3
CO-3	2	3	2	1	2	3	2	1	3	1	2
CO-4	1	1	2	3	3	2	3	3	3	2	3

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Paper No: 203
Paper Name: BASICS OF INFORMATION AND COMMUNICATION TECHNOLOGY & ITS APPLICATION IN LIBRARIES

Credit Distribution			Total Credits	Mid-Term	End-Term	Total Marks
L	T	P	L+T+P	30	70	100
3	1	0	04			

Objective: To train the students with the basics structure of Information and Communication Technology and use of library software for record management and dissemination.

Course Outcomes:

CO-1 To remember the basic knowledge about computers and how they are used in Libraries.

CO-2 To understand the benefits of Computer Technology, Communication Technology, Library Automation software packages.

CO-3 To apply the difference between traditional Library System and integrated library system by the use of computers.

CO-4. To evaluate the working knowledge of various types of Library Software Packages and how they are used in Libraries.

Unit 1: Computer Technology

- Evolution of Digital Computers;
- Number systems;
- Character Representation: ASCII, ISCII and UNICODE;
- Basic Components of a Computer: Arithmetic Logic Unit;
- Control Unit; Memory Unit; Input / Output devices;
- System Software; Application software.
- Operating Systems: Linux, Windows;
- Introduction to Programming Languages

Unit 2: Introduction to Communication Technology

- Tele-communication: Transmission Media, ISDN, PSDN, Multiplexing,
- Modulation, Standards and Protocols,
- Wireless Communication; Networking: Topology and levels of networks, Network protocols, Network Models (OSI),
- Tools and Devices. Hardware requirements

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Unit-3: Library Automation

- History and Development of Library Automation
- Planning and implementation
- Automation of in-house operations
- Requirements for Acquisition, Cataloguing, Circulation control, Serials Control, OPAC
- Library Security Technology: Barcode, QR Code, RFID, CCTV, Biometrics, Smartcard

Unit-4: Library Automation Packages

- History, Evolution and Generations of Packages
- Commercial Software Packages: LIBSYS, SOUL 2.0, SLIM
- Open-Source Software Packages: KOHA, NEWGENLIB, E-GRANTHALAYA
- Evaluation of Software Packages

RECOMMENDED BOOKS

1. Arora, A., & Bansai, S. (2002). *Computer fundamentals*. Excel Books.
2. Atul, K. (2004). *Introduction to database management systems*: Pearson Education India.
3. Babu, Dr. B. R., & Gopalakrishnan, Dr. S. (2004). *Information, communication, library, and community development: Festschrift in honour of prof. C.P. vashishth*. B. R. Publishing.
4. Bach, M. J. (1986). *The design of the UNIX operating system*. Pearson.
5. Basandra, S. K. (1998). *Computer Today*. Galgotia Publications.
6. Bilal, D. (2014). *Library automation: Core concepts and practical systems analysis, 3rd edition: Core concepts and practical systems analysis*. ABC-CLIO.
7. Brown-Syed, C. (2011). *Parents of Invention: The development of library automation systems in the late 20th century: The development of library automation systems in the late 20th century*. ABC-CLIO.
8. Date, C. J. (2006). *An introduction to database systems*. Pearson Education India.
9. Doyle, S. (2015). *Complete ICT for Cambridge IGCSE®*. Oxford University Press - Children.
10. Doyle, S. (2015b). *Complete ICT for cambridge IGCSE® revision guide*. Oxford University Press - Children.
11. Goel, A. (2010). *Computer fundamentals*. Pearson Education India.

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12. Gopal, K. (2005). *Modern library automation*. Authors Press.
13. Grewal, G. (2004). *Handbook of library security*. Dominant.
14. Jain, M., Jain, & Singh, S. (2003). *Introduction to database management*. BPB Publications.
15. Jha, J., Mahanti, P. K., & Sahoo, L. (1996). *Elements of computer science*. Alpha Science International, Limited.
16. Kochtanek, T. R., & Breeding, M. (2017). *Library information systems: From library automation to distributed information access solutions, 2nd edition*. Libraries Unlimited.
17. Kochtanek, T. R., & Matthews, J. R. (2002). *Library information systems: From library automation to distributed information access solutions*. Greenwood.
18. Kumar, P. S. G. (2004). *Information and communication: Paper ix of ugc model curriculum*. B.R. Publisher.
19. Leon, A. (2009a). *Database management systems, 1E*. Vijn Nicole.
20. Matthew, N., & Stones, R. (2011). *Beginning linux programming*. John Wiley & Sons.
21. Petersen, R. (2007). *Linux: The complete reference (with cd)*. Tata McGraw-Hill Education.
22. Reddy, S., Balakrishnan, S., & Paliwal, P. K. (2001). *Automated management of library collections*. Ess Ess Publications.
23. Redmond, E., & Wilson, J. R. (2012). *Seven databases in seven weeks: A guide to modern databases and the nosql movement*. Shroff.
24. Shotts, W. (2019). *The Linux Command Line: A Complete Introduction*. No Starch Press.
25. Shuman, B. A. (1999). *Library security and safety handbook: Prevention, policies, and procedures*. American Library Association.
26. Silberschatz, A., Gagne, G., & Galvin, P. B. (2018). *Operating system concepts*. Wiley.
27. Silberschatz, A., Korth, H. F., & Sudarshan, S. (2011). *Database system concepts*. McGraw-Hill Education.
28. Siwatch, A. S. (2006). *New approaches to modern librarianship*. Sanjay.
29. Stallings. (2003). *Computer networking with internet protocols and technology*. Pearson Education India.
30. Sujatha, G. (1999). *Resource sharing and networking of university libraries*. Ess Ess Publications.


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31. Sybex. (2007). *Linux complete*. BPB Publications.
32. Ward, B. (2014). *How linux works, 2nd edition: What every superuser should know*. No Starch Press.
33. Ward, B. (2021). *How linux works, 3rd edition: What every superuser should know*. No Starch Press.
34. Wilson, K. (2016). *Essential computing: Concepts of ICT*. Elluminate Press.

CO-PO & PSO mapping (P-203)

PAPER CODE-LIS-203 Basics of Information and Communication Technology & its Application in Libraries											
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	3	2	1	3	2	3	2	2	3	3	2
CO-2	2	3	1	2	2	3	2	3	2	3	3
CO-3	2	2	1	2	2	3	2	3	3	3	2
CO-4	3	2	1	2	1	2	3	2	2	2	3

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Paper No: 204
 Paper Name: PERSONALITY DEVELOPMENT & COMMUNICATION SKILL

Credit Distribution			Total Credits	Mid-Term	End-Term	Total Marks
L	T	P	L+T+P	30	70	100
3	1	0	04			

Objectives:

1. To develop communication skills as well as positive personality traits
2. Developing effective communication skills (spoken and written) and presentation skills.
3. Become self-confident individuals by mastering interpersonal skills, team management skills, and leadership skills and function effectively in different circumstances.
4. Development of broad career plans, evaluating the employment market, identifying the organisations to get a good placement, and matching the job requirements and skill sets.

Course Outcomes: After completion of the course, students will be able:

- CO-1. Effectively communicate through verbal/oral communication and improve listening skills
- CO-2. Write precise briefs or reports and technical documents, actively participate in group discussions/meetings/interviews and prepare & deliver presentations.
- CO-3. Become a more effective individual through goal/target setting, self-motivation and practising creative thinking.
- CO-4. Function effectively in multi-disciplinary and heterogeneous teams through the knowledge of teamwork, Interpersonal relationships and conflict management skills.

Unit 1: Personality and its Characteristics

- Personality Types, Traits and Characteristics
- Social, Soft and Influencing Skill Development
- Attitude, Appearance, Time and Stress Management Skill

Unit 2: Communication Skill

- Professional Communication Skills (Verbal, Non-Verbal & Written)
- Communication –Understanding the Audience, Presentation, Body Language, Interpersonal Skills and ability to listening Skill
- Technical Communication Skills and Editorial Tools

Unit 3: Marketing Skills & Public Relations

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- Marketing Planning and Strategy
- Publicity and Promotion
- Public Relations and Liaison with Library Authority and Patrons

Unit 4: Leadership and Vision

- Organizational Ability, Team Leadership and Problem Solving
- Project Management, Annual Plan, Five-Year & Perspective Plan, Disaster Management, Conflict and Crisis Management
- Visionary and Futuristic Approach, Preparation of Vision Document
- Negotiation Skills & Strategies

RECOMMENDED BOOKS

1. Aitchison, J. (2004). *Teach yourself linguistics*. McGraw-Hill.
2. Booth, P. F. (1991). *Report writing*. Huntington.
3. Chandler, H. E. (1983). *Technical writer's handbook*. Asm International.
4. Cooper, B. M. (1964). *Writing technical reports*. Penguin UK.
5. Gerson. (2007). *Technical writing: Process and product*, 5/E. Pearson Education India.
6. Gladis, S. D. (1993). *Write type: Personality types and writing styles*. Human Resource Development.
7. Harrison, C. (1980). *Readability in the classroom*. Cambridge University Press.
8. Huckin, T. N., & Olsen, L. A. (1991). *Technical writing and professional communication: For nonnative speakers of English*. McGraw-Hill Humanities, Social Sciences & World Languages.
9. James, G. G. (1986). *Strategies and skills of technical presentations*. Greenwood Press.
10. Karten, N. (2010). *Presentation skills for technical professionals: Achieving excellence*. Itgp.
11. Masters, A., & Wallace, H. R. (2010). *Personal development for life and work*. Cengage Learning.
12. McMurphy, J. H. (2002). *The etiquette advantage: Personal skills for social success*. Stellar Publications.
13. S. G. (2009). *Personality development and communication skills*. Book Enclave.
14. Saxena, T. P., & Arvinda, C. (1979). *Style manual for writing theses, dissertations and papers in social sciences by Arvinda Chandra and T P Saxena*. Metropolitan Books.
15. Sherman, T. A., & Johnson, S. S. (1975). *Modern technical writing*. Prentice Hall.

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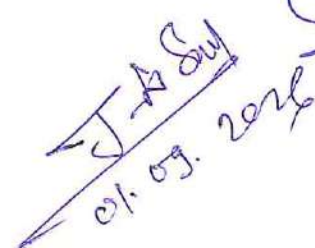
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16. Swain, D. V., & Swain, J. R. (1991). *Scripting for the new AV technologies*. Taylor & Francis.
17. VanAlstyne, J. S. (1999). *Professional and technical writing strategies: Communicating in technology and science*. Prentice-Hall Inc.
18. Weisman, H. M. (1992). *Basic technical writing*. Prentice Hall.

CO-PO & PSO mapping (P-204)

PAPER CODE-LIS-204 Personality Development & Communication Skill											
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	1	2	1	2	1	1	1	2	1	3	1
CO-2	3	2	3	3	2	1	3	2	2	2	3
CO-3	2	3	2	1	2	3	2	1	3	1	2
CO-4	1	1	2	3	3	2	3	3	3	2	3

(1=Low, 2= Medium, 3= High)







Paper No: 205
Paper Name: ICT & Library Management Software-Practice

Credit Distribution			Total Credits	Mid-Term	End-Term	Total Marks
L	T	P	L+T+P	-	100	100
0	0	4	04			

Objectives:

1. To provide hands-on training in operating systems, office applications, library automation software, and web/database tools relevant to Library and Information Science.
2. To develop practical skills for creating, managing, and evaluating digital resources, databases, and web-based information systems in academic and research environments.

Course Outcomes: After completion of the course, students will be able to:

- CO-1 Apply operating systems and office tools to perform academic and research tasks.
CO-2 Analyse library automation and digital repository systems for information management.
CO-3 Evaluate software solutions for library and information services.
CO-4 Create databases, digital content, and web-based library systems.

Unit 1: Use of system software and application software

- Windows-10, Linux
- MS-Word, MS-Excel, MS-PowerPoint

Unit 2: Hands on experience with library automation software (any one)

- Newgenlib
- E-Granthalaya
- Koha

Unit 3: Programming language and databases

- Basic Programming in HTML
- DBMS (MS-Access)

Unit 4: Viva-Voce

Note: In the Practical Paper total marks will consist of under:

End Term Examination = Computer Practice – Hands - on (80 marks) + Viva- voce (20 marks) = 100 marks

RECOMMENDED BOOKS

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1. Mukhopadhyay, P. Library automation – software packages – MLII 104 (ICT applications – Part 1), MLIS, IGNOU, 2006.
2. Mukhopadhyay, P. Library automation packages - introduction – BLII 003, Block 1, Unit 1 of CICTAL course, IGNOU, 2005
3. Shotts, Williams E. (2012). The Linux Command Line – A Complete Introduction.
4. Silberschatz, A.(2005). Operating System Concepts. Wiley
5. Silberschatz. (2013). Database System Concepts Paperback. McGrawHill.

CO-PO & PSO mapping (P-205)

PAPER CODE-LIS-205 ICT & Digital Library-Practice

	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	1	1	1	1	2	2	3	1	2	1	2
CO-2	3	2	3	1	3	1	2	2	3	3	2
CO-3	2	3	2	3	1	2	1	2	1	2	1
CO-4	1	1	1	2	2	3	3	3	3	3	3

(1=Low, 2= Medium, 3= High)


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Paper No: 206-A
 Paper Name: PRESERVATION & CONSERVATION OF LIBRARY MATERIALS

Credit Distribution			Total Credits	Mid-Term	End-Term	Total Marks
L	T	P	L+T+P	30	70	100
3	1	0	04			

Objective- To appraise the need and techniques of preservation and conservation of library materials.

Course Outcomes: After studying this paper, students shall be able to:

CO-1 Understand the fundamental concepts of preservation, conservation, causes of hazards, control measures, digital preservation and binding of library materials.

CO-2 Identify the physical characteristics of library materials and causes of their deterioration

CO-3 Analyze features of different types of hazards and control measures to library materials

CO-4 Implement the different types of preventive measures digital preservation techniques and binding for safeguard different types of library materials

Unit 1: Basics of Preservation and Conservation: Overview

- Preservation and Conservation: Historical Development, Need and Purpose
- Preservation of Print Materials: Books, Periodicals, Pamphlets
- Digital Preservation

Unit 2: Preservation of Non-Print Materials

- Palm Leaves
- Manuscripts
- Films
- Floppies and Disks

Unit 3: Hazards and Control Measures to Library Materials

- Environmental Factor (Temperature, Humidity, Water, Light, Air Pollution, Smoke, Dust, etc)
- Chemical Factors
- Biological Factors

Unit 4: Binding

- Types of Binding of Library Materials
- Binding Material and their Varieties

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- Binding Process
- Standards for Library Binding

RECOMMENDED BOOKS

1. Casey, J. P. (1960). *Papermaking*. Inter-science Publishers.
2. Corderoy, J. (1967). *Bookbinding for beginners*. Thomas and Hudson.
3. Dasgupta, K. (1988). *Conservation of library materials: Seminar : Papers*. National Library.
4. Dureau, J.-M., Clements, D. W. G., & Conservation, I. F. of L. A. and Institutions. S. on. (1986). *Principles for the preservation and conservation of library materials*. Hague : IFLA Headquarters.
5. Gabriel, M. R., Roselle, W. C., & Ladd, D. P. (1980). *The microform revolution in libraries*. Greenwich, Conn. : Jai Press.
6. Harvey, D. R. (1993). *Preservation in Libraries: A Reader*. K G Saur Verlag Gmbh & Company.
7. Jensen, H. (1969). *Sign, symbol, and script: An account of man's efforts to write*. George Allen & Unwin.
8. Singh, R.S. . (1993). *Conservation of documents in libraries, archives and museums*. Aditya Prakashan.

CO-PO & PSO Mapping (P-206A)

PAPER CODE-LIS-206 (A) PRESERVATION & CONSERVATION OF LIBRARY MATERIALS											
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	3	3	1	0	1	1	1	3	0	2	1
CO-2	3	3	1	0	1	0	1	3	0	2	1
CO-3	3	3	1	0	1	0	1	3	0	2	1
CO-4	3	3	1	0	1	1	1	3	0	2	1

(1=Low, 2= Medium, 3= High)


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Paper No:
Paper Name:

206-B
COMMUNITY INFORMATION SERVICE

Credit Distribution			Total Credits	Mid-Term	End-Term	Total Marks
L	T	P	L+T+P	30	70	100
3	1	0	04			

Objective -To acquaint students with the need and purpose of community information services.

Course Outcomes: After completion of the course students will be able

CO-1 To remember the basic concepts of Community information in Libraries.

CO-2 To create professionals as per the requirement of various organizations.

CO-3 To analyze the experience, knowledge and challenges of various Professionals in their organization.

CO-4 To evaluate the challenges in community information.

Unit 1: Basics of Community Information

- Community Information: Definition, Origin and Scope
- Need for and Sources of Community Information
- Role of Libraries in Dissemination of Community Information

Unit 2: Community Information Services

- Community Information Services: Meaning, Types and Target Users
- Community Information Centers: Planning and Role of Information Services
- Community Information Services to Specific Communities
 - a) Rural, Urban and Metropolitan Communities
 - b) Industrial, Business Communities
 - c) Academic, Research, Institutional and R & D Communities
 - d) Physically/Mentally Disadvantaged Communities
 - e) Children, Women and Senior Citizens
- Community Information Services in India, UK and USA

Unit-3: Community Information Resources

- Nature and Scope, Differences with bibliographical resources
- Documentary Sources: vital statistics, land records, official publications, magazines etc.
- Institutional Sources: Publications of local governments and government agencies, educational and religious institutions etc.
- Human Resources: village level leaders, field extension personnel, religious leaders, government officials, etc;
- Cultural heritage resources and Digital resources.

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Unit 4: Digital Community Information Services

- Digital Community Information Services – Need, Advantages, Tools and Techniques
- Software Framework for Community Information Services: Models, Components
- Community Communication and Interaction: Tools, Techniques and Processes

RECOMMENDED BOOKS

1. Ainley, P. (1980). *Basics of community information: An action handbook for librarians*. Association of Assistant Librarians.
2. Association, A. L. (1967). *Minimum standards for public library systems, 1966*. ALA.
3. Babu, Dr. B. R., & Gopalakrishnan, Dr. S. (2004). *Information, communication, library, and community development: Festschrift in honour of prof. C.P. vashishth*. B. R. Publishing.
4. Bunch, A. (1982). *Community information services: Their origin, scope, and development*. London : Bingley.
5. Bunch, A. (1993). *The basics of community information work*. Unipub.
6. Coleman, P. (1986). Community information policy and provision. *Aslib Proceedings*, 38(9), 305–316. <https://doi.org/10.1108/eb060051>
7. Durrance, J. C. (1984). *Armed for Action: Library response to citizen information needs*. New York, NY : Neal-Schuman Publishers.
8. Durrance, Joan Coachman, & Pettigrew, K. E. (2002). *Online community information: Creating a nexus at your library*. American Library Association.
9. Kahn, A. J. (1971). *Neighborhood information centers: A study and some proposals*. Columbia University School of Social Works.
10. Roy, L., Bhasin, A., & Arriaga, S. K. (2011). *Tribal libraries, archives, and museums: Preserving Our Language, Memory, and Lifeways*. Scarecrow Press.
11. Vashishth, C. P. (1995). *Libraries as rural community resource centres: Papers & proceedings of the Workshop on Rural Community Resource Centres, New Delhi, august 28-29, 1992*. B. R. Publishing.

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CO-PO & PSO mapping (P-206 B)

PAPER CODE-LIS-206 (B) (Community Information Service)											
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	1	2	1	2	1	1	1	2	1	3	1
CO-2	3	2	3	3	2	1	3	2	2	2	3
CO-3	2	3	2	1	2	3	2	1	3	1	2
CO-4	1	1	2	3	3	2	3	3	3	2	3

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Paper No: 206-C
Paper Name: INFORMATION RESOURCE DEVELOPMENT

Credit Distribution			Total Credits	Mid-Term	End-Term	Total Marks
L	T	P	L+T+P	30	70	100
3	1	0	04			

Objective- To keep acquainted with the types of information resources and develop various types of resources in the library to use for learning and research and need principles for resource development, bibliography, use of databases, institutional repositories, open access resources etc.

Course Outcomes: After completion of the course students will be able

CO-1. Understand the basic concept of Documentary and Non Documentary sources of information.

CO-2. Analyze the importance of various book selection tools viz Drury's Principle, Dewey's Principle and Ranganathan's principles.

CO-3 Section of the various types of tools for providing services to users.

CO-4. Implementation and use the various types of tools and documents in providing the information to patrons.

Unit 1: Types of Information Resources

- Documentary (Primary, Secondary & Tertiary)
- Non-Documentary
- E-Resources

Unit 2: Book Selection Principles

- Drury's Principle
- Dewey's Principle
- McColvin's Principle
- Ranganathan's Principle

Unit 3: Selection Tools

- Current List
- Bibliographies
- Library Catalogue
- Books in Print
- Publishers' Catalogue
- Directories

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- WebOPAC (WorldCat)
- Websites

Unit 4: Categories of Documents

- By Physical Characteristics
- By Information Characteristics
- Books and Periodicals
- Theses and Dissertations
- Govt. Publications
- Grey Literature

RECOMMENDED BOOKS

1. Ani, O. E., & Ahiauzu, B. (2008). Towards effective development of electronic information resources in Nigerian university libraries. *Library Management*, 29(6/7), 504–514. <https://doi.org/10.1108/01435120810894527>
2. Harrell, M. C., Thie, H. J., Yardley, R. J., & Lytell, M. C. (2011). *Information systems technician rating stakeholders: Implications for effective performance*. RAND Corporation.
3. Laudon, K. C., & Laudon, J. P. (2017). *Management information systems: Managing the digital firm*. Pearson.
4. McCloy, K. R. (1995). *Resource management information systems: Remote sensing, GIS and modelling, second edition*. CRC Press.
5. McNurlin, B. C., & Sprague, R. H. (2003). *Information systems management in practice*. Prentice Hall.
6. Pitschmann, L. A., & Federation, D. L. (2001). *Building sustainable collections of free third-party web resources*. Washington, D.C.: Digital Library Federation, Council on Library and Information Resources.

CO-PO & PSO mapping (P-206C)

PAPER CODE-LIS-206 (C) (Information Resource Development)											
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	3	2	1	3	2	3	2	2	3	2	2
CO-2	2	3	1	2	3	1	1	3	2	3	3
CO-3	1	2	3	1	2	1	1	1	1	1	2
CO-4	3	1	2	2	1	2	3	2	2	2	1

(1=Low, 2= Medium, 3= High)

J. A. Singh
07.05.2026

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**SEMESTER-III
PART-II**

Paper No: 301
Paper Name: INFORMATION RETRIEVAL

Credit Distribution			Total Credits	Mid-Term	End-Term	Total Marks
L	T	P	L+T+P	30	70	100
3	1	0	04			

Objective- To get abreast of the students about the indexing & vocabulary control techniques and searching of resources both through print and electronic form.

Course Outcomes: After studying this paper, students shall be able to:

CO-1 Understand the fundamental concepts of ISAR Systems, Artificial intelligence, information searching, information evaluation, information retrieval model indexing language, indexing system, vocabulary control tools, and its functions.

CO-2 Analyse the features and functions of different indexing systems, indexing techniques and learn the parameters of information evaluation.

CO-3 Distinguish controlled vocabulary from natural language and its applicability in libraries for subject indexing.

CO-4 Apply the knowledge of ISAR Systems, retrieval performance, indexing language, systems and techniques in information searching

Unit 1: Basics of Information Retrieval Systems

- Definition, Components and Types of ISAR Systems
- Evaluation of ISAR Systems
- Elements of File Organization
- Artificial Intelligence and Expert System
- Information Retrieval Models

Unit 2: Subject Representation and Indexing Languages

- Alphabetical Subject Representation
- Contributions of Cutter, Kaiser, Ranganathan, Farradane and Coates
- Characteristics of Indexing Languages
- Vocabulary Control-List of Subject Headings, Thesaurus and Thesaurofacet, Classaurus

Unit 3: Indexing Systems and Techniques

- Indexing Concept, Principles and Process
- Pre - Coordinate Indexing System & Post-Coordinate Indexing System

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- Uniterm Index System
 - Citation Indexing – Meaning and importance, Different citation indexes: SCI, SSCI,
- AHCI
- Full-Text (STAIRS, LEXIS-NEXIS, etc.)
 - Automatic Indexing: COMPass, Web Indexing

Unit 4: Information Searching and Evaluation

- Search Methods and Search Strategy, Boolean Search
- Information Searching in different Media: Print and Electronic
- Need and Parameters of Evaluation
- Retrieval Performance: Recall and Precision

RECOMMENDED BOOKS

1. Aitchison, J., Bawden, D., & Gilchrist, A. (2003). *Thesaurus construction and use: A practical manual*. Routledge.
2. Becker, J., & Hayes, R. M. (1963). *Information storage and retrieval: Tools, elements, theories*. New York : Wiley.
3. Chowdhury, G. G. (2004). *Introduction to modern information retrieval*. Library Assn Pub Limited.
4. Convey, J. (1992). *Online information retrieval: Introductory manual to principles and practice*. Clive Bingley.
5. de Grolier, E. (1962). *A study of general categories applicable to classification and coding in documentation*. Paris, Unesco.
6. Ellis, D. (1996). *Progress and problems in information retrieval*. Library Association Pub. Library Association Pub.
7. Foskett, A. C. (1996). *The subject approach to information*. Facet Publishing.
8. Fugmann, R. (1993). *Subject analysis and indexing: Theoretical foundation and practical advice*. INDEKS Verlag .
9. Lancaster, F. W., W, L. F., Lancaster, W., & Joncich, M. J. (1977). *The measurement and evaluation of library services*. Washington : Information Resources Press.
10. Losee, R. M. (1998). *Text retrieval and filtering: Analytic models of performance*. Springer.
11. Matthews, J. R. (2017). *The Evaluation and Measurement of Library Services, 2nd Edition*. ABC-CLIO.
12. Meadow, C. T., Boyce, B. R., Kraft, D. H., & Barry, C. L. (2006). *Text information retrieval systems*. Academic Press Incorporated.

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13. Sharp, H. S. (1964). *Readings in information retrieval*. The Scarecrow Press.
14. Soergel, D. (1974). *Indexing languages and thesauri: Construction and maintenance*. Los Angeles : Melville Publishing Company.
15. Soergel, D. (1985). *Organizing Information: Principles of Data Base and Retrieval Systems*. Morgan Kaufmann.

CO-PO & PSO mapping (P-301)

PAPER CODE-LIS-301 Information Retrieval											
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	3	3	2	1	1	1	1	3	0	2	1
CO-2	3	3	2	0	1	1	1	3	0	2	1
CO-3	3	3	2	0	2	2	1	3	1	2	1
CO-4	3	3	2	0	2	2	1	3	1	2	1

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Paper No: 302
Paper Name: DIGITAL LIBRARY AND CONTENT MANAGEMENT

Credit Distribution			Total Credits	Mid-Term	End-Term	Total Marks
L	T	P	L+T+P	30	70	100
3	1	0	04			

Objective: To make the students aware of content management concepts, content developing strategies and digitization in the library and develop their confidence level in using the same in the library.

Course Outcomes: After completion of the course students will be able:

CO-1 Remember the basic knowledge of content management and digitization

CO-2 Analyze the need and importance of digital library and virtual library.

CO-3 Design the content management and content developing strategies.

CO-4 Implementation of content developing strategies in digitization process

Unit 1: Content Management & Digitization

- Content Development: Concept; Content Creation & Organization
- E-Content Development Strategies
- Virtual Learning Environment
- Digitization Process, Tools and File Formats

Unit 2: Digital Library Concepts

- Digital Library & Institutional Repository: Concepts; Digital Library Initiatives (National & International)
- Digital Library Software(s)
- Digital Library Creation using D-Space

Unit-3: Knowledge Discovery through Data Mining

- Definition, Benefits and applications of data mining
- Data mining approaches and functionalities
- Important data mining techniques
- Web Mining and its applications

Unit-4: Legal Issues in Content Management & Digital Library

- Identifiers & Handle systems in digital libraries, Legal aspects of librarianship
- Metadata standards – Dublin Core, METS, TEI etc.
- Metadata interoperability, cross walking and mapping
- Copyright and Rights Management in digital libraries

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RECOMMENDED BOOKS

1. Andrews, J. (2017). *Digital libraries: Policy, planning and practice*. Routledge.
2. Chowdhury, G. G., & Chowdhury, S. (2003). *Introduction to digital libraries*. Facet Publishing.
3. Deegan, M., & Tanner, S. (2006). *Digital preservation*. Facet Publishing.
4. Hoshi, T. P., & Schatz, B. (2003). *Digital library use: Social practice in design and evaluation*. MIT Press.
5. Jones, R. E., Andrew, T., & MacColl, J. (2006). *The institutional repository*. Elsevier.
6. Lakshmi, V., & Jindal, S. C. (2004). *Digital libraries*. Gyan Publishing House.
7. Shinde, G. Z. (2015). *Emerging technologies and future of libraries issues and challenges*. Daya Publishing House.

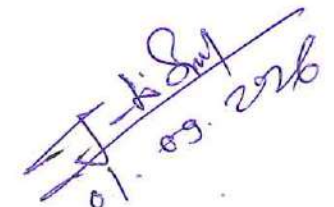
CO-PO & PSO Mapping (P-302)

PAPER CODE-LIS-302 Digital Library and Content Management											
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	1	2	1	2	1	1	1	2	1	3	1
CO-2	3	2	3	3	2	1	3	2	2	2	3
CO-3	2	3	2	1	2	3	2	1	3	1	2
CO-4	3	2	1	1	3	2	1	3	1	3	1

(1=Low, 2= Medium, 3= High)


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 H. D. Ahir
 1.9.26


 J. K. Singh
 01.09.2026

Paper No: 303
Paper Name: ACADEMIC LIBRARY SYSTEM

Credit Distribution			Total Credits	Mid-Term	End-Term	Total Marks
L	T	P	L+T+P	30	70	100
3	1	0	04			

Objective- To make the students conversant with organization, functions, building, user-oriented collections and services in academic libraries as well as role of library in continuing education program.

Course Outcomes: After completion of the course the students will be able:

- CO-1 To remember the basic knowledge and functions of Academic Libraries.
- CO-2 To understand Resource Development in the field of Library & Information Science.
- CO-3. To apply for staff development courses through continuing education.
- CO-4 To analyze how the application of networking has changed the services and all the activities of the Libraries

Unit 1: Academic Library: Functions and Services

- Role of Academic Library in Higher Education
- Academic Library Services
- Academic Library Management
- Role of UGC for Academic Library Development

Unit 2: Resource Development

- Physical Resources including ICT Infrastructure
- Collection Development Policy, Weeding out Policy
- Human Resource Development
- Financial Resource Management

Unit 3: Staff Development and Continuing Education

- Staffing Norms and Standards
- Continuing Education Program for Academic Libraries
- Personnel Management

Unit 4: Library Networks and Consortia

- INFLIBNET- Objectives, Functions and Services; MHRD/UGC-INFLIBNET
- Initiatives for Academic Library Development: E-ShodhSindhu and N-LIST

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RECOMMENDED BOOKS

1. Beard, J. (2016). *University libraries and digital learning environments*. Routledge.
2. Bose, K. (1994). *Information networks in India: Problems and prospects*. Ess Ess Publications.
3. Brophy, P. (2005). *The Academic Library*. Facet Publishing.
4. Cowley, J. (1982). *Personnel management in libraries*. London : Bingley.
5. Evans, G. E., & Evans, G. R. (1983). *Management techniques for librarians*. Emerald Group Pub Limited.
6. Gelfand, M. A. (1971). *University libraries for developing countries*. University Book and Stationery.
7. Isaac, D., & Ramaiah, L. S. (1993). *Academic libraries, Role in the National Development: Festschrift Volume in Honour of Prof. N.B. Inamdar ; foreword by G. Ram Reddy*. T R Publications.
8. Katz, L. S. (2012). *Selecting materials for library collections*. Routledge.
9. Kent, A. (1979). *The Structure and Governance of Library Networks: Proceedings of the 1978 Conference in Pittsburgh, Pa., Co-sponsored by National Commission on Libraries and Information Science and University of Pittsburgh*. Marcel Dekker Incorporated.
10. Kumar, G. (1989). *Library development in India*. Vikas.
11. Kumar, K. (2009). *Library Administration and Management*. Vikas.
12. McKee, B. (1989). *Planning library service*. London : C. Bingley.
13. Mishra, R. N. (2017). *Use and Services of University Library*. Today and Tomorrow's Printers and Publishers.
14. Mittal, R. L. (2007). *Library administration: Theory and practice*. Ess Ess Publication.
15. Orne, J. (1977). *Academic libraries by the year 2000: Essays honoring Jerrold Orne*. New York : R. R. Bowker Company.
16. Prasher, R. G. (1991). *Managing university libraries*. Scholarly Publications.
17. Ranganathan, S. R., & Gopinath, M. A. (2006). *Library book selection*. Ess Ess Publication.

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18. S., T. (2013). *Challenges of academic library management in developing countries*. IGI Global.

CO-PO & PSO mapping (P-303)

PAPER CODE-LIS-303 (Academic Library System)											
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	2	2	1	2	1	1	2	2	2	3	2
CO-2	3	2	1	1	1	1	3	2	2	2	3
CO-3	2	2	1	1	1	2	3	2	3	2	2
CO-4	3	2	1	1	1	2	3	3	2	3	2

(1=Low, 2= Medium, 3= High)

J. S. Sanyal
01.09.2026

S. G. Sanyal
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R. Rout
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Paper Name: WEB TECHNOLOGIES

Credit Distribution			Total Credits	Mid-Term	End-Term	Total Marks
L	T	P	04	30	70	100
3	1	0				

Objectives:

1. To introduce students to the fundamental concepts, architecture and evolution of Web technologies.
2. To familiarize students with the principles and techniques of web page design and development.
3. To develop an understanding of Web 2.0, Web 3.0, semantic technologies and their applications in libraries.
4. To acquaint students with emerging trends in Web technologies, including cloud computing, mobile computing and Artificial Intelligence.

Course Outcomes: After completion of the course students will be able:

Course Outcomes: After completion of the course students will be able:
CO-1: Describe the fundamental concepts, evolution, architecture and technologies of the World Wide Web.

CO-2: Analyse web pages and explain the role of HTML, CSS, scripting, DOM and other components in web design.

CO-3: Differentiate between client-side and server-side technologies and explain their applications in web development.

CO-4: Explain the concepts and applications of Web 2.0, Web 3.0, Semantic Web and emerging Web technologies in libraries and information services.

Unit 1: Internet Basics/Web Technology

1. Internet and World Wide Web: Concept, history and evolution; Internet vs. WWW; web clients, web servers and web services; URL and OpenURL.
2. Web Protocols and Services: TCP/IP, HTTP/HTTPS, FTP, SSH and SOAP; basic concepts of APIs and web services.
3. Web Browsers and Search Engines: Web browsers and their evolution; major browsers; search engines, types and basic search techniques; meta tags and basic SEO.
4. Web Security concepts.

Unit 2: Web Page Design and Development

1. Introduction to Markup languages: SGML, HTML, DHTML, XHTML and XML, Common HTML commands.

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2. Tools for Web Page Designing: HTML Editors; Client-side Scripting – VB Script, Java Script and PHP; Server-side Scripting- ASP and JSP; DOM, CSS; Features of Web Page Design Tools; Advantages of Web Page Design Tools
3. Evaluation of websites

Unit 3: Web 2.0, Web 3.0 and Semantic Web

1. Web 1.0, Web 2.0 and Web 3.0; major features and differences; Web OPAC and its evolution.
2. Web 2.0 Tools and their application in Libraries: Blogs, RSS, Wikis, social networking, social bookmarking, tagging, folksonomy, podcasts and instant messaging; applications in libraries.
3. Mashups and Participatory Services: Concept and features of mashups; user-generated content; collaborative and participatory library services.
4. Semantic Web and Web APIs: Semantic Web, Linked Data, RDF, URI and ontologies; Web APIs, JSON/XML, data exchange and interoperability; applications in libraries.

Unit 4: Emerging Trends in Web Technologies

1. Cloud Computing: Concept, types and service models (IaaS, PaaS, SaaS); major cloud providers; applications in libraries, digital libraries and repositories.
2. Mobile Computing and Mobile Web: Concept and applications; mobile applications and web applications; mobile-based library services; access to OPACs and e-resources.
3. Artificial Intelligence and Web Technologies: Introduction to AI, Machine Learning and Generative AI; AI-based search, chatbots, recommendations and metadata generation; applications in libraries; ethical issues.
4. Emerging Web Technologies: Internet of Things (IoT), Progressive Web Applications (PWAs), voice search, conversational interfaces, web accessibility, privacy and data protection; future applications of Web technologies in libraries.

1. Recommended Books:

1. *A Helpful Guide to Web Search Engines -- how search engines work (page 4)*. (n.d.). Retrieved September 7, 2021, from <http://www.monash.com/spidap4.html>
2. Cleveland, A. D., & Cleveland, D. B. (2013). *Introduction to indexing and abstracting: Fourth edition*. ABC-CLIO.
3. Croft, B., Metzler, D., & Strohman, T. (2011). *Search engines: Information retrieval in practice*. Pearson Higher Ed.
4. Hahn. (1996). *The Internet complete reference*. Tata McGraw-Hill Education.
5. Hill, B. (2003). *Google for dummies*. John Wiley & Sons, Inc.
6. Hurwitz, J. S., Bloor, R., Kaufman, M., & Halper, F. (2010). *Cloud computing for dummies*. John Wiley & Sons.
7. Kinyanjui, D. (2017). *Application of web 2.0 Technologies in libraries*. Grin Verlag.

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8. Kizza, J. M. (2020). *Guide to computer network security*. Springer Nature.
9. Parkes, D., & Walton, G. (2010). *Web 2.0 And libraries: Impacts, technologies and trends*. Chandos Publishing.
10. Velte. (2009). *Cloud computing*. Tata McGraw-Hill Education.
11. Williamson. (2001). *Xml: The complete reference*. Tata McGraw-Hill Education.
12. Young, M. L. (1999). *Internet: The complete reference, millennium edition*. McGraw-Hill Osborne Media.

CO-PO & PSO mapping (P-304)

PAPER CODE-LIS-304 (Web Technologies)											
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	1	3	1	3	2	2	3	2	1	1	2
CO-2	3	2	1	1	3	2	1	3	1	3	1
CO-3	2	1	2	1	2	1	3	2	3	2	1
CO-4	3	2	1	1	3	2	1	3	1	3	1

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Paper No: 305

Paper Name: INTERNSHIP AND CONTENT MANAGEMENT SOFTWARE - PRACTICE

Credit Distribution			Total Credits	Mid-Term	End-Term	Total Marks
L	T	P	L+T+P	-	100	100
0	0	4	04			

(A) INTERNSHIP - 50 marks

To place students in a working Library & Information Centre environment approved/ recommended by the Department to enable them to be exposed to the various sections/divisions to gain practical knowledge and to give them working experience.

Internship shall be for one month (30 days).

A Report shall be submitted by each student along with a certificate from the Head of the library concerned for the completion of the Internship. The Internship report will be evaluated by the department faculty, and marks will be sent to the Controller of Examinations.

(B) Content Management Software Practice - 50 marks

- Hands-on practice on Joomla/Drupal.
- Hands on practice on Greenstone Digital Library Software (GSDL), D-Space.

End term examination (100 Marks)

A-Internship 50 Marks: Report Submission (30 Marks) + Presentation & Viva-Voce (10+10=20 Marks)

B- Content Management Software Practice 50 Marks:
Computer Practice - Hand on (30 marks) + Viva-Voce (20 marks)

PAPER CODE-LIS-305 Internship and Content Management Software Practice											
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	1	2	1	2	1	1	1	2	1	3	1
CO-2	3	2	3	3	2	1	3	2	2	2	3
CO-3	2	3	2	1	2	3	2	1	3	1	2
CO-4	3	2	1	1	3	2	1	3	1	3	1

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Paper No: 306-A
Paper Name: INTELLECTUAL PROPERTY RIGHTS & COPYRIGHT

Credit Distribution			Total Credits	Mid-Term	End-Term	Total Marks
L	T	P	L+T+P	30	70	100
3	1	0	04			

Objective- To make the students aware of the intellectual property & copyright concepts and other issues related to patents, trade rights etc.

Course Outcomes: After completion of the course students will be able

CO-1 Remember and understand the fundamental concepts of intellectual property and copyright.

CO-2 Analyse the different IPR Acts and conventions and its application in the electronic environment.

CO-3 Apply the principles of Indian copyright Act, Creative Commons licence and Plagiarism.

CO-4 Evaluate Copyright and Patent laws of different countries.

Unit 1: Intellectual Property Rights

- IPR: Meaning, Concept, Genesis, and Development
- Categories of IPR
- Enforcement of Intellectual Property Rights & Role of WIPO,
- IPR Acts and its Application in Electronic Environment
- Berne Convention; Universal Copyright Convention; Stockholm Conference; Paris Conference; WIPO Copyright treaty; GATT; TRIPS.

Unit 2: Copyright

- Copyright: Meaning and Scope
- Rights to Copyright Owner, Open access journals and repositories
- Licensing of Copyright
- Copyright and Protection of Electronic Resources
- Copyright Laws, Creative Commons; Plagiarism

Unit 3: Patents

- Concept and Scope

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L. D. / 1.9.26

- Patent Laws in India & Abroad and its amendments
- Protection of Inventions

Unit 4: Copyright & Patent Violation and Infringement

- India
- USA
- UK

RECOMMENDED BOOKS

1. Bouchoux, D. E. (2016). *Intellectual property: The law of trademarks, copyrights, patents, and trade secrets, loose-leaf version*. Cengage Learning.
2. Correa, C. M., & Yusuf, A. A. (2016). *Intellectual property and international trade: The TRIPS Agreement: The TRIPS Agreement*. Kluwer Law International B.V.
3. Fishman, S. (2020). *The Copyright Handbook: What Every Writer Needs to know*. Nolo.
4. Freeman, L., & Peace, A. G. (2005). *Information ethics: Privacy and intellectual property*. IGI Global.
5. Grant, J., Ashworth, C., & Charmasson, H. (2008). *Patents, registered designs, trade marks and copyright for dummies*. For Dummies.
6. Litman, J. (2006). *Digital copyright*. Prometheus Books.
7. Munari, F., & Oriani, R. (2011). *The economic valuation of patents: Methods and applications*. Edward Elgar Publishing.
8. Murray, A. (2019). *Information technology law: The law and society*. Oxford University Press, USA.
9. Narayanan, P. (2007). *Law of copyright and industrial designs*. Eastern Law House (ELH).
10. Parulekar, A. (2006). *Indian Patents Law: Legal and business implications*. Macmillan India Ltd.
11. Tian, Y. (2009). *Re-thinking Intellectual Property: The Political Economy of Copyright Protection in the digital era*. Routledge Cavendish.
12. Umeh, J. (2007). *The World Beyond Digital Rights Management*. BCS, the Chartered Institute.
13. Wadehra, B. L. (2004). *Law relating to patents, trademarks, copyright, designs and geographical indications*. University Law Publishing Pvt. Ltd.

CO-PO & PSO mapping (P-306A)

PAPER CODE-LIS-306 (A)Intellectual Property Rights & Copyright											
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4

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CO-1	1	3	1	3	2	2	3	2	1	1	2
CO-2	3	2	1	1	3	2	1	3	1	3	1
CO-3	2	1	2	1	2	1	3	2	3	2	1
CO-4	3	2	1	1	3	2	1	3	1	3	1

(1=Low, 2= Medium, 3= High)

Paper No: 306-B
Paper Name: INTERNET & ITS APPLICATIONS

Credit Distribution			Total Credits	Mid-Term	End-Term	Total Marks
L	T	P	L+T+P	30	70	100
3	1	0	04			

Objective- To make the students aware of the Internet and its related technologies in teaching, learning and research.

Course Outcomes: After completion of the course students will be able:

CO-1 To remember the basic concepts of internet in Libraries.

CO-2 To create professionals as per the requirement of latest technologies of internet.

CO-3 To analyze the experience, knowledge and challenges of various Professionals in internet applications.

CO-4 To evaluate the challenges and trends in internet.

Unit 1: Internet: An Overview

- Internet: Introduction, Historical Development and Scope of Internet
- Internet Architecture: H/W & S/W Components, Client/Server Principle, Routers, Connection Types, ISP, Protocols, Uniform Resource Locator, IP Address
- Domain Name System

Unit 2: Web Languages & Web Browsers

- Web: Introduction, History and Functions
- Web Languages: HTML, XML, CSS, ASP, JavaScript, PHP
- Web Browsers: Internet Explorer, Mozilla Firefox, Google Chrome

Unit 3: Intranet & Internet Security

- Intranet: Components, Prerequisites and Services
- Extranet: Components, Prerequisites and Services
- Internet Security: Types of Security, Firewalls, Anti-Virus, Anti-Spyware

Unit 4: Internet Tools & Services

- Communication Tools: Email, Telnet, Discussion Groups

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- Search Tools: Gopher, Veronica, Jughead, Archie, Search Engines
- Content Enriching Services: Blogs, Wikis, Social Community Websites

RECOMMENDED BOOKS

1. Bates, C. (2007). *Web Programming: Building Internet Applications*, 3rd Ed. John Wiley & Sons.
2. Crumlish, C. (1997). *The abcs of the internet*. Sybex Incorporated.
3. Hartl, M., & Prochazka, A. (2007). *RailsSpace: Building a social networking website with ruby on rails*. Addison-Wesley Professional.
4. Kalbach, J. (2007). *Designing web navigation: Optimizing the user experience*. "O'Reilly Media, Inc."
5. Miller, J. B. (2014). *Internet technologies and information services*, 2nd edition. ABC-CLIO.
6. Morville, P., & Rosenfeld, L. (2006). *Information architecture for the world wide web: Designing large-scale web sites*. "O'Reilly Media, Inc."
7. Nair, R. R. (2002). *Internet for information services*. Ess Ess Publications.
8. Robbins, J. N. (2012). *Learning web design: A beginner's guide to HTML, CSS, javascript, and web graphics*. "O'Reilly Media, Inc."
9. Sehgal, R. L. (2000). *Intranet & Internet Applications For Librarians (Set Of Two Volumes)*. ESS ESS.
10. Stallings. (2003). *Computer networking with internet protocols and technology*. Pearson Education India.
11. Weinberg, T. (2009). *The new community rules: Marketing on the social web*. "O'Reilly Media, Inc."

CO-PO & PSO mapping (P-306B)

PAPER CODE-LIS-306(B) Internet & Its Applications											
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	1	2	1	2	1	1	1	2	1	3	1
CO-2	3	2	3	3	2	1	3	2	2	2	3
CO-3	2	3	2	1	2	3	2	1	3	1	2
CO-4	3	2	1	1	3	2	1	3	1	3	1

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Paper No: 306-C
Paper Name: ELECTRONIC PUBLISHING (E-PUBLISHING)

Credit Distribution			Total Credits	Mid-Term	End-Term	Total Marks
L	T	P	L+T+P	30	70	100
3	1	0	04			

Objective: To make the students aware of different types of e-publishing consisting of electronic books, journal articles, reports etc. which facilitate easy access and use by the students for learning and research and its importance in the realm of e-learning.

Course Outcomes: After completion of the course students will be able
CO-1: Understand the kinds of electronic publishing.

CO-2: Familiarize the components of electronic publishing.

CO-3: Learn the methods of E-Publishing Technology.

CO-4: Attain the concept and various types and models of e-publishing.

Unit 1: Basics of Electronic Publishing

- History of scholarly Publishing, Types of e-publications
- Migration of peer reviewed journals from print to electronic
- Role of Internet in accessing to such resources
- Digital publishing as a catalyst to interdisciplinary communication
- Peer review process; Archival options for short- and long-term preservation

Unit 2: Stakeholders of Electronic Publishing

- Universities, research institutions, university presses;
- Libraries and commercial publishers in scholarly communication
- Newspapers and the transformation of journalism.
- Open Access Publishing
- Large scale digitization projects at the international level.

Unit 3: E-Publishing and E-Learning

- Digital publishing- Models
- E-Publishing in the realm of e-learning
- E-publishing tools and evaluation techniques

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Unit-4: E-Publishing Technology

- Technology support such as, hardware, software for e-publishing
- DTP software
- Copyright

RECOMMENDED BOOKS

1. Gastel, B., & Day, R. A. (2016). *How to write and publish a scientific paper*. Greenwood.
2. Rose, M. J., & Adair-Hoy, A. (2007). *How to publish and promote online*. St. Martin's Griffin.
3. Singh, V. P. (2008). *Simplified dtp course book*. Asianbooks.
4. Spring. (1991). *Electronic printing and publishing: The document processing revolution*. CRC Press.

CO-PO & PSO mapping (P-306C)

PAPER CODE-LIS-306 (C) Electronic Publishing (E-Publishing)											
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	1	2	2	2	1	2	2	1	2	1	2
CO-2	3	3	2	1	3	3	1	2	1	3	1
CO-3	2	1	3	3	2	2	2	3	3	2	3
CO-4	1	2	2	3	1	2	1	3	2	1	3

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Paper No.: 306-D

Paper Name: OPEN ACCESS & SCHOLARLY COMMUNICATIONS

Credit Distribution			Total Credits	Mid-Term	End-Term	Total Marks
L	T	P	L+T+P	30	70	100
3	1	0	04			

Objective: This course introduces the students with broad understanding of the multidisciplinary field of scholarly communication and impact of technology in digital driven research and its policy challenges.

Course Outcomes: The students, after completion of the course, will be in a position

CO-1 Remember the basic concept of open access and scholarly communication.

CO-2 Analyze the need and importance of open access and scholarly communication.

CO-3 Design the integrated policy to avoid plagiarism and detect Predatory Journals.

CO-4 Implementation of the open access policy, development of various kinds of databases
Bibliographic databases, Citation Databases, Full-text Databases, E-Journal Gateways, Online Directories.

UNIT-1: Introduction To Scholarly Communication

- Scholarly communication – its genesis
- Importance and ethics of academic publishing
- Different communication channels in academic publishing
- Process of scholarly communications

UNIT-2: Publishing In Academic Journals

- Academic Journals and their functions
- The Peer Review Process
- The Importance of Scientific and Professional Societies in Journal
- Publishing
- Publishing in Conferences

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UNIT-3: Academic Integrity

- Academic integrity: definition, meaning importance in educational lives
- Academic integrity policy and role of university
- Plagiarism and consequence of indulgence in plagiarism
- Avoiding plagiarism: paraphrasing, referencing and citing

UNIT-4: Electronic Journals and Databases

- Emergence of e-Journals
- Migration of Peer-Reviewed Journals from Print to Online Platforms
- Electronic Databases (Bibliographic Databases, Citation Databases, Full-text Databases, E-Journal Gateways, Online Directories)
- Predatory Journals

RECOMMENDED BOOKS:

1. UNESCO. (2015). Scholarly communication. UNESCO.
2. Borgman, C.L. (Either version is fine-2007 or 2010). Scholarship in the Digital Age: Information, infrastructure, and the Internet. Cambridge, Massachusetts: The MIT Press.
3. The 2007 version of this work is available digitally at no cost to you via IUCAT: <http://site.ebrary.com/lib/iupui/docDetail.action?docID=10194165>
4. Bohannon, J. (2013). Who's Afraid of Peer Review? Science, 342(6154), 60-65. DOI:10.1126/science.342.6154.60 Retrieved from www.umass.edu/preferen/You%20Must%20Read%20This/BohannonScience2013.pdf
5. Cargill, M., & O'Connor, P. (2013). Writing Scientific Research Articles: Strategy and Steps. Wiley-Blackwell.
6. De Groote, S. L., & Dorsch, J. L. (2001). Online Journals: Impact on Print Journal Usage. Bulletin of the Medical Library Association, 89(4), 372-378. Retrieved from www.ncbi.nlm.nih.gov/pmc/articles/PMC57966/
7. Elsevier (2012). Understanding the Publishing Process in Scientific Journals. Retrieved from http://biblioteca.uam.es/sc/documentos/understanding_the_publishing_process.pdf
8. Harter, S. P. (1998). Scholarly Communication and Electronic Journals: An Impact Study. Journal of the American Society for Information Science, 49(6), 507-516.
9. Monbiot, George (2011). Academic Publishers Make Murdoch Look Like a Socialist: Academic Publishers Charge Vast Fees to Access Research Paid for by Us. The Guardian, 29 August 2011. Retrieved from www.theguardian.com/commentisfree/2011/aug/29/academic-publishersmurdoch-socialist.
10. Webster, P. J. (2008). Managing Electronic Resources: New and Changing Roles for Libraries. Oxford: Chandos Publishing.

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CO-PO & PSO Mapping (P-306D)

PAPER CODE-LIS-306 (D) (Open Access & Scholarly Communications)											
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	1	2	1	2	1	1	1	2	1	3	1
CO-2	2	2	3	2	2	1	1	2	2	2	3
CO-3	2	3	2	1	2	3	2	1	3	1	2
CO-4	3	2	1	1	3	2	1	3	1	3	1

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**SEMESTER-IV
PART-II**

Paper No: 401
Paper Name: RESEARCH METHODOLOGY

Credit Distribution			Total Credits	Mid-Term	End-Term	Total Marks
L	T	P	L+T+P	30	70	100
3	1	0	04			

Objective- To make the students aware of the research methodology concepts, definitions, and various techniques used for data analysis in research and to achieve new insights or gain familiarity of a phenomenon.

Course Outcomes: After completion of the course students will be able:

CO-1 Recognize and understand the fundamental concepts of research, its types, research process, methods, designs, report writing and ethics.

CO-2 Analyse the different types of research methods, data collection tools, data presentation style, bibliometrics laws and learn to use different statistical tools.

CO-3 Design research proposal, conduct literature review, identify variables and apply correct methodology for conducting research which is crucial for the success of any research project.

CO-4 Implement the knowledge of different types of research, literature review, research process, basic bibliometrics laws, data analytics techniques and research report writing.

Unit 1: Research and Research Design

- Concept, Meaning, Need and Process of Research
- Types of Research: Fundamental and Applied
- Research Design, Types of Research Design
- Designing Research Proposal
- Literature Search – Print, Non-Print and Electronic Sources
- Literature Review

Unit 2: Research Methods

- Scientific Method
- Historical Method
- Survey and Case Study Method
- Experimental Method

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Unit 3: Data Analysis and Interpretation

- Data Collection Techniques: Questionnaire, Interview, Observation, Sampling and Delphi
- Presentation of Data-Tables, Charts and Graphs
- Interpretation of Data: Frequency Distribution, Measures of Central Tendency, Analysis of Time Series, Correlation Studies and Analysis of Variance
- Use of Statistical Packages

Unit 4: Bibliometric Methods and Report Writing

- Bibliometric Studies: Meaning, Scope and Parameters
- Bibliometric Laws and their Applications
- Informetrics, Scientometrics and Webometrics
- Guidelines for and Preparation of Writing Research Report (Thesis and Dissertation)

RECOMMENDED BOOKS

1. Arnab, R. (2017). *Survey sampling theory and applications*. Academic Press.
2. Booth, W. C., Colomb, G. G., Williams, J. M., Bizup, J., & FitzGerald, W. T. (2016). *The Craft of Research, fourth edition*. University of Chicago Press.
3. Brady, J. (1997). *The craft of interviewing*. Vintage.
4. Fadem, T. J. (2008). *The art of asking: Ask better questions, get better answers*. FT Press.
5. Gillham, B. (2001). *Research interview*. Bloomsbury Publishing.
6. Mann, S. (2016). *The research interview: Reflective practice and reflexivity in research processes*. Springer.
7. Marshall, C., & Rossman, G. B. (2011). *Designing qualitative research*. SAGE.
8. Nielsen, J. (2000). *Designing web usability*. New Riders Pub.
9. Raju, N. G. (2009). *Bibliometric applications: Study of literature use patterns*. Akansha Publishing.
10. Rea, L. M., & Parker, R. A. (2014). *Designing and conducting survey research: A comprehensive guide*. John Wiley & Sons.
11. Reinard, J. C. (2006). *Communication research statistics*. SAGE.
12. Rowntree, D. (1983). *Statistics without tears: A primer for non-mathematicians*. Penguin.

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13. Rubin, H. J., & Rubin, I. S. (2012). *Qualitative interviewing: The art of hearing data*. SAGE Publications.
14. Sudman, S. (1976). *Applied sampling*. Academic Press.
15. Wadsworth, Y. (2016). *Everyday evaluation on the run*. Routledge.
16. Williams, F., & Monge, P. R. (2001). *Reasoning with statistics: How to read quantitative research*. Wadsworth Publishing Company.
17. Willis, G. B. (2004). *Cognitive interviewing: A tool for improving questionnaire design*. SAGE Publications.

CO-PO & PSO Mapping (P-401)

PAPER CODE-LIS-401 Research Methodology											
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	3	3	2	0	3	1	3	2	3	2	1
CO-2	3	3	2	0	3	1	3	2	3	2	1
CO-3	3	3	2	1	3	1	3	2	3	2	2
CO-4	3	3	2	1	3	1	3	2	3	2	2

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Paper No: 402
Paper Name: INFORMATION SYSTEM AND NETWORKS

Credit Distribution			Total Credits	Mid-Term	End-Term	Total Marks
L	T	P	L+T+P	30	70	100
3	1	0	04			

Objective- To make the students aware of the different information systems and networks available at national and international level used for data and information exchange.

Course Outcomes: After completion of the course students will be able:

CO-1. Understand the basic concept of different information systems and networks.

CO-2. Analyze the work and activities of the National and Global Information system.

CO-3 Design the suitable networks and their use in information exchange.

CO-4 Implementation of network services for information exchange in education and research.

Unit 1: Information Systems

- Definition, Types and Characteristics
- Information Organizations and Systems
- Planning and Designing of Information System
- Evaluation of Information System

Unit 2: National Information Systems

- Environmental Information System (ENVIS)
- Patent Information System (PIS)

Unit 3: Global Information Systems

- International System for Agricultural Science and Technology (AGRIS)
- International Nuclear Information System (INIS)
- Information, Service for Physics Engineering and Computing (INSPEC)
- Medical Literature Analysis and Retrieval System (MEDLARS)

Unit 4: Networks

- Resource Sharing and Networking – Objectives and Scope

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- Features and Characteristics of Library Networks
- Data Networks – National Information Centre Network (NICNET), National Research and Education Network (ERNET), National Knowledge Network (NKN)

RECOMMENDED BOOKS

1. Kaul, H. K. (1999). *Library resources sharing and networks*. Virgo Publications.
2. Lihitkar, S. R. (2012). *Study of information systems and networks in India*. Today and Tomorrow's Printers and Publishers.
3. Neelameghan, A., & Prasad, K. N. (1998). *Information systems, networks, and services in India: Developments and trends*. Indian Bibliographic Center.
4. Rowley, J. E. (1996). *The basics of information systems*. Library Assn Pub Limited.
5. Simon, R. C. (2018). *Issues for libraries and information science in the internet age*. Libraries Unlimited Inc .
6. Tedd, L. A., & Large, J. A. (2005). *Digital libraries: Principles and practice in a global environment*. Walter de Gruyter.

CO-PO & PSO Mapping (P-402)

PAPER CODE-LIS-402 Information System and Networks											
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	1	2	2	2	1	2	2	1	2	1	2
CO-2	3	3	2	1	3	3	1	2	1	3	1
CO-3	2	1	3	3	2	2	2	3	3	2	3
CO-4	3	2	1	2	3	1	3	2	1	3	1

(1=Low, 2= Medium, 3= High)

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 J. A. 01.09.26

Paper No: 403
Paper Name: KNOWLEDGE MANAGEMENT

Credit Distribution			Total Credits	Mid-Term	End-Term	Total Marks
L	T	P	L+T+P	30	70	100
3	1	0	04			

Objective- To make the students aware of the need and concepts of knowledge management in the library.

Course Outcomes: After completion of the course students will be able:

CO-1 To remember the basic concepts of Knowledge management in Libraries.

CO-2 To create professionals as per the requirement of various organizations.

CO-3 To analyze the experience, knowledge and challenges of various Professionals in their organization.

CO-4 To evaluate the challenges and trends in Knowledge Management.

Unit 1: Basics of Knowledge Management

- Concept of Knowledge
- Types of Knowledge: Explicit Knowledge, Implicit Knowledge
- Concept and Scope of Knowledge Management
- Knowledge Management Cycle

Unit 2: Knowledge Management: Creation & Tools

- Knowledge Creation, Access, Transfer and Sharing
- Knowledge Tools
- Knowledge Networks
- Knowledge in Decision Making

Unit 3: Pre-requisites of Knowledge Management

- Sharing of Expertise
- Knowledge Mapping
- Knowledge Worker

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J. K. Singh / 01.09.2026
B. Pooja / 1.9.26
Anurag / 1.9.26
R. D. Ch / 1.9.26

Unit 4: Trends and Challenges of Knowledge Management

- KM Initiatives in Indian Organization
- Software for Knowledge Management
- Pioneers in Knowledge Management
- Advances in Knowledge Management

RECOMMENDED BOOKS

1. Anderson, P. (2016). *Web 2.0 And beyond: Principles and technologies*. CRC Press.
2. Atwood, C. G. (2009). *Knowledge management basics*. American Society for Training and Development.
3. Awad, E. M., & Ghaziri, H. M. (2004). *Knowledge management*. Pearson Education.
4. Becerra-Fernandez, I., & Sabherwal, R. (2014). *Knowledge management: Systems and processes*. Routledge.
5. Cappelli, P. (2010). *The performance effects of it-enabled knowledge management practices*. National Bureau of Economic Research.
6. Dalkir, K. (2017). *Knowledge management in theory and practice*. MIT Press.
7. Easterby-Smith, M., & Lyles, M. A. (2011). *Handbook of organizational learning and knowledge management*. John Wiley & Sons.
8. Frappaolo, C. (2006). *Knowledge management*. Capstone.
9. Hislop, D., Bosua, R., & Helms, R. (2018). *Knowledge management in organizations: A critical introduction*. Oxford University Press.
10. Hoffmann, A., Kang, B., Richards, D., & Tsumoto, S. (2006). *Advances in knowledge acquisition and management: Pacific Rim Knowledge Acquisition Workshop, PKAW 2006, Guilin, China, august 7-8, 2006, revised selected papers*. Springer.
11. Liebowitz, J. (2012). *Knowledge management handbook: Collaboration and social networking, second edition*. CRC Press.
12. Peter, J. P., & Donnelly, J. H. (2007). *Marketing management: Knowledge and skills*. Irwin Professional Pub.

CO-PO & PSO mapping (P-403)

PAPER CODE-LIS-403 Knowledge Management											
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	3	2	2	2	1	1	2	2	2	3	2
CO-2	3	2	2	1	2	1	2	2	2	2	2
CO-3	2	2	2	1	2	3	2	1	3	2	2
CO-4	3	2	1	1	1	2	3	3	2	3	2

(1=Low, 2= Medium, 3= High)

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Paper No: 404
Paper Name: INFORMATION LITERACY

Credit Distribution			Total Credits	Mid-Term	End-Term	Total Marks
L	T	P	L+T+P	30	70	100
3	1	0	04			

Objectives-

1. To introduce to the students the concept of information literacy and its importance in contemporary knowledge society.
2. To make the student familiar with the various models of information literacy and their application.
3. To create knowledge on Information Literacy standards and guidelines, forums and online resources.

Course Outcomes: After completion of the course students will be able:

CO-1 Determine the nature and extent of information needed.

CO-2 Access information effectively and efficiently.

CO-3 Evaluate information and resources for their academic work.

CO-4 Develop, implement, and evaluate progress toward achieving personal, academic, career, and lifelong learning goals.

Unit 1: Emergence of Information Literacy

- Information: Characteristics of information, Types of information
- Information Society and Information Literacy
- Information Literacy: Definition, Models and Standards
- Information Literacy: Strategic Plan
- Information Literacy and Lifelong Learning

Unit 2: ICT and Media Literacy

- Computer Literacy and E-Literacy
- Digital Literacy
- Media Literacy
- Information Literacy and Bridging the Digital Divide

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Unit 3: Information Literacy and Libraries

- School, College and University Libraries
- Public Libraries
- Special Libraries
- Information Literacy and LIS Education,
- International and national initiatives, Policies and guidelines IFLA, ALA, UNESCO, Information literacy skills and best practices.

Unit 4: Policy and Advocacy

- Information Literacy: Initiatives and Forms in USA, UK and Australia
- Policies, Guidelines and Standards: UNESCO, IFLA and ALA
- Information Literacy: Skills and Competencies
- Information literacy: Best Practices

RECOMMENDED BOOKS

1. ACRL Information. (2000, January 1). *Information literacy competency standards for higher education*. American Library Association. <http://hdl.handle.net/11213/7668>
2. Association of College and Research Libraries. (2006, July 24). *Presidential Committee on Information Literacy: Final report*. Association of College & Research Libraries (ACRL). <https://www.ala.org/acrl/publications/whitepapers/presidential>
3. Association, A. L. (2000). ACRL STANDARDS: Information literacy competency standards for higher education. *College & Research Libraries News*, 61(3), 207–215. <https://doi.org/19242>
4. Australia Library and Information Association. (2021, June 24). *Statement on information literacy for all Australians*. ALIA Library. <https://read.alia.org.au/statement-information-literacy-all-australians>
5. Bawden, D. (2001). Information and digital literacies: A review of concepts. *Journal of Documentation*, 57(2), 218–259. <https://doi.org/10.1108/eum0000000007083>
6. Bruce, C. S. (1997). *The seven faces of information literacy*. Auslib Press,.
7. Repplinger, J. (2021, August 31). *Research guides: Information literacy: Goals & objectives*. Willamette University. <https://libguides.willamette.edu/information-literacy>
8. Torras, M.-C., & Saetre, T. (2016). *Information literacy education: A process approach: Professionalising the pedagogical role of academic libraries*. Chandos Publishing.

CO-PO & PSO mapping (P-404)

PAPER CODE-LIS-404 Information Literacy											
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PSO-1	PSO-2	PSO-3	PSO-4

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CO-1	1	2	2	2	1	2	2	1	2	1	2
CO-2	3	3	2	1	3	3	1	2	1	3	1
CO-3	2	1	3	3	2	2	2	3	3	2	3
CO-4	2	3	2	2	1	1	3	3	1	1	1

(1=Low, 2= Medium, 3= High)

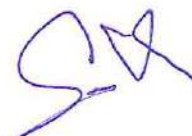
Paper No: 405

Paper Name: DISSERTATION/ PROJECT and VIVA-VOCE

Credit Distribution			Total Credits	Dissertation/Project	Viva-voce	Total Marks
L	T	P	L+T+P	80	20	100
0	4	0	04			

Every Student has to carry out a project work on a topic approved by the Departmental Council, under the guidance of a faculty member and prepare a Dissertation / Project Report.

Students should make a presentation and appear for a Viva-Voce for evaluation and Grading.


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**VALUE ADDED COURSES- SYLLABUS
LIBRARY AND INFORMATION SCIENCE
(SEMESTER SYSTEM)**

2026-2027



**SCHOOL OF LIBRARY AND INFORMATION SCIENCE
GANGADHAR MEHER UNIVERSITY
AMRUTA VIHAR
SAMBALPUR-768004
ODISHA**

DETAIL SYLLABUS

Course Name: MANAGEMENT OF E-RESOURCES

Course Code: VLIS-001

Unit-I

Basic Concept of E-Resources

Introduction and Basic Concepts of E-Resources
History and development of E-Resources

Unit-II

Format of E-resources:

E-journals- characteristics, advantages and disadvantages
E-book- characteristics, advantages and disadvantages
Online Databases- characteristics, advantages and disadvantages

Unit-III

Search Strategy & Search Techniques

Meta data harvesting
Web Crawling

Unit- IV

Consortia for Resource Sharing

UGC-INFLIBNET
International: OCLC

Unit-V

Hands-on Practice of E-resource Databases

Hands-on Experience -JSTOR
EBSCO
ELSEVIER
SCIENCE DIRECT
DOAJ
DOAB

Recommended Text Books

Korfhage, R.R.(1997) Information storage and retrieval. New York: John Wiley.
Lancaster, F.W. (1985) Vocabulary control for information retrieval. Ed.2. Arlington: Information Resource Press.

Butler, J. G. (1997). Information technology: Converging strategies and trends for the 21st century. Computer Technology Research.

Ram, C. S. (2010). Information technology in developing human resources. Deep and Deep Publications.

Reddy, Satyanarayana. (2001). Automated Management of Library Collections. EssEss

RAY, A. K., & ACHARYA, T. (2004). Information technology: Principles and applications. PHI Learning Pvt

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DETAIL SYLLABUS

Course Name: LIBRARY AUTOMATION AND DIGITIZATION
Course Code: VLIS-002

Objective: To apprise the students and making them aware of the ICT application in library & information centres.

Course Outcomes: After studying this paper, students shall be able to-

CO-1 Understand the fundamental concepts of Information Communication Technology (ICT), internet, online searching, library automation, library automation software, library networks and library consortia.

CO-2 Analyze the importance of ICT in libraries and develop proficiency to build automated library system.

CO-3 Develop ICT based skills for applying it in library and information centers.

CO-4 Implement knowledge on library automation, library networking, online searching, internet-based platforms like OCLC, SCOPUS, EBSCO and OPAC searching

Unit-I

Basics of ICT

Information Communication Technology: Meaning, Components, and its applications in libraries, ICT based library and information services.

Computer Technology: Evolution and Generation of Computers

Computer Hardware and its Components; Software and its Types

Open-Source Software Vs Commercial/Proprietary Software; Internet: Concept, Services and Applications

Unit-II

Library Automation

Library Automation: Meaning, Purpose, Planning, and Steps and Implementation

Library Software Packages: WINISIS, SOUL and Koha

House Keeping Operations, OPAC, and Web-OPAC

Barcode, QR Code and RFID

Unit-III

Library Networks

Library Networks - Meaning and Purposes

Library Networking in Indian Perspectives: INFLIBNET, and DELNET

Library Consortia in Indian Context: E-ShodhSindhu, & Others E-Resource Consortia

Unit-IV

ICT-practice

Online and Offline Searching.

Web Searching

Advanced Internet Searching

Search through Meta Search Engines.

Online database searching: OCLC, SCOPUS and EBSCO (Digital Resource Aggregator), OPAC searching

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Recommended Books

1. Bilal, Dania (2014). Library Automation: Core Concepts and Practical Systems Analysis, 3rd Edition. ABC-CLIO.
2. Brown-Syed, Christopher (2011). Parents of Invention: The Development of Library Automation Systems in the Late 20th Century. ABC-CLIO.
3. Doyle, Stephen (2015) Complete ICT for Cambridge IGCSE. Oxford University Press.
4. Gopal Krishan. (2005). Modern Library Automation. Authors Press.
5. Grewal, Gagandeep. (2004). Handbook of Library Security. Dominant.
6. Kaul, H.K. (1999). Library Resource Sharing and Networking. New Delhi: Virgo Publication. 38.
7. Kumar, P. S. G. (2004). Information and Communication. Delhi: B. R. Publication.
8. Pandey, S.K. and Sharma. (1995). Fundamentals of Library Automation. New Delhi: EssEss Publications. 131.
9. Reddy, Satyanarayana. (2001). Automated Management of Library Collections. EssEss.
10. Uddin, Hanif, (2009). Library Automaton: A study of the AIC, INSDOC and National Libraries of Bangladesh.

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DETAIL SYLLABUS

Course Name: DIGITAL LITERACY

Course Code: VLIS-003

Course Objectives:

- i. Understand the basic concepts of digital literacy.
- ii. Apply digital tools and technologies effectively.
- iii. Analyze and evaluate digital information critically.
- iv. Create and communicate information ethically and effectively.

Course Outcomes:

- CO1: Define digital literacy and describe various digital tools and technologies
CO2: Apply digital tools to complete specific academic and professional tasks
CO3: Critically analyze and evaluate the quality of digital content.
CO4: Demonstrate an understanding of digital ethics and advocate for responsible digital citizenship.

Unit 1: Understanding Digital Literacy

- i Introduction to Digital Literacy
- ii Overview of Digital Tools and Technologies
- iii The Role of Digital Literacy in Society

Unit 2: Applying Digital Tools and Technologies

- i Basic Computer and Internet Skills
- ii Productivity Software (Word Processing, Spreadsheets, Presentations)
- iii Online Research Techniques

Unit 3: Analyzing and Evaluating Digital Information

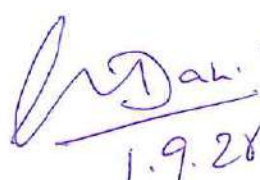
- i Critical Thinking and Digital Literacy
- ii Evaluating Online Sources
- iii Recognizing Misinformation and Digital Scams

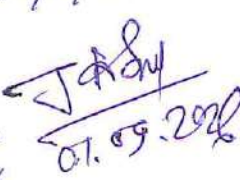
Unit 4: Creating and Communicating Information

- i Content Creation Tools (Blogs, Social Media, Video)
- ii Effective Digital Communication
- iii Digital Ethics and Copyright


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Recommended Books:

1. Hobbs, R. (2017). *Create to learn: Introduction to digital literacy*. Wiley-Blackwell.
2. Rheingold, H. (2012). *Net smart: How to thrive online*. The MIT Press.
3. Belshaw, D. (2014). *The essential elements of digital literacies*. CreateSpace Independent Publishing Platform.
4. Jones, J. (2019). *Digital literacy in the classroom*. Routledge.
5. Buckingham, D. (2013). *Media education: Literacy, learning and contemporary culture*. Polity Press.
6. Gilster, P. (1997). *Digital literacy*. Wiley Computer Publishing.
7. Martin, A., & Madigan, D. (Eds.). (2006). *Digital literacies for learning*. Facet Publishing.
8. Eshet-Alkalai, Y. (2012). *Thinking in the digital era: A revised model for digital literacy*. Journal of Educational Technology & Society, 15(2), 28-36.
9. Jenkins, H., Purushotma, R., Weigel, M., Clinton, K., & Robinson, A. J. (2009). *Confronting the challenges of participatory culture: Media education for the 21st century*. The MIT Press.
10. Lankshear, C., & Knobel, M. (2008). *Digital literacies: Concepts, policies and practices*. Peter Lang Publishing.

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R. Prasad
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S. V. K.
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DETAIL SYLLABUS
Course Code: VLIS-004

Title-4: **ACADEMIC INFORMATION SEEKING AND USE**

Course Objectives:

By the end of this course, students will be able to:

- i. Develop skills to efficiently search for and retrieve academic information using various sources and databases.
- ii. Critically evaluate the credibility, relevance, and quality of academic resources.
- iii. Apply ethical practices in using and citing academic information.
- iv. Utilize reference management tools to organize and manage academic references effectively.

Course Outcomes:

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

- CO1.** Identify and utilize various academic information sources.
CO2. Apply effective search strategies to retrieve academic resources.
CO3. Critically evaluate the credibility, reliability, and relevance of information.
CO4. Use advanced tools and technologies to manage and organize academic references.

Unit 1: Introduction to Academic Information Seeking

- i. Understanding the need for academic information
- ii. Types of academic resources (books, journals, databases, etc.)
- iii. Introduction to library resources and digital libraries
- iv. Open access vs. subscription-based resources

Unit 2: Information Retrieval Strategies

- i. Developing research questions and keywords
- ii. Boolean logic and search operators (AND, OR, NOT)
- iii. Database search techniques (e.g., Google Scholar, JSTOR, PubMed)
- iv. Using advanced search tools and filters

Unit 3: Evaluating Academic Information

- i. Criteria for evaluating sources (relevance, authority, accuracy, purpose)
- ii. Distinguishing between peer-reviewed and non-peer-reviewed resources
- iii. Identifying biases and conflicts of interest
- iv. Ethical use of academic information (avoiding plagiarism, proper citation)

Unit 4: Managing Academic Information

- i. Introduction to reference management tools (Zotero, Mendeley, EndNote)
- ii. Organizing and categorizing academic references
- iii. Citation styles (APA, MLA, Chicago, etc.)
- iv. Sharing and collaborating on academic information

JKS
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Amir

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Recommended Readings:

1. **Badke, W.** (2014). *Research Strategies: Finding Your Way Through the Information Fog*. iUniverse.
2. **Booth, A., Sutton, A., & Papaioannou, D.** (2016). *Systematic Approaches to a Successful Literature Review*. SAGE Publications.
3. **Hart, C.** (2018). *Doing a Literature Review: Releasing the Research Imagination*. SAGE Publications.
4. **Leedy, P. D., & Ormrod, J. E.** (2019). *Practical Research: Planning and Design* (12th Edition). Pearson.
5. **Rumsey, S.** (2008). *How to Find Information: A Guide for Researchers*. Open University Press.
6. **Gash, S.** (2000). *Effective Literature Searching for Research* (2nd Edition). Gower Publishing.
7. **Booth, W. C., Colomb, G. G., & Williams, J. M.** (2016). *The Craft of Research* (4th Edition). University of Chicago Press.
8. **Dixon, S.** (2016). *Researching Online: A Guide to Success with Research, Writing, and Blogging*. Research Press.
9. **Blaxter, L., Hughes, C., & Tight, M.** (2010). *How to Research* (4th Edition). Open University Press.
10. **Walliman, N.** (2017). *Research Methods: The Basics* (2nd Edition). Routledge.
11. University library guides and databases.

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