

UNIVERSITY OF PESHAWAR



Curriculum BS Library and Information Science

**DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE
UNIVERSITY OF PESHAWAR
2025**

Scheme of Studies

The standard scheme of studies for BS in Library and Information Science is given as under:

SEMESTER I

S.N.	COURSE	CREDITHOURS	CATEGORY
1	Quantitative Reasoning-I**	3 (3-0)	General Education
2	Functional English**	3 (3-0)	General Education
3	Applications of Information & Communication Technologies**	3 (2-1)	General Education
4	Foundation of Library and Information Science	3 (3-0)	Major
5	Information, Library and Society	3 (3-0)	Major

Total Credits (15)

SEMESTER II

S.N.	COURSE	CREDITHOURS	CATEGORY
1	Quantitative Reasoning-II**	3 (3-0)	General Education
2	Social Science* (Sociology)	2 (2-0)	General Education
3	Expository Writing**	3 (3-0)	General Education
4	Natural Science* (University approved course)	3 (2-1)	General Education
5	Management of Library and Information Centers	3 (3-0)	Major
6	Information Sources and Services	3 (3-0)	Major

Total Credits (17)

SEMESTER III

S.N.	COURSE	CREDITHOURS	CATEGORY
1	Arts & Humanities*(Museology)	2 (2-0)	General Education
2	Islamic Studies (Religious Education / Ethics for non-Muslim students) **	2 (2-0)	General Education
3	Pakistan Studies**	2 (2-0)	General Education
4	Organization of Information	3 (3-0)	Major
5	Online Information Retrieval	3 (3-0)	Major
6	Emerging Technologies Application in Information Organization	3 (3-0)	Major

Total Credits (15)

SEMESTER IV

S.N.	COURSE	CREDITHOURS	CATEGORY
1	Civics & Community Engagement**	2 (2-0)	General Education
2	Ideology & Constitution of Pakistan**	2 (2-0)	General Education
3	Entrepreneurship**	2 (2-0)	General Education
4	Information Ethics, Policy and Laws	3 (3-0)	Major
5	Archives and Record Management	3 (3-0)	Major
6	Marketing of Library and Information Services	3 (3-0)	Major

Total Credits (15)

SEMESTER V

S.N.	COURSE	CREDITHOURS	CATEGORY
1	Communication skills for Information Professionals	3 (3-0)	Major
2	Project Management	3 (3-0)	Interdisciplinary
3	Quantitative Research	3 (3-0)	Major
4	Applied Cataloguing	3 (0-3)	Major
5	Applied Classification	3 (0-3)	Major

Total Credits (15)

SEMESTER VI

S.N.	COURSE	CREDITHOURS	CATEGORY
1	Elective-I*** (Management of Libraries and Information Centers)	3 (3-0)	Major
2	Library Automation Systems	3 (3-0)	Major
3	Qualitative Research	3 (3-0)	Major
4	Collection Development and Management	3 (3-0)	Major
5	Elective-II*** (Bibliographic Control)	3 (3-0)	Major

Total Credits (15)

SEMESTER VII

S.N.	COURSE	CREDITHOURS	CATEGORY
1	Information Visualization	2 (1-1)	Interdisciplinary
2	Knowledge Management	3 (3-0)	Interdisciplinary
3	Elective-III*** (Serial Management)	3 (3-0)	Major
4	Digital Libraries	3 (3-0)	Major
5	Elective-IV*** (Human Resource Management in Libraries)	3 (3-0)	Major
6	Application of Information System	3 (3-0)	Major

Total Credits (17)

SEMESTER VIII

S.N.	COURSE	CREDITHOURS	CATEGORY
1	Elective-V*** Preservation and Conservation of Library Material)	3 (3-0)	Major
2	Elective-VI*** (Financial Management in Libraries)	3 (3-0)	Major
3	Information Literacy Instructions	2 (2-0)	Major
4	Elective-VII*** Introduction to Publishing and Book Trade)	3 (3-0)	Major
5	Capstone	3 (3-0)	Capstone
6	Web Development in Libraries	2 (2-0)	Interdisciplinary

Total Credits (16)

NOTE: Internships of three (03) credit hours must be completed in accordance with HEC Undergraduate Education Policy V 1.1. This requirement cannot be substituted with additional coursework, capstone, research, or project work.

* The University/Department may offer any course within the broader subject domain/cluster to meet the given credits. (Highlighted in Red text)

** The university may use HEC-designed model courses. (List attached)

*** The university/department may offer any advanced course in Library and Information Science as an elective based on available academic and physical resources, depending on its geographical location and program objectives. (List Attached/highlighted in Green Text).

INFORMATION, LIBRARY AND SOCIETY (03 Credit Hours)

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

- to explore the environment in which library and information professionals work
- to understand the social, political and economic context in which libraries and other information agencies operate
- to understand the nature of library and information and their role in society

Course Objectives
▪ To explore the environment in which library and information professionals work. ▪ To understand the social, political and economic context in which libraries and other information agencies operate. ▪ To understand the nature of library and information. ▪ To understand the role of libraries in society. ▪ To identify library services and availability of resources in libraries. ▪ To understand the use of information ethically. ▪ To understand the role of libraries in providing access to information irrespective of their form, format and location.

Course Learning Outcomes
▪ Understand the role of libraries in promoting knowledge. ▪ Understand how to use the information ethically. ▪ Understand the role of skillful librarians in society for spreading information. ▪ Understand the purposes and functions of different types of libraries. ▪ Understand different library terminology. ▪ Understand the profession of Library and Information Science. ▪ Understand the policy for information and information management.

Detailed Course Contents/Weekly Breakup

W		Description/Lectures	W		Description/Lectures
1		Introduction	2		Information
	I	Introduction to libraries		I	Origin, definition, Meaning
	II	Types of Libraries		II	Types of Information
	III	Importance and Purpose of Libraries		III	Information VS Knowledge
3		Information Continue.....	4		Society
	I	Characteristics of Information		I	Characteristics of Society
	II	Principles of Information		II	Purpose of Society and Importance

	III	Continue		III	Types of Society
5	Introduction to LIS		6	Library and its role in Society	
	I	LIS as a Profession		I	Role of Libraries in our society
	II	LIS Professionalization History		II	Continue
	III	LIS as a Discipline		III	Continue
7	Information Society		8	Communication	
	I	Concept, meaning and definition of Information Society		I	Origin, meaning, and definition of Communication
	II	Characteristics of Information Society		II	Process of Communication
	III	Functions of Information Society		III	Types of Communication
9	Information Policy		10	Information Privacy	
	I	Introduction to Information Policy		I	Concept of Information Privacy
	II	Levels of Information Policy		II	Information Privacy Principles
	III	Continue		III	Information Privacy Laws
11	Intellectual property		12	Information Ethics	
	I	Introduction to Intellectual Property		I	Introduction to Information Ethics
	II	Types of Intellectual Property		II	Use of Information in an Ethical Manner
	III	World Intellectual Property Organization (WIPO)		III	Factors affecting information in an ethical manner
13	Information Management		14	Freedom of Information	
	I	Components of Information Management		I	Freedom of Information
	II	Goals of Information Management		II	Freedom of Access to Information in Pakistan
	III	Challenges for Information Management		III	Continue
15	Economic aspects of information		16	Information Sources	

I	Introduction: Economic Aspects of Information	I	Introduction, meaning, definitions
II	Economic Role of Information	II	Kinds of Information Sources
III	continue	III	Continue

Recommended Readings:

1. Bukland, M. (2017). *Information and Society*. United States of America: Massachusetts Institute of Technology (MIT) Press.
2. Baker, D., & Evans, W. (2011). *Libraries and society: role, responsibility and future in an age of change*.
3. Chowdhury, G. G. (2007). *Librarianship: the complete introduction*. London: Facet.
4. Crawford, W., Gorman, M., & Association, A. L. (1995). *Future libraries: dreams, madness & reality*: SciELO Brasil.
5. Feather, J. (2004). *The information society: a study of continuity and change*. London: Facet Pub.
6. Gerard, D. E. (1978). *Libraries in society: a reader*. London; New York: Bingley; K.G. Saur.
7. Gerard, D. E., & Welsh Arts, C. (1975). *Libraries and leisure: a symposium on the relationship between libraries and recreation in contemporary society*, London.
8. Himma, K. E. (2007). Information ethics, from <http://public.eblib.com/choice/publicfullrecord.aspx?p=291574>
9. Lester, J., & Koehler, W. C. (2003). *Fundamentals of information studies: understanding information and its environment*. New York: Neal-Schuman Publishers.
10. McCabe, G. B., & Dowell, D. R. (2006). *It's all about student learning: managing community and other college libraries in the 21st century*. Westport, Conn.: Libraries Unlimited.
11. Rubin, R. E. (1998). *Foundations of Library and Information Science*: ERIC.
12. Torr, J. D. (2003). *The information age*. San Diego: Greenhaven Press.

COMMUNICATION SKILLS FOR INFORMATION PROFESSIONALS

(03 Credit Hours)

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

- Demonstrate effective verbal & non-verbal communication skills, including presenting information clearly and confidently, engaging in active listening, and facilitating discussions with diverse audiences in professional settings.
- Produce clear, concise, and well-structured written documents, such as memos, emails, and user guides
- Learn technical writing skills, writing proposals, letters, formal & informal reports

Course Objectives
▪ Understand the principles of effective communication to convey information clearly and accurately. ▪ Develop skills in active listening to enhance comprehension and rapport with colleagues and clients. ▪ Learn techniques for adapting communication styles to diverse audiences and contexts. ▪ Cultivate proficiency in written communication to create concise and compelling messages. ▪ Explore strategies for managing conflicts and navigating difficult conversations constructively.

Course Learning Outcomes
▪ Develop and demonstrate proficiency in utilizing verbal and non-verbal communication techniques to convey information effectively in professional settings. ▪ Analyze and adapt communication strategies to suit diverse audiences, including stakeholders, colleagues, and clients within the field of information management. ▪ Evaluate and employ appropriate technologies and platforms to facilitate efficient communication and collaboration in information-related contexts

Detailed Course Contents/Weekly Breakup

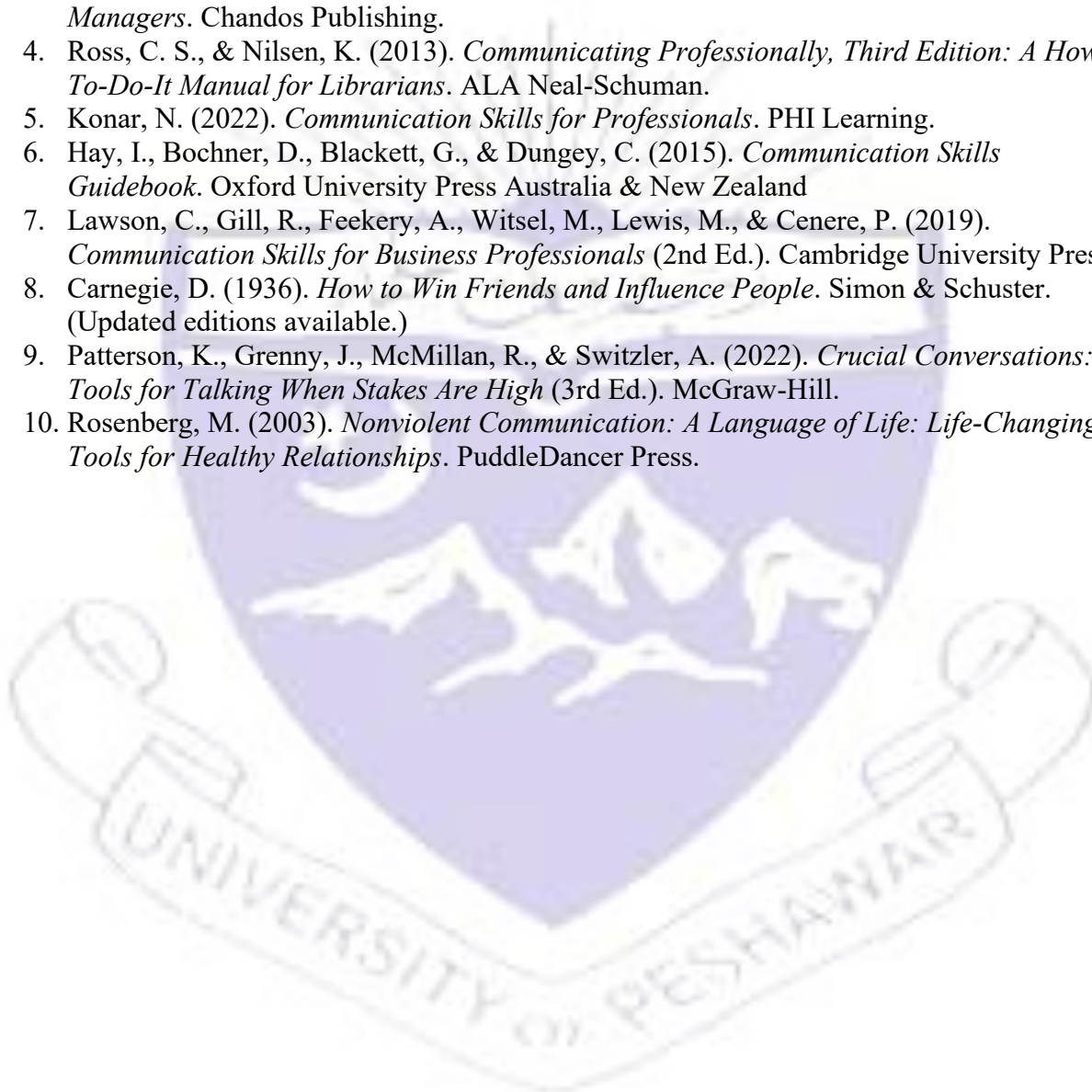
W		Description/Lectures	W		Description/Lectures
1.	Introduction to Effective Communication		2.	Verbal Communication Skills	
	I	Understanding the importance of effective communication in information professions.		I	Developing clarity and conciseness in verbal communication.
	II	Types and models of communication.		II	Active listening skills & techniques.
	III	Barriers to effective communication and strategies to overcome them.		III	Assertiveness and confidence in communication.
3.	Written Communication Skills		4.	Nonverbal Communication	

	I	Principles of effective written communication.	I	Understanding nonverbal cues and body language.
	II	Crafting professional emails and memos.	II	Using visual aids and presentations effectively.
	III	Writing reports, summaries, and documentation	III	Cultural differences in nonverbal communication.
5.	Interpersonal Communication		6.	Interpersonal Communication. Continue
	I	Building and maintaining professional relationships.	I	Conflict resolution and negotiation skills.
	II	Continue	II	Collaborative communication in teams and groups.
	III	Continue	III	Continue
7.	Communicating with Diverse Audiences		8.	Communication Technologies
	I	Tailoring communication for different stakeholders (e.g., clients, colleagues, management).	I	Utilizing communication tools and platforms (e.g., email, video conferencing, social media).
	II	Communicating with diverse cultural and demographic groups.	II	Digital etiquette and professionalism
	III	Accessibility and inclusive communication practices.	III	Managing information overload and digital distractions.
9.	Communication Strategy and Reflection		10.	Communication Strategy and Reflection. Continue
	I	Developing a personal communication strategy.	I	Case studies and real-world applications of effective communication in information professions.
	II	Continue	II	Reflecting on communication strengths and areas for improvement.
	III	Continue	III	Continue

11.	Crisis Communication and Risk Management		12.	Ethical Communication Practices	
	I	Strategies for effective crisis communication.		I	Understanding ethical considerations in communication.
	II	Identifying and mitigating communication-related risks.		II	Ethical implications of information sharing and confidentiality.
	III	Case studies on handling communication crises in information settings.		III	Promoting transparency and integrity in communication practices
13.	Leadership Communication		14.	Communication in Information Technology	
	I	Communicating vision, goals, and expectations as a leader.		I	Communicating technical information to non-technical stakeholders.
	II	Strategies for motivating and inspiring teams through communication.		II	Bridging the communication gap between IT professionals and end-users
	III	Effective delegation and feedback mechanisms in leadership communication.		III	Addressing challenges in remote and virtual communication in IT settings.
15.	Strategic Communication Planning		16.	Communication in Academic and Research Settings	
	I	Developing communication plans for projects and initiatives.		I	Writing scholarly articles and research papers effectively
	II	Identifying communication goals, objectives, and key messages.		II	Communicating research findings to diverse audiences.
	III	Evaluating and adapting communication strategies based on feedback and outcomes.		III	Collaborative communication in interdisciplinary research teams.

Recommended Readings:

1. Weisburg, H. K. (2022). *The Art of Communication: A Librarian's Guide for Successful Leadership, Collaboration, and Advocacy*. Libraries Unlimited / Bloomsbury.
2. Statz, S. R. (2010). *Public Speaking Handbook for Librarians and Information Professionals*. McFarland.
3. Neal, K. L. (2014). *Six Key Communication Skills for Records and Information Managers*. Chandos Publishing.
4. Ross, C. S., & Nilsen, K. (2013). *Communicating Professionally, Third Edition: A How-To-Do-It Manual for Librarians*. ALA Neal-Schuman.
5. Konar, N. (2022). *Communication Skills for Professionals*. PHI Learning.
6. Hay, I., Bochner, D., Blackett, G., & Dungey, C. (2015). *Communication Skills Guidebook*. Oxford University Press Australia & New Zealand
7. Lawson, C., Gill, R., Feekery, A., Witsel, M., Lewis, M., & Cenere, P. (2019). *Communication Skills for Business Professionals* (2nd Ed.). Cambridge University Press.
8. Carnegie, D. (1936). *How to Win Friends and Influence People*. Simon & Schuster. (Updated editions available.)
9. Patterson, K., Grenny, J., McMillan, R., & Switzler, A. (2022). *Crucial Conversations: Tools for Talking When Stakes Are High* (3rd Ed.). McGraw-Hill.
10. Rosenberg, M. (2003). *Nonviolent Communication: A Language of Life: Life-Changing Tools for Healthy Relationships*. PuddleDancer Press.



MANAGEMENT OF LIBRARY AND INFORMATION CENTERS (3 Credit Hours)

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

- Learn basic understanding of managerial and administrative concepts and its application in library & information centers.
- Know the theories and principles of administration for effective management of library & information centers.
- Understand the key management models, processes, aspects and the role of information professional in organizations.

Course Objectives

- To understand functions of management and their underlying theoretical concepts.
- To understand how these functions can be applied to provide effective library and information services.

Course Learning Outcomes

1. Understand the fundamental principles and theories of library and information science, including the historical development and evolution of libraries and information services.
2. Demonstrate proficiency in the management and organization of library resources, including cataloguing, classification, and metadata standards, to facilitate efficient access to information for users.
3. Develop skills in collection development and management, including the ability to assess user needs, evaluate resources, and make informed decisions regarding the acquisition, retention, and deselection of materials.

Detailed Course Contents/Weekly Breakup

Week		Description/Lectures	Week		Description/Lectures
1.	Introduction to Library Management		2.	Principles and Functions of Library management	
	I	Overview of library management		I	Introduction to Academic Library
	II	Levels of Management		II	Principles of Library Management
	III	Importance of effective management in libraries		III	Functions of Library Management
3.	Planning and Decision Making		4.	Library Organization	

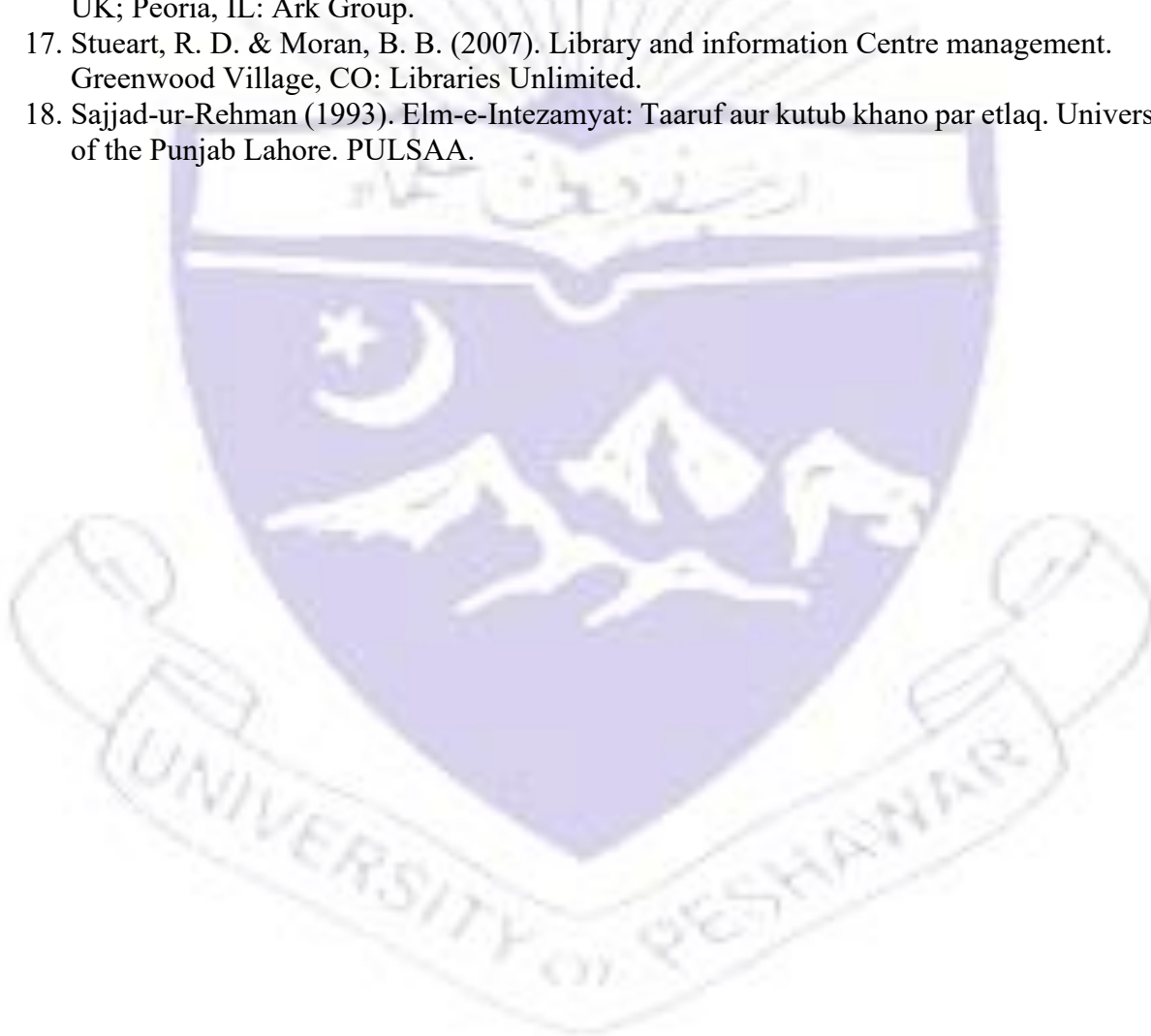
	I	Planning: Meaning, definitions and Types		I	Meaning and Concept of Organizing
	II	Process of planning		II	Successive stages in Library Organization
	III	Decision making: process and types		III	Organizational structure and organizational chart of Library
5.	Staffing in Libraries		6.	Directing and Coordination	
	I	Personnel management in Libraries		I	Direction: Meaning definition and techniques
	II	Library Personnel Policy		III	Coordination: Meaning and definitions
	III	Training and development of Library staff		III	Significance of Direction and coordination
7.	Motivation		8 9. MID Term Exam	Control/Reporting	
	I	Motivation: meaning and definition		I	Meaning and Definitions of Control
	II	Maslow theory of Motivation		ii	Process of control
	III	Motivators and De-motivators in Libraries		iii	Requirements of Control
10.	Leadership		11.	Library Budgeting	
	I	Leadership styles in library management		I	Financial management Process in libraries
	II	Qualities of a good leader		II	Library Budget: Purpose, Types
	III	Functions of Leaders in an organization		III	Related concepts
12.	Administrative Aspects of Technical Services		13.	Facilities Management and Change Management	
	I	Technical service workflows and procedures		I	Space planning and utilization in libraries
	II	Collection development and management		I	Change management principles and practices

	III	Continue		III	Continue
14.	Rules and Regulations		15.	Evaluation and Quality Assurance	
	I	Library Rules and Policies		I	Methods of evaluating library services and programs
	II	Developing and enforcing library policies and procedures		II	Quality assurance and continuous improvement
	III	Continue		III	Continue
16.	Public Relations Management		17.	Time Management	
	I	Building community partnerships and collaborations		I	Time management Techniques for library administrators
	II	Public relations strategies for libraries		II	Prioritization and delegation in library management
	III	Strategies for optimizing library space and facilities		III	Continue
	Week 18			Final term Examination	

Recommended Readings:

1. Albitz, B., Avery, C., & Zabel, D. (Eds.). (2017). *Leading in the new academic library*. Libraries Unlimited.
2. Bryson, J. (1998). *Effective library and information centre management* (2nd Ed.). Butterworth-Heinemann / Routledge.
3. Burger, R. H. (2016). *Financial management of libraries and information centers*. Libraries Unlimited.
4. Claravall, N. J. (2005). *Managing libraries and information centers in the Philippine setting*. Benguet State University.
5. Gupta, D. K. (n.d.). *Management of libraries and information centres and knowledge centres*. Simple Book Publishing.
6. Johnson, P., & Weber, M. B. (2025). *Fundamentals of collection development and management* (5th Ed.). American Library Association.
7. McCafferty, B. (2023). *Library management: A practical guide for librarians* (Practical Guides for Librarians, Vol. 77). Rowman & Littlefield.
8. Moniz Jr., R. (2010). *Practical and effective management of libraries: Integrating case studies, general management theory and self-understanding*. Chandos.
9. Stueart, R. D., Morner, C. J., & Moran, B. B. (2012). *Library and information center management* (8th Ed.). Libraries Unlimited.
10. Tandel, K. D. (2015). *Library administration and management*. Bioscientific Publishers.

11. Todaro, J. (2014). *Library management for the digital age: A new paradigm*. Rowman & Littlefield.
12. Wei, W., & Sue O'Neill Johnson. (2002). *Leadership and management principles in libraries in developing countries*. Routledge.
13. Balakrishnan, S., & Paliwal, P. K. (2001). *Management of library information services*. New Delhi: Anmol Publications.
14. Evans, G. E., Layzell Ward, P., Rugaas, B., & Evans, G. E. (2007). *Management basics for information professionals*. New York: Neal-Schuman.
15. Massis, B. E. (2003). *The practical library manager*. New York: Haworth Press.
16. Poynton, C. (2008). *Managing the evolution of library and information services*. London, UK; Peoria, IL: Ark Group.
17. Stueart, R. D. & Moran, B. B. (2007). *Library and information Centre management*. Greenwood Village, CO: Libraries Unlimited.
18. Sajjad-ur-Rehman (1993). *Elm-e-Intezamyat: Taaruf aur kutub khano par etlaq*. University of the Punjab Lahore. PULSAA.



KNOWLEDGE MANAGEMENT 3CR Course

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

- Understand definitions, theories, practices, techniques of knowledge management.
- Assess and implement various knowledge sharing and transfer methods, with a focus on electronic environments, to facilitate effective knowledge dissemination within organizations.
- Evaluate the effectiveness of different KM systems and tools, considering ethical and legal issues, and manage knowledge workers to optimize organizational performance.

No.	Course Objective
1	To introduce students to the fundamental concepts, models, and processes of knowledge management, with a focus on its application in libraries and information centers.
2	To equip students with the skills and understanding necessary to apply KM principles for improving library services, knowledge sharing, and organizational learning.

No.	Course Learning Outcome
1	Explain the core concepts, processes, and models of knowledge management and their relevance to libraries and information centers.
2	Apply KM tools and strategies (such as knowledge organization, repositories, and knowledge sharing practices) in the context of library and information services.
3	Evaluate the role of libraries as knowledge management hubs in supporting academic, research, and organizational knowledge needs.

Week	Topics	Description / Link to Library Science
1	Introduction to Knowledge Management (KM)	Definition, evolution, and importance of KM. Relationship between data, information, and knowledge.
2	Knowledge in Organizations	Tacit vs. explicit knowledge, knowledge hierarchy, organizational knowledge assets.
3	Role of KM in Libraries and Information Centers	KM applications in libraries: improving services, institutional memory, and user support.
4	KM Models and Frameworks	Nonaka's SECI model, knowledge cycle models.
5	Knowledge Creation and Capture	Methods for creating and capturing organizational knowledge.
6	Knowledge Organization	Indexing, classification, taxonomy, ontology, metadata.
7	Knowledge Storage and Repositories	Databases, digital libraries, institutional repositories.
8	Knowledge Sharing and Communication	Techniques, communities of practice, collaborative tools.
9	Knowledge Use and Application	Applying knowledge for decision-making, innovation, and problem-solving.
MID Term Examination		

10	Technology in KM	KM tools: intranets, content management systems, AI, and library systems.
11	KM and Information Literacy	Training users to locate, evaluate, and apply knowledge.
12	KM and Digital Libraries	Role of digital libraries in knowledge preservation and dissemination.
13	KM Policies and Strategies	Institutional KM strategies, policies, governance.
14	KM and Human Resources	Knowledge workers, roles of librarians as knowledge managers.
15	Challenges in KM	Cultural, technological, and organizational barriers to KM.
16	Evaluation and Assessment of KM	KM metrics, measuring knowledge use and impact.
17	Future Trends and Course Review	AI, big data, knowledge analytics, and their role in KM. Wrap-up and course review.
Final Term Examination		

Reading List

1. Awad, E. M., & Ghaziri, H. M. (2017). *Knowledge management*. Pearson.
2. Dalkir, K. (2017). *Knowledge management in theory and practice* (3rd Ed.). MIT Press.
3. Girard, J., & Girard, J. L. (Eds.). (2015). *Knowledge management matters: Words of wisdom from leading practitioners*. Taylor & Francis.
4. Jashapara, A. (2011). *Knowledge management: An integrated approach* (2nd Ed.). Pearson Education.
5. Koenig, M. E. D., & Srikantaiah, T. K. (Eds.). (2012). *Knowledge management in practice: Connections and context*. Information Today, Inc.
6. Nonaka, I., & Takeuchi, H. (2019). *The wise company: How companies create continuous innovation*. Oxford University Press.
7. Rubenstein-Montano, B., Liebowitz, J., Buchwalter, J., McCaw, D., Newman, B., Rebeck, K., & Team, T. K. M. (2001). *A systems thinking framework for knowledge management*. Decision Support Systems, 31(1), 5–16.
8. Srikantaiah, T. K., Koenig, M. E. D., & Hawamdeh, S. (Eds.). (2010). *Knowledge management in libraries: Concepts, strategies, and practices*. Information Today, Inc.
9. Tiwana, A. (2020). *The knowledge management toolkit: Orchestrating IT, strategy, and knowledge platforms* (3rd Ed.). Pearson.
10. Wilson, T. D. (2015). *Theory in information behavior research*. Journal of Documentation, 71(1), 29–46.

COLLECTION DEVELOPMENT AND MANAGEMENT (3 Credit Hours)

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

- Familiarize with the philosophy, principles and main elements of collection development and management (CDM).
- Develop insights and methods for dealing with issues pertaining to collection development and management including policies development, selection process, acquisition options, weeding, preservation and conservation strategies for print and electronic resources using relevant theories and practices.
- Identify the opportunities and challenges posed by electronic materials in the information environment covering ownership versus leasing models, the differences in licensing options from the major publishers and aggregators.
- Gain valuable insight regarding the impact of e-material on the publishing industry, scholarly communication.

Learning Objectives: After studying this course the students will be able to:

1. Explain the concept of collection development and management in libraries
2. Describe the importance of collection development in libraries
3. Discuss the role of collection management in the delivery of the right information to the right user
4. Explain the collection development policy, planning, and budgeting
5. Discuss the importance of collection development and management in the electronic era
6. Explain the role of collection analysis in collection development in libraries

Learning Outcomes: Students will gain an idea of

1. How collections are developed in libraries
2. How selection and acquisition are made
3. How reading materials are technically processed
4. How collection is assessed
5. How the needs of the community are determined

Course Contents

Week	Lectures	Topics
1–2	Lecture 1–3	Mechanism of Collection Development and Management
	Lecture 4–6	Assessing Users' Needs
	Lecture 7–8	Problems in the Assessment of Users' Needs
3–4	Lecture 9–11	Collection Development Policy
	Lecture 12–15	Basic Purposes of Collection Development Policy
	Lecture 15–18	Basic Elements of Collection Development Policy
5–6	Lecture 19–21	Selection Sources and Processes
	Lecture 22–25	Selection Criteria, Tools, and Problems
	Lecture 26–28	Selection of Electronic Resources
7–8	Lecture 29–31	The Principal Goal of Library Acquisitions
	Lecture 32–35	Major Problems in the Acquisition of Foreign Books and Other Reading Materials

9–10	Lecture 36–38	Technical Processing of Library Materials
	Lecture 39–40	Preservation and Conservation of Library Materials
11–12	Lecture 41	Gifts, Exchange, and Donations
	Lecture 42	Weeding Library Collection
	Lecture 43	Weeding Policy
13–14	Lecture 44	Evaluation of Collection
	Lecture 45–46	Leg

Recommended Readings

1. Johnson, P. (2014). Fundamentals of collection development and management. American Library Association, Chicago, USA. Available at: <http://gen.lib.rus.ec/book/index.php?md5=C1210225644D894C9E7A149743B23EFE>
2. Adams, K. E., & Cassner, M. E. (2001). Marketing Library Resources and Services to Distance Faculty. *Journal of Library Administration*, 31(3/4), 5-22
3. Alabaster, C. (2002). *Developing an Outstanding Core Collection: A Guide for Libraries*. Chicago: American Library Association.
4. Albitz, B., Avery, C., & Zabel, D. (2014). *Rethinking collection development and management*. Santa Barbara, CA: Libraries Unlimited.
5. Barreau, D. (2001). Information Systems and Collection Development in Public Libraries. *Library Collections, Acquisitions, and Technical Services*, 25(3), 263-79.
6. Biery, S. S. (2001). Team Management of Collection Development from a Team Member's Perspective. *Collection Management*, 25(3), 11-22.
7. Branin, J., Groen, F., & Thorin, S. (2000). The Changing Nature of Collection Management in Research Libraries. *Library Resources and Technical Services*, 44(1), 23-32.
8. Evans, G. E., Ward, P. L. & Rugaas, B. (2000). The Planning Process. In *Management Basics for Information Professionals*, 161–90. New York: Neal-Schuman.
9. Farmer, L. S. J. (2001). Collection Development in Partnership with Youth: Uncovering Best Practices. *Collection Management*, 26(2), 67-78.
10. Flowers, J. L. (2001). Standing Orders: Considerations for Acquisitions Method. *Library Collections, Acquisitions, and Technical Services*, 25(3), 323-28.
11. Gillespie, J. T. (1998). *Guides to Collection Development for Children and Young Adults*. Englewood, Colo.: Libraries Unlimited.
12. Handman, G. (ed) (2002). *Video Collection Development in Multi-Type Libraries: A Handbook*. 2d ed. Westport, Conn.: Greenwood.
13. Jaguszewski, J. M., & Probst, L. K. (2000). The Impact of Electronic Resources on Serial Cancellations and Remote Storage Decisions in Academic Research Libraries. *Library Trends*, 48(4), 799-820.

14. Gessesse, K. (2000). Collection development and management in the twenty-first century with special reference to academic libraries: an overview. *Library Management*, 21(7), 365372.
15. Wicks, D. A., Bairdiella, L., & Swords, D. (2001). Four Birds with One Stone: Collaboration in Collection Development. *Library Collections, Acquisitions, and Technical Services* 25, 47383.
16. Wu, C., et al. (1994). Effective Liaison Relationships in an Academic Library. *College and Research Libraries News*, 55(5), 254-303.

APPLIED CATALOGUING

3 Credit Hours

▪ Course Objectives
▪ Understanding Cataloguing Principles: Gain insight into cataloguing concepts, historical development, and objectives. ▪ Practical Cataloguing Skills: Acquire hands-on experience in descriptive cataloguing for various resource formats. ▪ MARC 21 Proficiency: Develop proficiency in working with MARC 21 bibliographic records and understanding their structure and components. ▪ Introduction to Modern Cataloguing Initiatives: Explore modern cataloguing initiatives like RDA and BIBFRAME, understanding their features, objectives, and differences from traditional

No.	Course Learning Outcome
1	Learn basic principles and rules of cataloguing procedure according to AACR2.
2	Perform cataloguing practice of print, non-print material, serials, and electronic material.
3	Develop basic understanding about English and Urdu choice of access points.
4	Learn and practice different cataloguing formats, standards, and frameworks (MARC, Metadata, FRBR, RDA, BIBFRAME, etc.).

W	Description/Lecturers	W	Description/Lecturers
1	History of Cataloguing Codes	2	Non-Book Materials
	1. Anglo-American Cataloguing Rule I		1. Definitions, Types of Non-Book Periodicals
	2. Anglo-American Cataloguing Rule-II		2. Natural & Scope of Non-Book Material
	3. Comparison of AACR-I and AACR-II		3. Organization & Management of Non-Book Material
3.	Non-Book Materials	4	Continuing Resources (Serials and Integrating resources)
	1. Description of Non-Book Material		1. Definition and types of Continuing resources, types of Serials based on frequencies

	2.	Problems in the Cataloguing of Non-Book Material		2.	Problems of serial publication during cataloguing
	3.	Sources of Information of Non-Book Material		3.	Rules for the description of Continuation Resources
5.	Cartographic Materials		6	Sound and Video Recording	
	1.	Definition and Types of Cartographic Material, General Rules		1.	Definition of the related term, motion pictures, music, audio, and video recordings
	2.	Definition and Types of Maps, and Rules for the Description of Map		2.	Rules for the cataloguing of sound recording
	3.	Definition and Rules for the Description of Globe and Atlas		3.	Rules for the cataloguing of video recording
7.	Non-Book Materials		8	Three Dimensional Objects	
	1.	Rules for the cataloguing of manuscripts		1.	Dimensional Artefacts and Realia, sources of Information
	2.	Rules for the cataloguing of Microforms,		2.	General rules for the description of three-dimensional objects
	3.	Rules for the cataloguing of electronic resources		3.	Lecture 2 continue
Mid Semester Examination					
9	Cataloguing of Pakistani Names		10	Standardization in Cataloguing	
	1.	Structure of Pakistani Names		1.	ISBN, Structure, and Importance
	2.	Problems of Pakistani Names		2.	ISBD's latest consolidated edition
	3.	Rules for Cataloguing of Pakistani Names		3.	Lecture 2 continues (ISBD latest consolidated edition)
11	Understanding MARC 21 Bibliographic Records		12	Understanding MARC 21 Bibliographic Records	
	1.	(Introduction, Parts of Marc Record, Types of MARC filed, components of MACR field)		1.	5XX Note fields
	2.	2XX fields, Title and title-related fields and Edition fields		2.	Subject headings, 6XX and Series, 4XX and 8XX)

	3.	260=Imprint field and 3XX=Physical description		3.	Main entries: 1XX, Added entries: 7XX, 240, Subject headings: 600, 610, 611, 630. Linking entries: 780, 785
13	Understanding MARC Bibliographic Records		21	14	Resources Description and Access (RDA)
	1.	0XX fields, 01X-09X, Fixed fields 008, Local holdings, Local systems		1.	Functional Requirements for Bibliographic Records (FRBR)
	2.	Rules for Assigning Subject Heading		2.	RDA Introduction, why is RDA created,
	3.	Rules for the cataloguing of Pakistani names		3.	Goals of RDA, Structure of RDA, Goa
15.	Resources Description and Access (RDA)		16	Bibliographic Framework Initiative	
	1.	FRBR and FRAD Terminologies		1.	Introduction, Features
	2.	Features of RDA		2.	BIBFRAME model
	3.	RDA Core Elements		3.	BIBFRAME VS MARC
Final Semester Examination					

Recommended Readings

1. Maxwell, R.L. (2019). Maxwell's Handbook for AACR2: Explaining and Illustrating the Anglo-American Cataloguing Rules through the 2003 Update. Chicago: ALA Editions.
2. Intner, S.S., Weihs, J., & Polutta, D. (2020). Cataloguing Correctly for Kids: An Introduction to the Tools (6th Ed.). Chicago: ALA Editions.
3. Coyle, K. (2018). Understanding the Semantic Web: Bibliographic Data and Metadata. Santa Barbara, CA: Libraries Unlimited.
4. Taylor, A.G. (Ed.). (2021). Resource Description and Access (RDA): Cataloging Rules for the 20th Century. New York: Neal-Schuman Publishers.

Course Objectives	
- Understand the functions and types of notes in Dewey Decimal Classification (DDC), including bracketed numbers and their use. - Gain proficiency in using Standard Subdivisions (SS) and tables in DDC for classifying materials effectively. - Explore various classification systems like Colon Classification (CC), Library of Congress Classification System (LCC), and Universal Decimal Classification (UDC), understanding their main classes, features, and notational systems. - Compare and contrast different library classification systems, including DDC, LCC, and UDC, to understand their strengths, weaknesses, and applications.	

No.	Course Learning Outcome
1	Classify library collection using classification schemes such as DDC.
2	Demonstrate an appreciation for the importance of standardized classification systems by consistently adhering to established protocols during cataloging exercises.
3	Demonstrate the application of subject headings and understand the nature of subject heading lists.

COURSE BREAKDOWN WEEK WISE

W	Description/Lecturers	W	Description/Lecturers
1.	Notes/Instructions in DDC	2.	Bracketed Numbers
	1. Functions of Notes, Types of Notes		1. Numbers in Squared Brackets
	2. Notes that Describe What Is Found in a Class		2. Types of Squared Brackets Numbers
	3. Notes that Describe What Is Found in a Class		3. Number in Parenthesis and Cantered Entries
3.	Table 2 (Geographic Areas, Historical Periods, Biography)	4.	Table 1: Standard Subdivisions (SS)
	1. Introduction, Definition		1. Introduction of SS and Summary
	2. Types of Number Building		2. Features/characteristics of SS
	3. Number Building in Schedules		3. Use of SS with main classes, divisions, and sections Numbers
5.	Table 2 (Geographic Areas, Historical Periods, Biography)	6.	Table 4 (Subdivisions of Individual Languages and Language Families)

	1 .	Introduction, summary of table 2		1.	Introduction,
	2 .	Use of Table 2		2.	Summary of Table
	3 .	Introduction of Table 3 (Subdivisions for Individual Literature)		3.	Use of Table 4
7.	Table 5 (Ethnic and National Groups)		8.	Table 6 (Languages)	
	1 .	Introduction of Table 5		1.	Introduction and Summary of Table 6
	2 .	Summary of Table 5		2.	General Use of Table 6
	3 .	Use of Table 5		3.	Use of Table 4 with Table 6 (Bilingual Dictionary)
Mid Semester Examination					
9.	Colon Classification (CC)		10.	Colon Classification (CC)	
	1 .	Introduction, Main Classis		1.	Biography of S R Ranganathan
	2 .	Feature of CC		2.	Biography of S R Ranganathan (Continued)
	3 .	Basic, Compound and Complex Subjects		3.	Phase Relation
11.	Colon Classification (CC)		12.	Library of Congress Classification System (LSS)	
	1 .	Postulates of Fundamental Categories		1.	Introduction, History, Main Classis
	2 .	Three Plan of Work		2.	Features of LCC
	3 .	Eight Step Method		3.	Library of Congress
13.	Universal Decimal Classification (UDC)		14.	The online version of Classification System	
	1 .	Historical Perspective of UDC		1.	Web Dewey, Introduction

	2 .	Version of UDC		2.	Dewey Browser and Practice
	3 .	Main Classis and Features		3.	UDC Master Reference File
15.	Notations system of Classification systems		16.	Comparison of Various Library Classification	
	1 .	Notational System of UDC		1.	DDC VS LCC
	2 .	Notational System of CC		2.	DDC VS UDC
	3 .	Notational System of LCC		3.	UDC VS LCC
Final Semester Examination					

Recommended Readings

1. Dahlberg, I., & Jansson, A. (Eds.). (2021). Library Classification Systems Revisited: Beyond the Foundations of the Dewey Decimal and Library of Congress Classifications. Berlin: Springer.
2. Ranganathan, S.R. (2019). Colon Classification (8th Ed.). New Delhi: Ess Ess Publications.
3. Begum, Z., & Islam, M.S. (2020). Library Classification and Cataloguing: Theory and Practice. Dhaka: University Press Limited.
4. Smiraglia, R.P. (Ed.). (2022). Introduction to Library Classification: Theories, Practices, and Trends. Chicago: ALA Editions.

MARKETING OF LIBRARY AND INFORMATION SERVICES (3 Credit Hours)

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

- Understand theoretical and practical aspects of marketing concepts to libraries and information centers
- Develop skills in preparing marketing plans for library and information services
- Apply technology tools and techniques to meet users' information need

Course Objectives

- To equip students with the concept of Marketing necessary to over a range of skills and knowledge areas critical for effectively promoting library services and resources.
- To create and implement effective marketing strategies that promote library services and products, ultimately increasing usage and patron satisfaction.
- To empower the students to develop strategies for maintaining and improving patron relationships.

Course Learning Outcomes

4. Articulate the specific skills, knowledge, and competencies that students are expected to achieve upon successful completion of the course.
5. Demonstrate proficiency in conducting market research to identify target audiences and their needs.
6. Develop skills to formulate effective marketing strategies tailored to library services and products.
7. Use digital marketing tools and platforms to enhance the library's online presence.

Week	Lectures	Topics
1–2	Lecture 1–3	Fundamentals of Marketing: What is marketing? Meaning and definitions; Vision and vision statement; Purpose of vision statement
	Lecture 4–6	Mission statement; Purpose and examples; Difference and comparison between vision and mission
3–4	Lecture 7–9	Marketing Information Products and Services: Information marketing; Information products and categories; Need for marketing library products and services
	Lecture 10–12	Information as a Product: Qualities; Identifying and developing library services and products; Pre-requisite for marketing
5–6	Lecture 13–15	Market Research and Analysis: Identifying target audiences; Needs assessment and user surveys; Methods of data collection (surveys, focus groups, interviews); Analyzing and interpreting data
	Lecture 16–18	Ingredients of marketing (Marketing mix or 7 Ps); Pricing and its objectives, types, definitions, importance
7–8	Lecture 19–21	Building Customer Relationship: Marketing communication; Marketing communication tools and mix
	Week 7	S. R. Ranganathan's concept of marketing information products and services through Five Laws of Library Science

	Week 8	Mid Term Examination
9–10	Lecture 21–24	Digital Marketing for Libraries: Digital marketing fundamentals; Importance of digital presence; Overview of digital marketing channels
	Lecture 25–27	Social Media as a Promotion Tool: What is social media? Profiles of major social media sites; Social media marketing; Reasons for social media marketing
11–12	Lecture 28–30	Website and SEO: Designing user-friendly library website; SEO techniques; Creating engaging content
	Lecture 31–33	Email Marketing: Building and maintaining an email list; Crafting effective email campaigns
13–14	Lecture 34–36	Ethical and Legal Considerations: Ethical issues in marketing; Ethical principles and addressing dilemmas
	Lecture 37–40	Legal Compliance: Understanding relevant laws and regulations; Ensuring compliance with copyright, privacy, and other legal issues
15–16	Lecture 41–43	Case Studies and Best Practices: Successful marketing campaigns; Analyzing case studies; Lessons learned
	Lecture 44–47	Best Practices in Library Marketing: Identifying and implementing best practices; Innovation and trends
17	Lecture 48–50	Practical Applications: Developing a marketing plan for a real or hypothetical library; Creating promotional materials and campaigns
18	–	Final Term Examination

Recommended Readings:

1. Dinesh K. Gupta, Christie Koontz, & Angels Massisimo (Eds.). (2013). *Marketing Library and Information Services II: A Global Outlook*. De Gruyter Saur.
2. Potter, N. (2012). *The Library Marketing Toolkit*. Facet Publishing.
3. Eden, B. L. (Ed.). (2016). *Marketing and Outreach for the Academic Library: New Approaches and Initiatives*. Rowman & Littlefield.
4. Wood, E. J., Priest, B. J., & Wallace, B. A. (1997). *Strategic Marketing for Libraries: A Handbook*. Greenwood Press.
5. Heinze, J. S. (2011). Marketing the library. *Library Journal*, 136(18), 26-29.
6. Small, R. V., Arnone, M. P., & others. (1999). *User-Centered Library Websites: Usability Evaluation Methods*. Neal-Schuman Publishers.
7. Lewis, A., & Voeller, S. (2012). Social media marketing for libraries. *Computers in Libraries*, 32(5), 20-24.
8. Kingsnorth, S. (2016). *The Digital Marketing Handbook: Deliver Powerful Digital Campaigns*. Kogan Page.
9. Jones, R., & Hargrove, S. (2019). *Content Marketing for Libraries*. ABC-CLIO.
10. Riley-Huff, D. E. (2010). Customer relationship management in libraries: It's time to go social. *Computers in Libraries*, 30(6), 10-14.
11. Lippincott, J. K. (Ed.). (2016). *the Engaged Library: High-Impact Educational Practices in Academic Libraries*. Association of College and Research Libraries.
12. Fowler, R. B., & others. (2013). *Library Branding: How to Create and Market Your Library's Brand*. Information Today, Inc.
13. Kotler, P., & Keller, K. L. (2016). *Marketing management* (15th Ed.). Pearson.

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

- Describe the evolution of methods and technologies used to create, store, organize, and preserve records.
- Describe the components of archival programs (appraisal, acquisition/disposition, inventory, arrangement, description, preservation, access, use and outreach)
- Describe legal and ethical issues surrounding archives and records administration.

Course Objectives

- Understand the principles and concepts of archives and record management, including the importance of preserving and managing records for organizational accountability, transparency, and historical significance.
- Develop practical skills in organizing, classifying, and indexing records to ensure efficient retrieval and use, utilizing both traditional and digital methods.
- Explore various archival standards and best practices, such as the principles outlined by the International Council on Archives (ICA), to ensure compliance and consistency in record management processes.

Course Learning Outcomes

- Understand the principles and practices of archives and records management, including the role and importance of preserving and maintaining records within organizations and society.
- Identify and apply various methods and techniques for organizing, classifying, and describing records, including archival arrangement and description standards such as DACS (Describing Archives: A Content Standard).
- Evaluate different types of records systems and technologies used in contemporary archives and records management, including electronic records management systems (ERMS) and digital preservation strategies.
- Demonstrate proficiency in creating and implementing records retention schedules, disposal procedures, and policies in compliance with legal and regulatory requirements, as well as ethical considerations.

Detailed Course Contents/Weekly Breakup

Week		Description/Lectures	Week		Description/Lectures
1.		Introduction to Archives and Public Records	2.		Introduction to Archives and Public Records. Continue
	I	Introduction to archives		i	Archival institutions

	I i	history, importance, and role of public records		ii	legal frameworks
	I ii	Types of archives		iii	Continue
3.	Theory and Concepts of Archives and Record Management		4.	Strategies, Control, Accessibility, Disposal, and Storage	
	I	Basic theories and principles of archives and records management		i	Strategies for managing records
	ii	Lifecycle of records		ii	Access controls
	ii i	Appraisal, arrangement, and description		iii	Security measures
5.	Strategies, Control, Accessibility, Disposal, and Storage. Continue		6.	Electronic Records	
	I	Disposal methods		i	Challenges in managing electronic archives
	I i	Storage options		ii	Opportunities in managing electronic archives
	I ii	Preservation planning		iii	Digital preservation techniques
7.	Electronic Records		8.	Archival Centers in Pakistan	
	i	Metadata standards		i	Overview of archival centers in Pakistan, their roles, and contributions
	ii	Continue		ii	National Archives of Pakistan

	I	Continue		iii	Khyber Pakhtunkhwa Archives
	ii				
9.	Archival Centers in Pakistan.		10.	Preservation and Conservation of Archival Materials	
	Continue				
	i	Punjab Archives		i	Preservation methods
	ii	Sindh Archives		ii	Environmental control, handling guidelines
	ii	Baluchistan Archives		iii	Conservation techniques
	i				
11.	Preservation and Conservation of Archival Materials		12.	Perspective of Electronic Preservation	
	i	Restoration		i	Future trends in electronic preservation
	ii	Disaster recovery		ii	Challenges in electronic preservation
	ii	Continue		iii	Solutions in electronic preservation
	i				
13.	International council on Archives		14.	International council on Archives.	
				Continue	
	i	Introduction		i	Aims and Objectives of ICA
	ii	Organization of ICA		ii	Advocacy of ICA
	ii	Vision, mission of ICA		iii	Continue
	i				
15.	Weeding/Write off		16.	Listing & Cataloguing/Storage	
	i	Introduction to weeding		i	Advantages of cataloguing and listing
	ii	Concept of write off		ii	General guidelines for archival storage

	ii	Continue		iii	Continue
	i				

Recommended Readings:

1. Boles, F. (2005). *Selecting and appraising archives and manuscripts*. Chicago: Society of American Archivists.
2. Dearstyne, B. W. (2008). *Leading and managing archives and records programs*. New York: Neal-Schuman.
3. Hughes, C. (2005). *Modern records management: Key skills and core competencies*. Oxford: Chandos.
4. Hunter, G. S. (2003). *Developing and maintaining practical archives*. New York: Neal-Schuman.
5. Hunter, G. S. (2009). *Records management: A how-to-do-it manual*. New York: Neal Schuman.
6. Read, J., Ginn, M. L., Jones, V. A., & Rankin, D. S. (2007). *Records management*. Cincinnati, Oh: South-Western Publishing.
7. Roe, K. D. (2005). *Arranging and describing archives and manuscripts*. Chicago: Society of American Archivists.
8. Smith, K. (2007). *Planning and implementing electronic records management*. London: Facet.
9. Smith, K. (2007). *Public sector records management: A practical guide*. Aldershot, Hants, England: Ashgate

Course Objectives

1. To provide students with a comprehensive understanding of traditional and electronic information sources.
2. To equip students with the knowledge and skills necessary to deliver effective library and information services in digital environments.

Course Learning Outcomes (CLOs)

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

1. **Identify and differentiate** among various types of information sources with special emphasis on electronic resources.
2. **Evaluate and select** appropriate sources to meet diverse information needs.
3. **Deliver traditional and electronic information services**, including reference, CAS, and SDI.
4. **Apply ethical, technical, and professional standards** in managing electronic resources and services.

Week	Theme	Topics	Focus
Part I: Information Sources			
1	Introduction	Definition, scope, importance of sources & services	Setting foundation
2	Print Sources	Books, reference works, theses/dissertations	Traditional basics
3	Serials & Grey Literature	Journals, magazines, reports, conference proceedings	Semi-formal scholarly sources
4	Electronic Sources (I)	E-books, e-journals, online newspapers	Core e-resources
5	Electronic Sources (II)	Databases, indexing/abstracting services, subject gateways	Research-focused
6	Open Access Resources	OERs, repositories, preprints, OA journals	Affordable access
7	Evaluation of Sources	Authority, accuracy, coverage, usability, cost	Print & e-resources
8	Midterm Exam & Review	Covers Weeks 1–7	Assessment checkpoint
Part II: Information Services			

9	Reference Services	Traditional reference vs. digital/virtual reference	Print & online
10	Reference Interview	Techniques in physical and online environments (chat, email, AI)	User-centered
11	Current Awareness Services (CAS)	Tools: alerts, RSS feeds, digital newsletters	Electronic CAS
12	Selective Dissemination of Information (SDI)	Personalized electronic alerts via databases & OPACs	User-specific
13	Information Literacy & Digital Literacy	Teaching users effective search & evaluation of e-resources	Training services
14	Electronic Discovery Tools	OPACs, discovery layers, federated search engines	Access tools
15	Emerging Electronic Services	Mobile apps, chatbots, institutional repositories, AI tools	Future-focused
16	Legal & Ethical Issues	Copyright, licensing, plagiarism, privacy in digital services	LIS ethics
17	Future Trends & Course Wrap-up	Smart libraries, big data, cloud-based services	Final review

Reading List

1. Cassell, K. A., & Hiremath, U. (2018). *Reference and information services: An introduction* (4th ed.). American Library Association.
2. Chowdhury, G. G. (2010). *Introduction to modern information retrieval* (3rd ed.). Facet Publishing.
3. Lankes, R. D. (2016). *The new librarianship field guide*. MIT Press.
4. Rowley, J., & Hartley, R. (2018). *Organizing knowledge: An introduction to managing access to information* (5th ed.). Routledge.
5. Saunders, L. (2020). *Information sources and services: An introduction*. Libraries Unlimited.
6. Singh, J., & Krishna, K. M. (2021). *Library and information science in the age of AI and big data*. Ess Ess Publications.
7. Taylor, A. G., & Joudrey, D. N. (2017). *The organization of information* (4th ed.). Libraries Unlimited.
8. Tenopir, C., & King, D. W. (2009). *Communication patterns of engineers*. Wiley. (Classic on information behavior, still relevant).
9. Walton, G., & Cleland, J. (Eds.). (2017). *Information literacy: Key to an inclusive society*. Springer.
10. Xia, Z. D., & Zhang, Q. (2022). *Library services in the digital age*. Springer.
11. Yu, H. (2020). *Social media and library services*. Chandos Publishing.
12. Zickuhr, K., Rainie, L., & Purcell, K. (2013). *Library services in the digital age*. Pew Research Center.

EMERGING TECHNOLOGIES APPLICATION IN INFORMATION ORGANIZATION

3 Credit Hours

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

- Learn emerging trends and technologies and their applications in libraries/information centers
- Evaluate the impact of emerging technologies, such as artificial intelligence, block chain, and the Internet of things etc., on information organizations and their services
- Apply IT tools and techniques to support information management and services.

No.	Learning Objective
1	Identify and describe key emerging technologies relevant to library services, including digital libraries, data analytics, and augmented reality.
2	Assess the potential impact of emerging technologies on traditional library services and articulate how these technologies can enhance access, engagement, and user experience.
3	Gain hands-on experience in implementing emerging technologies within library settings.
4	Demonstrate practical skills in deploying and managing technologies such as mobile apps, augmented reality, or data analytics tools.

No.	Learning Outcome
1	Identify, describe, and explain the fundamental concepts and functionalities of key emerging technologies relevant to library services (digital libraries, data analytics, augmented reality, etc.).
2	Evaluate the impact of emerging technologies on library services by assessing their potential to enhance access, engagement, and user experience.
3	Implement emerging technologies in library settings by demonstrating practical skills in deploying and managing tools such as mobile apps, augmented reality, or data analytics solutions.

Week	Lectures	Topics
1	1–3	Introduction to Emerging Technologies in Libraries: Overview of library technologies; Importance of adopting emerging technologies; Impact of technology on library services and users.
2	4–6	Concept and Evolution of Information Technologies: Meaning, definitions, and elements of information technology; Telecommunication; Data transmission and communication media.
3	7–9	Wireless Technology: Unguided/Wireless media – concepts, definitions, and types; Propagation and its types; Guided media and its types.
4	10–12	Internet and World-Based Technologies in Libraries: Internet evolution, definitions, and related concepts; Internet uses in libraries; WWW – concepts, definitions, and related terms.
5	13–15	Comparison of Internet and WWW: Comparative analysis; Website, web page, homepage, and web address; Uploading and downloading files.

6	16–18	Barcode Technologies in Libraries: Concepts and functions of barcoding and self-checkout systems; Uses of barcode technology in libraries; Mechanisms and requirements.
7	19–21	Reprographic Technology in Libraries: Meaning and definitions; Functions of reprographic departments; Types of reprographic services and facilities.
8	—	MS Office: Hands-on Practices; Midterm Examination
9	22–24	Library Security Technologies: Historical perspective; Types of security (conventional and modern); RFID – concept, definition, and mechanism.
10	25–27	Big Data Analytics in Libraries: Big Data and libraries; Big Data management in libraries.
11	28–30	Artificial Intelligence and Libraries: Concept and definition of AI; AI in library services and operations; Current status in Pakistan.
12	31–33	Internet of Things (IoT) in Libraries: Concepts and applications; IoT in libraries; Current status in Pakistan.
13	34–36	Cloud Computing and Libraries: Meaning, concept, and definitions; Applications in libraries; Status of cloud computing in Pakistan.
14–16	37–38	Future Trends and Continuous Learning: Emerging technologies on the horizon; Ethical considerations and responsible innovation.
17	—	Final Examination

Recommended Readings

1. Leonhardt, T. (2019). Library Technology and Digital Resources: An Introduction for Support Staff. Rowman & Littlefield.
2. Iglesias, E. (2018). Emerging Library Technologies: It's Not Just for Geeks. Chandos Publishing.
3. Showers, B. (2015). Library Analytics and Metrics: Using Data to Drive Decisions and Services. Facet Publishing.
4. Chowdhry, B. S. (2019). Augmented Reality for the Industrial Internet of Things. CRC Press.
5. McClure, R., Purdy, J. P., & DeVoss, D. N. (2013). The New Digital Scholar: Exploring and Enriching the Research and Writing Practices of NextGen Students. Information Today, Inc.

PROJECT MANAGEMENT 3 Credit Hours

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

- Demonstrate an understanding of core project management concepts, tools, and techniques in the context of library and information science.
- Design, implement, and evaluate library-related projects, such as digital archives, collection development, and library renovation, using structured project management methodologies.
- Effectively manage time, budget, personnel, and technology to ensure the successful execution of library projects while adhering to institutional policies and user needs.
- Identify potential risks, challenges, and ethical considerations in library project management and develop strategies for long-term sustainability and continuous improvement.

No.	Objective
1	To introduce students to the basic concepts and phases of project management.
2	To help students understand and practice project planning for simple library-related projects.

No.	Learning Outcome
1	Define project management and explain its importance in library and information settings.
2	Identify and describe the phases of a project life cycle.
3	Prepare simple project plans for small-scale library projects (e.g., automation, book exhibition, and digitization).
4	Understand basic project documents (e.g., PC-1) and grant proposals in a simplified form.
5	Demonstrate awareness of project monitoring and evaluation at a basic level.

Week	Topics
1	Introduction to Project Management: Meaning, definitions, examples from library projects.
2	Project Life Cycle: Initiation, planning, execution, monitoring, closing (with library examples).
3	Project Teams: Roles, responsibilities, teamwork in library projects.
4	Basic Tools: Simple Gantt charts, timelines, checklists.
5	Project Context: Stakeholders in library projects (faculty, students, administration).
6	Project Scope: Defining project boundaries (e.g., digitization scope, automation scope).
7	Project Time & Cost Basics: Scheduling and estimating costs (basic examples).
8	Midterm Examination
9	Project Quality: What makes a “good” project in libraries?
10	Project Communication: Simple communication plans in library projects.
11	Project Risk: Identifying small risks in library projects (e.g., technical failure, budget limits).

12	Introduction to PC-1 (basic overview, very simplified).
13	Writing a Simple Proposal (for a book exhibition, library orientation program, or digitization project).
14	Monitoring Basics: Tracking project progress in small library projects.
15	Evaluation Basics: Measuring success in library projects (e.g., user feedback).
16	Case Studies: Small library projects in Pakistan and abroad (basic examples).
17	Final Examination + Presentation of Student Mini-Projects (e.g., draft proposal).

Suggested Readings

1. Burke, R. (2013). *Fundamentals of project management* (5th Ed.). AMACOM.
2. Heagney, J. (2016). *Fundamentals of project management* (5th Ed.). AMACOM.
3. Lewis, J. P. (2020). *Project planning and management for libraries: A beginner's guide*. Chandos Publishing.
4. Pinto, J. K. (2019). *Essentials of project management* (4th Ed.). Pearson.
5. Schwalbe, K. (2018). *Information technology project management* (9th Ed.). Cengage Learning. (Selected chapters).
6. Wallace, D. P., & Van Fleet, C. (2012). *Knowledge into action: Research and evaluation in library and information science*. Libraries Unlimited.
7. Meredith, J. R., & Mantel, S. J. (2017). *Project management: A managerial approach* (10th Ed.). Wiley. (Introductory chapters only).
8. Lientz, B. P., & Rea, K. P. (2012). *Project management for the 21st century*. Routledge.



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

- Analyze how web technologies enhance library services, user engagement, and digital accessibility.
- Apply fundamental web development skills (HTML, CSS, JavaScript etc) to create user-friendly and responsive library websites.
- Integrate digital catalogs, databases, and interactive tools to improve library resource discovery and accessibility.
- Apply best practices for web accessibility WCAG (Web Content Accessibility Guidelines) and cyber security measures to protect library users and data.

Course Objectives

1. To introduce students to the fundamental concepts of web development with a focus on library and information services.
2. To develop students' practical skills in creating and managing simple library-oriented web pages and online services.

Course Learning Outcomes

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

- Understand the basic structure and functions of the World Wide Web.
- Design and develop simple web pages using **HTML and CSS**.
- Apply **basic JavaScript** for interactive features.
- Use open-source tools for creating and maintaining **library websites**.
- Recognize the importance of **user-centered design** and **accessibility** in library web services.
- Build a basic prototype of a **library web portal** showcasing electronic resources and services.

Course Contents (17 Weeks)

Week	Topic
1	Introduction to the Web: Internet, World Wide Web, websites, web servers, browsers – relevance for libraries
2	Basics of Web Development: HTML structure, tags, attributes, creating the first library webpage
3	Formatting Library Content with HTML: headings, paragraphs, lists, links, images, tables

4	Introduction to CSS: inline, internal, and external styling – applying styles to library pages
5	Page Layouts for Library Websites: divs, spans, CSS positioning, grid/flexbox basics
6	Creating Navigation for Library Sites: menus, hyperlinks, internal/external linking
7	Adding Multimedia to Library Websites: embedding videos, audio, images, and documents
8	Introduction to JavaScript: adding interactivity to web pages
9	Practical JavaScript Applications: form validation for library membership, simple alerts
10	Responsive Web Design: making library websites mobile-friendly
11	Introduction to Web Accessibility: standards, WCAG, making library sites inclusive
12	Content Management Systems (CMS): introduction to WordPress/Drupal for library websites
13	Open Source Tools for Library Websites: Omeka, Greenstone, DSpace (brief overview)
14	Creating a Simple Library Website: integrating resources and services
15	Electronic Services through Websites: online catalogs (OPAC), digital reference, chatbots, e-resources
16	Designing a Prototype Library Web Portal (Practical Project)
17	Student Presentations & Review of Course Concepts

Suggested Readings

1. Brown, J., & Huettig, C. (2021). *Web development for beginners: Learn HTML, CSS, and JavaScript step by step*. Apress.
2. Gibbons, S. (2020). *Designing library websites: A guide for librarians*. Rowman & Littlefield.
3. Krug, S. (2014). *Don't make me think, revisited: A common sense approach to web usability*. New Riders.
4. Kroski, E. (2017). *The whole digital library handbook*. American Library Association.
5. Nielsen, J. (2012). *Usability engineering*. Morgan Kaufmann.
6. Reitz, J. M. (2022). *Dictionary for library and information science* (Updated ed.). Libraries Unlimited. (Selected entries on web and digital services).
7. Spence, R. (2021). *Beginning web development for librarians*. Neal-Schuman.
8. Tidal, J. (2016). *Digital services in libraries: A practical guide*. Chandos Publishing.
9. W3C. (2018). *Introduction to web accessibility*. Retrieved from <https://www.w3.org/WAI/fundamentals/accessibility-intro/>
10. Yu, H., & Breivold, S. (2008). *Web 2.0: How to for librarians*. Neal-Schuman.

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

- Understand the concepts and philosophy of online information retrieval
- Demonstrate proficiency in using advanced search techniques, Boolean operators, and filtering tools to retrieve accurate and relevant information from online databases, search engines, and digital repositories.
- Assess the reliability, validity, and bias of online sources using established frameworks and criteria for digital literacy.

Course Objectives

1. To introduce students to the fundamental concepts, models, and processes of online information retrieval.
2. To provide hands-on training in using online sources, services, databases, and digital repositories for effective information retrieval.

Course Learning Outcomes

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

- Explain the **basic principles** of information retrieval (IR) and online searching.
- Identify and evaluate different **information sources and services** available online.
- Use a variety of **online databases, search engines, and repositories** effectively.
- Demonstrate practical skills in retrieving scholarly information from **digital libraries, institutional repositories, and OPACs**.
- Understand challenges such as **search strategies, relevance, evaluation of information, and ethical use**.
- Apply their IR skills to **academic, research, and library contexts**.

Course Contents (17 Weeks)

Week	Lecture Topics
1	Introduction to Information Retrieval: concepts, history, importance in LIS
2	Information Retrieval Systems: components, functions, and models (Boolean, vector space, probabilistic)
3	Online vs. Traditional Retrieval: differences, advantages, limitations
4	Search Strategies I: keywords, Boolean operators, truncation, phrase searching
5	Search Strategies II: advanced search techniques, filters, citation chaining
6	Online Information Sources: primary, secondary, tertiary sources in digital environments
7	Online Information Services: reference services, digital reference, virtual libraries

8	Bibliographic Databases: structure, examples (Scopus, Web of Science, LISA, LISTA)
9	Full-text Databases: ProQuest, EBSCOhost, JSTOR, ScienceDirect
10	Subject-Specific Databases: PubMed, ERIC, IEEE Xplore, Emerald Insight
11	Open Access Resources: DOAJ, BASE, OpenDOAR, CORE
12	Institutional Repositories & Digital Libraries: DSpace, Greenstone, OCLC, HathiTrust
13	OPACs and Discovery Tools: online catalogs, WorldCat, federated search systems
14	Search Engines and Web-based IR: Google Scholar, semantic search, AI-powered retrieval
15	Evaluation of Online Information Retrieval: precision, recall, relevance, usability
16	Ethical and Legal Issues: copyright, plagiarism, access rights, information integrity
17	Future of Online IR: AI, big data, machine learning in IR + Course Review

Suggested Readings

1. Baeza-Yates, R., & Ribeiro-Neto, B. (2011). *Modern information retrieval: The concepts and technology behind search* (2nd Ed.). Addison-Wesley.
2. Chowdhury, G. G. (2010). *Introduction to modern information retrieval* (3rd Ed.). Facet Publishing.
3. Lancaster, F. W., & Warner, A. J. (2007). *Information retrieval today*. Information Resources Press.
4. Manning, C. D., Raghavan, P., & Schütze, H. (2008). *Introduction to information retrieval*. Cambridge University Press.
5. Rowley, J., & Hartley, R. (2017). *Organizing knowledge: An introduction to managing access to information* (4th Ed.). Routledge.
6. Singh, J., & Dabas, K. (2021). *Information retrieval: Concepts and applications*. Ess Ess Publications.
7. Tenopir, C. (2020). *Online databases and information retrieval: A guide for library and information professionals*. Libraries Unlimited.
8. Witten, I. H., Bainbridge, D., & Nichols, D. M. (2009). *How to build a digital library* (2nd Ed.). Morgan Kaufmann.
9. Yu, L. (2021). *Introduction to information services*. Springer.
10. Zhang, Y., & Zhao, Y. (2020). *Digital libraries and information access: Research perspectives*. Springer.

ORGANIZATION OF INFORMATION (03 Credit Hours)

Course Objectives - Understand the historical development and evolution of information organization, including key milestones, figures, and technological advancements. - Gain knowledge of the various systems, tools, and standards used for organizing information, including cataloguing codes, metadata standards, and encoding formats. - Develop skills in the practical aspects of information organization processes, such as creating surrogate/metadata records, implementing authority control, and facilitating subject access. - Explore the challenges and issues related to information organization, both globally and within the context of Pakistan, and develop strategies to address these challenges effectively.

Course Learning Objectives
Learn the concepts of organization of both print and electronic information.
Understand theories and trends of cataloging and classification.
Familiarize with the contributions of Pakistani LIS professionals towards organization of information.

Detailed Course Contents/Weekly Breakup

W		Description/Lecturers	W		Description/Lecturers
1		Historical Development of Organization of Information	2		Systems for Organization of Information
	I	Overview of the historical development of information organization		I	Environments for information organization: libraries, archives, museums
	II	Milestones and key figures in the evolution of information organization		II	Storage and retrieval tools: card catalogues, online catalogues, databases
	III	Impact of technological advancements on information organization		III	Encoding standards for information organization: MARC, Dublin Core
3		Cataloguing Codes and Modern Aspects (RDA)	4		Information Organization Process
	I	Overview of cataloguing codes: AACR2, RDA		I	Surrogate/metadata records: Description and Access

	II	Principles and practices of Resource Description and Access (RDA)		II	Authority control in information organization
	III	Implementation and challenges of RDA in modern cataloguing practices		III	Importance and functions of metadata in Information organization
5.	Subject Access		6	Introduction to JavaScript	
	I	Analysis in subject access: Subject analysis, controlled vocabularies		I	Organization and Administration
	II	Verbal subject approaches: Subject headings, keyword indexing		II	Management issues in information organization: Budgeting, staffing
	III	Classification systems for subject access: Dewey Decimal Classification, Library of Congress Classification		III	Challenges and strategies for effective organization and administration
7.	Problems of Information Organization in Pakistan		8	Metadata Standards	
	I	Overview of information organization landscape in Pakistan		I	Importance of metadata standards in information organization
	II	Challenges and barriers to effective information organization in Pakistan		II	Qualities of good metadata standards: Interoperability, granularity,
	III	Strategies and initiatives to address information organization issues		III	Elements of metadata standards: Descriptive, structural, administrative
Mid Semester Examination					
9	Metadata Encoding and Formats		10	Controlled Vocabularies and Thesauri	
	I	Encoding standards for metadata: XML, RDF, JSON		I	Role of controlled vocabularies in information organization
	II	Metadata formats and schemas: MODS, METS, Dublin Core		II	Principles and construction of thesauri

	III	Implementation and application of metadata encoding and formats		III	Application and management of controlled vocabularies in information
11	Semantic Web and Linked Data		12	Taxonomies and Ontologies	
	I	Overview of the Semantic Web and Linked Data Concepts		1.	Introduction to taxonomies and ontologies
	II	RDF triples and linked data principles		II	Differences between taxonomies and ontologies
	III	Implementing linked data in information organization systems		III	Designing and using taxonomies and ontologies in information organization
13	Folksonomies and Social Tagging		14	Information Retrieval Techniques	
	I	Definition and characteristics of folksonomies		I	Overview of information retrieval (IR) techniques
	II	Role of social tagging in information organization		II	Retrieval models: Boolean, Vector Space Model, Probabilistic Model
	III	Challenges and benefits of incorporating folksonomies in information		III	Evaluation of information retrieval systems
15.	Natural Language Processing in Information Retrieval		16	Future Trends in Information Organization	
	I	Introduction to natural language processing (NLP) techniques		I	Emerging trends and technologies in information organization
	II	Applications of NLP in information retrieval		II	Impact of artificial intelligence and machine learning on information
	III	Challenges and advancements in NLP for information retrieval		III	Ethical considerations in information organization
Final Semester Examination					

Recommended Readings

1. Taylor, A. G., & Joudrey, D. N. (2009). *The Organization of Information* (3rd Ed.). Libraries Unlimited.
2. Dahlberg, I., & Nilsson, N. (2018). *Metadata and Organizing Educational Resources on the Internet: Principles, Methods and Applications*. Chandos Publishing.
3. Baca, M. (Ed.). (2016). *Introduction to Metadata* (3rd Ed.). Getty Publications.
4. Lancaster, F. W. (2003). *Indexing and Abstracting in Theory and Practice* (3rd Ed.). Libraries Unlimited.
5. Salton, G., Wong, A., & Yang, C. S. (1975). A Vector Space Model for Automatic Indexing. *Communications of the ACM*, 18(11), 613-620.

INFORMATION ETHICS, POLICY AND LAWS

3 Credit Hours

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

- Understand the key ethical principles in library and information science, such as privacy, intellectual property, access to information, and the digital divide, to real-world scenarios
- Describe and address ethical challenges in information management, including digital issues, censorship, and balancing user rights with legal responsibilities, while advocating for policies promoting equitable access and privacy protection.
- Demonstrate and analyze the impact of laws and policies on information access, focusing on copyright, data protection, and freedom of information.

Course Objectives

- To introduce students to the fundamental ethical principles guiding library and information science, with emphasis on privacy, intellectual property, freedom of information, and equitable access.
- To develop students' ability to critically analyze and address ethical dilemmas and policy issues in the context of emerging digital technologies and global information environments.

Course Learning Objectives (CLOs)

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

1. Understand the key ethical principles in library and information science, such as privacy, intellectual property, access to information, and the digital divide, and apply them to real-world scenarios.
2. Describe and address ethical challenges in information management, including digital issues, censorship, and balancing user rights with legal responsibilities, while advocating for policies promoting equitable access and privacy protection.
3. Demonstrate and analyze the impact of laws and policies on information access, focusing on copyright, data protection, and freedom of information.

Course Contents (17 Lectures)

Week/Lecture	Topics
Week 1	Lecture 1: Introduction to Information Ethics, Policy, and Law – Concepts, Scope, and Importance
Week 2	Lecture 2: Core Ethical Principles in Library and Information Science (privacy, freedom, equity, intellectual property)
Week 3	Lecture 3: Professional Codes of Ethics in Librarianship (IFLA, ALA, Pakistan Library Association, etc.)
Week 4	Lecture 4: Privacy and Confidentiality in Libraries – User Data and Digital Tracking
Week 5	Lecture 5: Intellectual Property Rights – Concepts of Copyright, Patents, Trademarks in the Information Context
Week 6	Lecture 6: Copyright Laws and Libraries – Fair Use, Licensing, and Exceptions for Education/Research
Week 7	Lecture 7: Open Access, Open Data, Creative Commons Licensing and Ethical Use of Information
Week 8	Lecture 8: Censorship, Freedom of Expression, and Freedom of Information (FOI) Laws
Week 9	Lecture 9: Ethical and Legal Challenges in the Digital Age (piracy, hacking, plagiarism, AI use)
Week 10	Lecture 10: Data Protection and Privacy Laws – Global (GDPR) and Pakistani Context
Week 11	Lecture 11: Information Policy Development – National and Institutional Perspectives
Week 12	Lecture 12: The Digital Divide – Ethical Issues of Access and Equity in Developing Countries
Week 13	Lecture 13: Cyber Laws in Pakistan and their Implications for Libraries and Information Professionals
Week 14	Lecture 14: Case Studies in Information Ethics – Censorship, Copyright Conflicts, and Privacy Breaches
Week 15	Lecture 15: Professional Responsibilities of Librarians in Policy Advocacy and Ethical Leadership
Week 16	Lecture 16: Future Trends – AI Ethics, Big Data, Surveillance, and Emerging Policy Issues
Week 17	Lecture 17: Review and Final Discussion: Integrating Ethics, Policy, and Law in Library Practice

Suggested Readings

1. Britz, J. J., Hoffmann, A., Ponelis, S. R., & Zimmer, M. (Eds.). (2020). *Perspectives on information ethics*. Springer.
2. Froehlich, T. J. (2021). *Ethics for records and information management*. Facet Publishing.
3. Gorman, M. (2015). *Our enduring values revisited: Librarianship in an ever-changing world*. American Library Association.

4. Hauptman, R. (2002). *Ethical challenges in librarianship*. McFarland.
5. Jaeger, P. T., & Bertot, J. C. (2011). *Information policy in the digital age: Policy and information in the network society*. Routledge.
6. Smith, M. (2019). *Copyright compliance and libraries: Preserving intellectual freedom*. Rowman & Littlefield.
7. Sturges, P., & Gastinger, A. (2010). *Information ethics in the twenty-first century: Old problems, new challenges*. *Information Development*, 26(1), 55–63.
8. Wallace, K. (2019). *Privacy and freedom of information in 21st century libraries*. Rowman & Littlefield.
9. Zimmer, M. (2021). *Internet and ethics*. Oxford University Press.
10. Pakistan Telecommunication Authority. (2016). *Prevention of Electronic Crimes Act (PECA) 2016*. Government of Pakistan.

QUANTITATIVE RESEARCH

3 Credit Hours

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

- Know and articulate the concept, philosophy and terminology of quantitative research
- Identify and describe various methods for doing quantitative research
- Learn the procedure of survey research, topic identification, report writing and statistical tests.

Course Objective

To introduce students to the concepts, methodologies, and applications of quantitative research in library and information science, enabling them to design, conduct, and analyze empirical studies using quantitative methods.

Course Learning Objectives (CLOs)

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

1. Understand the fundamental principles and characteristics of quantitative research.
2. Identify appropriate quantitative research designs for different LIS research problems.
3. Formulate research questions and hypotheses relevant to library and information science.
4. Apply methods of data collection (surveys, questionnaires, experiments, and secondary data) effectively.
5. Analyze quantitative data using statistical tools and interpret results.
6. Prepare research reports and present quantitative findings in a scholarly manner.

Week-wise Course Contents

Week	Topics / Lectures
Week 1	Introduction to Research in LIS: Types of research; Qualitative vs. Quantitative research
Week 2	Philosophy and Characteristics of Quantitative Research
Week 3	Research Problems and Formulating Research Questions in LIS
Week 4	Hypotheses: Definition, Types, and Formulation

Week 5	Research Design in Quantitative Research (descriptive, correlational, causal, experimental)
Week 6	Population, Sampling, and Sampling Techniques in LIS Research
Week 7	Data Collection Methods: Surveys, Questionnaires, Observation, Secondary Data
Week 8	Measurement and Scaling: Reliability and Validity of Research Instruments
Week 9	Mid-term Review and Examination
Week 10	Introduction to Descriptive Statistics (mean, median, mode, SD, variance)
Week 11	Inferential Statistics: Correlation, Regression, and Hypothesis Testing
Week 12	Experimental Design and Causal Analysis in LIS
Week 13	Use of Software in Quantitative Research: SPSS/Excel basics
Week 14	Data Presentation: Tables, Graphs, Charts
Week 15	Writing the Methodology Section in LIS Research
Week 16	Reporting Results, Discussion, and Conclusions
Week 17	Final Presentations and Course Wrap-up

Suggested Readings (APA Style)

1. Babbie, E. (2021). *The practice of social research* (15th Ed.). Cengage Learning.
2. Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th Ed.). SAGE Publications.
3. Gay, L. R., Mills, G. E., & Airasian, P. (2020). *Educational research: Competencies for analysis and applications* (12th Ed.). Pearson.
4. Neuman, W. L. (2014). *Social research methods: Qualitative and quantitative approaches* (7th Ed.). Pearson.
5. Punch, K. F. (2013). *Introduction to social research: Quantitative and qualitative approaches* (3rd Ed.). SAGE Publications.
6. Trochim, W. M., Donnelly, J. P., & Arora, K. (2016). *Research methods: The essential knowledge base*. Cengage Learning.
7. Bryman, A. (2016). *Social research methods* (5th Ed.). Oxford University Press.
8. Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2018). *Multivariate data analysis* (8th Ed.). Cengage Learning.
9. Punch, K. F., & Oancea, A. (2014). *Introduction to research methods in education* (2nd Ed.). SAGE Publications.
10. Khan, A., & Bhatti, R. (2017). *Research methods in library and information science: Concepts and practices*. Pakistan Library Association.

LIBRARY AUTOMATION SYSTEMS

Course Objectives

- Understand the fundamental concepts of Library Automation (LA), including its definition, objectives, and the advantages it offers to library operations.
- Learn about Systems Analysis for Library Automation, covering basic requirements, relevant technical standards, and the features of Library Management Systems (LMS).
- Explore the Integrated Library System (ILS), including its components, modules, and features, to comprehend its role in automating library services.
- Gain insights into the implementation, maintenance, and evaluation of library automation systems, including strategies for implementation, maintenance practices, and evaluation methods for assessing effectiveness.

Course Learning Objectives (CLOs)

Enhance knowledge of the students about library automation concepts, trends, developments, and systems.

Familiarize students with the components and functionality of integrated library systems (ILS).

Develop understanding of library automation standards and protocols.

Learn about various library software, including open-source options like Koha, etc.

Week-Wise Course Breakdown

W		Description/Lecturers	W		Description/Lecturers
1		Concepts of Library Automation (LA)	2		Systems Analysis for Library Automation
	1.	Introduction, meaning and Definition		1.	Basic Requirements of LA
	2.	Needs and Objectives		2.	Relevant technical standards
	3.	Advantages of Library Automation		3.	Features of LMS
3.		Integrated Library System (ILS)	4		Areas and Services of Library Automation
	1.	Components of ILS		1.	Areas of Library Automation
	2.	Modules of ILS		2.	Automated Library Services
	3.	Features of various Modules		3.	OPAC, Introduction and Features
5.		Library Automation	6		Implementation, Maintenance, and Evaluation
	1.	Planning of Library Automation		1.	Strategies for implementing library automation systems

	2.	Implementation, maintenance, and evaluation of ILS		2.	Maintenance practices for ensuring system efficiency
	3.	Structure of the library automation industry		3.	Evaluation methods for assessing the effectiveness of library automation systems
7.	Industry Structure of the Library Automation		8	Library Automation in Pakistan	
	1.	Overview of the major players in the library automation industry		1.	Library software used in Pakistani Libraries
	2.	Trends and developments in the library automation market		2.	Role of Various organization and Bodies in Developing Automated Library Culture in Pakistan
	3.	Impact of industry structure on library automation initiatives		3.	Library Automation Problems in Pakistan
Mid Semester Examination					
9	Implementation, Maintenance, and Evaluation		10	Planning and Acquisition of Library Automation Systems	
	1.	Strategies for implementing library automation systems		1.	Request for proposals (RFP) process in library automation
	2.	Maintenance practices for ensuring system efficiency		2.	Contract negotiation and vendor selection
	3.	Evaluation methods for assessing the effectiveness of library automation systems		3.	Budgeting and funding for library automation projects
11	Acquisitions Module		12	Cataloguing Module	
	1.	Overview of the acquisitions module in library automation systems		1.	Functions and features of cataloguing modules
	2.	Functions and features of acquisitions modules		2.	Metadata standards and cataloguing rules in library automation
	3.	Best practices for managing acquisition processes		3.	Enhancing cataloguing efficiency and accuracy
13	OPAC Services		14	Circulation Module	
	1.	Introduction to Online Public Access Catalogue (OPAC) services		1.	Functions and features of circulation modules

	2.	User interface design and customization for OPACs		2.	Patron management and circulation policies
	3.	Advanced search capabilities and features in OPACs		3.	Automation of circulation processes for efficiency and user satisfaction
15.	Role of Library Staff and Management		16	Implementation of Case Studies and Future Trends	
	1.	Responsibilities of library staff in managing automation systems		1.	Case studies of successful library automation implementations
	2.	Leadership and decision-making roles of senior management		2.	Emerging trends in library automation technology
	3.	Collaboration between library systems personnel, librarians, vendors, and consultants		3.	Discussion on the future of library automation and potential innovation
Final Semester Examination					

Recommended Readings

1. Marshall, M. (2018). Library Automation in Transitional Societies: Lessons from Eastern Europe and the Former Soviet Union. Chandos Publishing.
2. Chowdhury, G. G. (2017). Introduction to Modern Information Retrieval (3rd ed.). Facet Publishing.
3. Cullen, R. (2016). Introduction to Knowledge Management: Principles and Practice (2nd ed.). Facet Publishing.
4. Koehler, W. (2018). Practical Library Automation: An Introduction for Library Professionals. Libraries Unlimited.
5. Davis, R. C. (2016). Library Automation: Core Concepts and Practical Systems Analysis (3rd ed.). Libraries Unlimited.

Course Objectives

1. To introduce students to the concepts, history, and significance of information visualization with a focus on library and information science.
2. To provide students with practical skills to analyze, clean, process, and visualize library-related data using relevant tools and software.

Course Learning Outcomes (CLOs)

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

1. Familiarize themselves with the history, importance, and types of information visualization.
2. Identify and apply visualization techniques for library data (circulation, collections, user behavior).
3. Understand principles and design elements of effective data visualization.
4. Comprehend data types, formats, cleaning and processing techniques using Excel/Biblioshiny etc.

Course Contents (17 Weeks)

Week	Topics / Lectures
Week 1	Introduction to Information Visualization: Definitions, history, and importance
Week 2	Types of Information Visualization (charts, graphs, infographics, dashboards)
Week 3	Principles of Visualization Design: Clarity, accuracy, and aesthetics
Week 4	Data and Libraries: Nature of library data (collections, circulation, user behavior)
Week 5	Applications of Visualization in Libraries: Case studies and global examples
Week 6	Data Types and Formats: Structured vs. unstructured data
Week 7	Data Cleaning and Processing: Basics of Excel for LIS data
Week 8	Hands-on: Cleaning and organizing library data (circulation dataset)
Week 9	Midterm Examination
Week 10	Biblioshiny and Bibliometrix: Introduction and applications in LIS
Week 11	Visualization of Bibliometric Data (co-authorship, citations, networks)
Week 12	Creating Dashboards for Library Data
Week 13	Visualization Tools Overview: Tableau, Power BI, Google Data Studio
Week 14	Hands-on with Power BI/Google Data Studio for Library Data
Week 15	Ethical Considerations in Data Visualization (bias, misrepresentation, privacy)
Week 16	Future Trends: AI-driven visualization, immersive visualization (VR/AR) in libraries
Week 17	Final Presentations: Students' visualization projects using library datasets

Suggested Readings

1. Cairo, A. (2019). *How charts lie: Getting smarter about visual information*. W. W. Norton & Company.
2. Few, S. (2012). *Show me the numbers: Designing tables and graphs to enlighten* (2nd Ed.). Analytics Press.
3. Knafllic, C. N. (2015). *Storytelling with data: A data visualization guide for business professionals*. Wiley.
4. Munzner, T. (2014). *Visualization analysis and design*. CRC Press.
5. Friendly, M., & Denis, D. J. (2021). *History of data visualization and graphic communication*. Harvard University Press.
6. Kirk, A. (2019). *Data visualization: A handbook for data-driven design* (2nd Ed.). Sage Publications.
7. Yau, N. (2013). *Data points: Visualization that means something*. Wiley.
8. Chen, C., Härdle, W., & Unwin, A. (Eds.). (2008). *Handbook of data visualization*. Springer.
9. Moed, H. F. (2020). *Bibliometric approaches to research assessment in library and information science*. Springer.
10. Steele, J., & Iliinsky, N. (Eds.). (2010). *Beautiful visualization: Looking at data through the eyes of experts*. O'Reilly Media.

QUALITATIVE RESEARCH

Course Objectives

- To provide students with an understanding of the philosophical foundations and methodological approaches of qualitative research.
- To train students in qualitative research design, data collection, analysis, and interpretation.
- To enable students to critically evaluate qualitative research in Library and Information Science (LIS).
- To prepare students to apply qualitative research methods in their own scholarly and professional contexts.

Learning Outcomes

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

- Explain the basic philosophical and methodological approaches of qualitative research.
 - Identify and apply various steps and methods in qualitative research.
 - Collect, analyze, and interpret qualitative data using appropriate techniques.
 - Critically assess qualitative research studies in LIS.
-

Course Contents (Week-wise)

Week	Topics
1	Introduction to Qualitative Research: Definitions, Characteristics, and Relevance to LIS
2	Philosophical Foundations: Positivism vs. Interpretivism; Constructivism; Pragmatism
3	Research Paradigms and Theoretical Frameworks in Qualitative Research
4	Designing Qualitative Research: Formulating Research Problems and Questions
5	Sampling in Qualitative Research: Purposive, Snowball, and Theoretical Sampling
6	Data Collection Methods I: Interviews (structured, semi-structured, unstructured)
7	Data Collection Methods II: Focus Groups and Observation (participant and non-participant)
8	Data Collection Methods III: Document and Content Analysis
9	Fieldwork and Research Ethics in Qualitative Studies
10	Data Analysis Approaches I: Thematic Analysis and Coding
11	Data Analysis Approaches II: Narrative Analysis and Discourse Analysis
12	Data Analysis Approaches III: Grounded Theory Method
13	Data Analysis Tools: Introduction to NVivo, ATLAS.ti, and manual coding
14	Validity, Reliability, and Trustworthiness in Qualitative Research
15	Writing and Presenting Qualitative Research Findings
16	Applications of Qualitative Research in LIS (case studies and examples)
17	Student Presentations, Review, and Wrap-up Discussion

Suggested Readings

1. Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry & research design: Choosing among five approaches* (4th ed.). SAGE Publications.
2. Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation* (4th ed.). Jossey-Bass.
3. Flick, U. (2018). *An introduction to qualitative research* (6th ed.). SAGE Publications.
4. Tracy, S. J. (2020). *Qualitative research methods: Collecting evidence, crafting analysis, communicating impact* (2nd ed.). Wiley-Blackwell.
5. Patton, M. Q. (2015). *Qualitative research & evaluation methods: Integrating theory and practice* (4th ed.). SAGE Publications.
6. Miles, M. B., Huberman, A. M., & Saldaña, J. (2019). *Qualitative data analysis: A methods sourcebook* (4th ed.). SAGE Publications.
7. Denzin, N. K., & Lincoln, Y. S. (Eds.). (2018). *The SAGE handbook of qualitative research* (5th ed.). SAGE Publications.
8. Silverman, D. (2021). *Qualitative research* (6th ed.). SAGE Publications.
9. Charmaz, K. (2014). *Constructing grounded theory* (2nd ed.). SAGE Publications.
10. Given, L. M. (Ed.). (2008). *The SAGE encyclopedia of qualitative research methods*. SAGE Publications.

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

- Understand basic concepts and terminology of information literacy instructions.
- Familiarity with varying IL conceptions, models, standards, and frameworks
- Develop practical skills for designing, delivering and evaluating information literacy programs.

Course Objectives	
• To equip students with the foundational information literacy skills necessary to locate, evaluate, and use information effectively in various academic and real-world contexts. • To encourage critical thinking and analytical skills by teaching students how to assess the credibility and relevance of information sources and make informed decisions. • To instil ethical and responsible information use practices, including proper citation and avoidance of plagiarism, while respecting intellectual property rights. • To empower students with the ability to adapt to changing information environments, promoting a lifelong learning mindset that extends beyond the classroom.	

Course Breakdown

W		Description/Lecturers	W		Description/Lecturers
1		Introduction to Information Literacy	2		Information Sources
	1.	What is Information Literacy?		1.	Identifying Different Information Sources
	2.	The Evolution of Information Literacy		2.	Traditional vs. Digital Information Sources
	3.	Importance of Information Literacy in Modern Life		3.	Primary, Secondary, and Tertiary Sources
3.		Information Seeking Process	4		Searching Strategies
	1.	The Information Seeking Process: Steps and Strategies		1.	Effective Search Techniques
	2.	Formulating Research Questions		2.	Boolean Operators and Advanced Search Operators
	3.	Problem Definition and Information Needs Assessment		3.	Using Filters and Advanced Search Features
5.		Evaluating Information	6		Citation and referencing
	1.	Criteria for Evaluating Information Sources		1.	Introduction to Citation Styles (APA, MLA, Chicago, etc.)

	2.	Distinguishing Reliable from Unreliable Sources		2.	Proper Citation and Avoiding Plagiarism
	3.	Evaluating Websites for Credibility		3.	Creating Bibliographies and References
7.	Database Searching		8	Web Literacy	
	1.	Navigating Academic Databases		1.	Evaluating Web Content for Credibility
	2.	Advanced Database Search Strategies		2.	Identifying and Avoiding Fake News
	3.	Managing and Saving Database Searches		3.	Responsible Online Information Consumption
Mid Semester Examination					
9	Information Ethics		10	Information Organization	
	1.	Copyright and Fair Use Guidelines		1.	Effective Notetaking and Summarizing
	2.	Ethical Use of Information: Attribution and Permissions		2.	Managing and Organizing Research Materials
	3.	Digital Rights and Privacy		3.	Reference Management Tools
11	Critical Thinking and Information Literacy		12	Information Literacy in Research	
	1.	Developing Critical Thinking Skills in Information Evaluation		1.	Integrating Information Literacy into Research Projects
	2.	Analyzing Data and Information		2.	Literature Review and Information Synthesis
	3.	Recognizing Bias and Assumptions		3.	Research Proposal Development
13	Information Literacy Assessment		14	Information Literacy in Education	
	1.	Responsible Online Behaviour and Digital Citizenship		1.	Integrating Information Literacy into Curriculum
	2.	Cybersecurity and Protecting Personal Information		2.	Teaching Information Literacy Skills to Students
	3.	Avoiding Cyberbullying and Online Scams		3.	Collaborative Teaching Strategies
15.	Calibre (Repository Software)		16	Future Trends in Information Literacy	

	1.	Methods for Assessing Information Literacy Skills		1.	Emerging Technologies and Information Literacy
	2.	Creating Effective Information Literacy Assessments		2.	Lifelong Learning in the Information Age
	3.	Continuous Improvement in Information Literacy Education		3.	The Role of Libraries and Educational Institutions in Information Literacy
Final Semester Examination					
Recommended Readings					
1. Breivik, P. S., & Gee, E. G. (Eds.). (2021). Information Literacy: Research and Collaboration Across Disciplines. Libraries Unlimited.					
2. Grassian, E. S., & Kaplowitz, J. R. (2020). Information Literacy Instruction: Theory and Practice (3rd ed.). Rowman & Littlefield Publishers.					
3. Herring, J. E. (Ed.). (2022). Teaching Information Literacy: An International Review. Facet Publishing.					
4. Johnston, J. E. (Ed.). (2021). The Information Literacy Cookbook: Ingredients, Recipes, and Tips for Success. ACRL.					

DIGITAL LIBRARIES

3 Credit Hours

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

- ☐ Understand theoretical knowledge of digital libraries' key concepts, design, architecture and challenges
- ☐ Learn digitization and implementation of digital library management systems
- ☐ Understand the basic issues, problems, and approaches to digital libraries.
- ☐ Develop skills for designing digital libraries.

Course Objectives
1. Understand Digital Libraries: Grasp the core concepts, evolution, and advantages of digital libraries. 2. Acquire Technical Skills: Gain hands-on knowledge of file formats, digitization, metadata, and content management. 3. **Explore Access and Security: Learn about access control, DRM, and preservation strategies for digital library resources. 4. Evaluate Emerging Trends: Examine AI, blockchain, and AR/VR for their potential in digital libraries.

W		Description/Lecturers	W		Description/Lecturers
1	Introduction to Digital Libraries		2	DL Communities and Advantages	
	1.	Definition & scope of digital libraries		1.	DL communities
	2.	Concepts and issues of Digital Libraries (DL)		2.	Advantages of Digital Libraries
	3.	Evolution of Digital Libraries		3.	Content creation in Digital Libraries
3.	File Formats, Digitization, and DL Architecture		4	Elements of a Digital Library	
	1.	Different file formats		1.	Key elements of a Digital Library
	2.	Digitization processes		2.	DOI, Open URL, CrossRef, and other aspects
	3.	Digital Library architecture		3.	Content management issues in Digital Libraries
5.	Metadata and Resource Discovery		6	Security and Preservation Issues	
	1.	Metadata in Digital Libraries		1.	Security issues in Digital Libraries
	2.	Resource discovery issues		2.	Preservation strategies
	3.	Access control and DRM		3.	Digital Library Software: DSpace, Greenstone
7.	HEC Digital Library		8	Subject Strengths and Searching in Various Databases	
	1.	Introduction, objectives,		1.	Searching in the Taylor and Francis database
	2.	Basic and Premium databases in HEC DL		2.	Searching in Blackwell Journals database
	3.	Subscription Process of HEC DI		3.	Searching in Science Direct database
Mid Semester Examination					
9	Searching in Various Databases (Continued)		10	Content Creation and Management	

	1.	Searching in the Emerald database		1.	Techniques for content creation
	2.	Searching in Sage Open SCUPS database		2.	Challenges in content management
	3.	Jstor, WorldCat, library genesis etc.		3.	Strategies for effective content management
11	Access Control and DRM		12	Metadata Standards and Resource Discovery	
	1.	Access control mechanisms		1.	Metadata standards in Digital Libraries
	2.	Digital Rights Management (DRM)		2.	Resource discovery techniques
	3.	Legal and ethical issues in DRM		3.	Enhancing metadata quality and completeness
13	Preservation Strategies		14	DL Software: DSpace and Greenstone	
	1.	Long-term preservation formats		1.	Overview of DSpace software
	2.	Preservation metadata		2.	Overview of Greenstone software
	3.	Digital preservation best practices		3.	Comparison of DSpace and Greenstone features
15.	Emerging Trends in Digital Libraries		16	Final Project Presentations and Wrap-up	
	1.	Augmented reality and virtual reality applications		1.	Presentations
	2.	Blockchain technology for digital asset management		2.	Course review and discussion
	3.	Artificial intelligence and machine learning in Digital Libraries		3.	Course review and discussion
Final Semester Examination					

Reading Materials

1. Arms, W.Y., & Lyon, L.W. (2001). Digital Library Education. D-Lib Magazine, 7(9). DOI: [10.1045/september2001-arms](https://doi.org/10.1045/september2001-arms)
2. Chowdhury, G. G., & Chowdhury, S. (2010). Introduction to Digital Libraries. Facet Publishing.

3. Gilliland-Swetland, A. J. (Ed.). (2008). Introduction to Metadata (2nd ed.). Getty Publications.
4. Kovacs, D. M. (2016). Digital Libraries: Challenges and Opportunities for Libraries and Publishers. Chandos Publishing.

APPLICATION OF INFORMATION SYSTEMS

3 Credit Hours

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

- ☐ Understand the theoretical knowledge about information systems particularly currently used in library and information settings
- ☐ Inculcate the practical skills to implement library automation systems and digital library management systems
- ☐ Develop certain skills for using (software to search, retrieve, and digital repositories) information systems in libraries

Learning Objectives:

After studying this course the students will be able to:

- To identify the various components of an information storage and retrieval system
- To become familiar with different models and structures an IR system may take.
- To understand the theoretical foundations of various IR methods
- To be able to design and implement IR systems using off-the-shelf software packages.
- To examine the factors that influences the performance of an IR system.
- To be aware of the current research in the field and on the Web

Learning Outcomes:

Students will gain an idea of

- The fundamentals of information storage and retrieval (ISR) systems, including components, models, structures, information representation, vocabulary control, search strategies (query language/operation, indexing and search), User interface and visualization and User dimension and evaluation.

Weeks	Lectures	Topics
Week 1–2	Lecture 1–3	What is information
	Lecture 4–6	What is information explosion and overload
	Lecture 7–8	Pioneers and milestones in ISR
Week 3–4	Lecture 9–11	Basics of Information Storage and Retrieval
	Lecture 12–15	Key concepts of ISR
	Lecture 15–18	Components of an ISR system, Types of ISR systems
Week 5–6	Lecture 19–21	ISR representation

	Lecture 22–25	What is information representation?
	Lecture 26–28	Information representation attributes and values
Week 7–8	Lecture 29–31	Language in ISR: Natural language vs. controlled vocabulary
	Lecture 32–35	Types of controlled vocabulary: Thesauri, Subject headings, Classification schemes
Week 9–10	Lecture 36–38	Retrieval Techniques and Query Representation
	Lecture 39–40	Search Techniques
Week 11–12	Lecture 41	Retrieval Approaches
	Lecture 42	Retrieval by searching, Retrieval by browsing
	Lecture 43	The hybrid approach, the integrated approach
Week 13–14	Lecture 44	Information Retrieval Models: Boolean logic, Vector space, Probabilistic, Extensions, Web search engine models
	Lecture 45–46	Library systems, Computer systems, CD-ROM systems, Web and Internet systems
Week 15–16	Lecture 47	Trends in ISR: Artificial Intelligence, NLP, Expert Systems, Semantic Web
	Lecture 48	The future of information retrieval

Recommended Readings

Baeza-Yates, Ricardo, and Ribeiro-Neto, Berthier. (1999). Modern information retrieval. New York: ACM Book Press.

Begum, Suraiya and Ahmed, Zayed (2001). Development of Web-based IR Systems: A Review. Information Society Today. URL:<http://www.infosciencetoday.org/ir.htm>

Chowdhury, Gobinda G. (2004). Introduction to modern information retrieval. London: Facet.

Date, J. C. 1986. An introduction to database systems: vol. I (4th ed.), Addison-Wesley Longman Publishing Co., Inc., Boston, MA

Harter, Stephen P. (1985). online information retrieval: Concepts, principles, and techniques. New York: Academic Press.

Ingwersen, Peter, and Järvelin, Kalervo. (2005). the turn: Integration of information seeking and retrieval in context. Dordrecht: Springer.

Lancaster, F.W., and Warmer, Amy J. (1993). Information retrieval today. Arlington, VA: Information Resources Press

Karen Sparck Jones. (1999). the role of artificial intelligence in information retrieval. Journal of the American Society for Information Science. Volume 42 Issue 8, Pages 558-565

Marchionini, Gary. (1995). Information seeking in electronic environments. New York: Cambridge University Press. (Cambridge Series on Human-Computer Interaction 9).

Meadow, Charles T., Boyce, Bert R., and Kraft, Donald H. (1999). Text information retrieval systems. Orlando, FL: Academic Press.

THEORITICAL FOUNDATION OF LIBRARY AND INFORMATION SCIENCE

3 Credit Hours

Course Objectives

- To introduce students to the historical, philosophical, and theoretical foundations of Library and Information Science (LIS).
- To familiarize students with major theories, models, and paradigms in LIS.
- To provide a critical understanding of the relationship between information, knowledge, society, and technology.
- To help students connect theoretical perspectives to LIS practices, research, and policies.

Course Learning Outcomes

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

- Understand the evolution and philosophical underpinnings of LIS.
- Describe major theories and conceptual models of information and knowledge organization.
- Critically analyze the relationship between LIS theories and professional practices.
- Apply theoretical perspectives to contemporary LIS issues such as information behavior, digital libraries, and knowledge management.

Course Contents (17 Lectures)

Week	Topics
1	Introduction to the Theoretical Foundations of LIS: Scope and Importance
2	Historical Development of Library and Information Science as a Discipline
3	Philosophy of Information: Ontology, Epistemology, and Axiology in LIS
4	Major Paradigms of LIS: Physical, Cognitive, and Social Paradigms
5	Theories of Knowledge and Their Influence on LIS
6	Theories of Information: Shannon & Weaver, Belkin, Brookes' Fundamental Equation
7	Information Needs, Uses, and Behavior: Wilson, Dervin's Sense-Making, Taylor
8	Models of Information Retrieval and Relevance Theories
9	Theories of Classification and Knowledge Organization (Ranganathan, Bliss, Facet Theory)
10	Bibliometric and Scientometric Theories (Bradford, Lotka, Zipf)

11	Social and Cultural Theories in LIS (Bourdieu, Foucault, Habermas)
12	Systems Theory and Its Application in LIS
13	Information Society, Digital Divide, and Social Informatics
14	Theories of Information Ethics and Policy
15	Theories of Knowledge Management and Learning in LIS
16	Emerging Trends: AI, Big Data, and Theoretical Implications for LIS
17	Review and Student Presentations on Theoretical Applications in LIS

Suggested Readings (APA Style)

1. Bates, M. J., & Maack, M. N. (Eds.). (2010). *Encyclopedia of Library and Information Sciences* (3rd ed.). CRC Press.
2. Bawden, D., & Robinson, L. (2022). *Introduction to information science* (2nd ed.). Facet Publishing.
3. Buckland, M. (2017). *Information and society*. MIT Press.
4. Case, D. O., & Given, L. M. (2016). *Looking for information: A survey of research on information seeking, needs, and behavior* (4th ed.). Emerald.
5. Cronin, B., & Meho, L. I. (2006). Using the h-index to rank influential information scientists. *Journal of the American Society for Information Science and Technology*, 57(9), 1275–1278.
6. Hjørland, B. (2017). *Library and information science (LIS): Part I. Nature, theories and models*. *Information Science and Knowledge Organization*, 46(3), 223–239.
7. Machlup, F., & Mansfield, U. (Eds.). (1983). *The study of information: Interdisciplinary messages*. Wiley.
8. Raber, D. (2003). *The problem of information: An introduction to information science*. Scarecrow Press.
9. Saracevic, T. (1999). Information science. *Journal of the American Society for Information Science*, 50(12), 1051–1063.
10. Shera, J. H. (1972). *Foundations of education for librarianship*. Wiley.