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Deputy Director (Academics)

No. 5-2/FS (NCRC)/Acad/HEC/2025/7090
21st March, 2025

Subject: **Revised Curriculum for Degree Programs in Library and Information Science**

The Higher Education Commission (HEC) of Pakistan, as mandated by its charter, provides strategic guidance to Higher Education Institutions (HEIs) on curricula for tertiary education, ensuring alignment with the National Qualifications Framework (NQF). To keep pace with evolving academic trends and market demands, HEC has revised the curricular standards for Library and Information Science (LIS) degree programs at NQF levels 5, 6 and 7. These updates are fully aligned with HEC Undergraduate Education Policy V 1.1 (2023) and HEC Graduate Education Policy (2023), reflecting national priorities and meeting global standards.

2. The revised curricula for Library and Information Science degree programs (enclosed) are hereby officially notified. Universities offering these programs are advised to update their Library and Information Science curricula in compliance with these standards at the earliest. The respective departments must also develop course contents in accordance with the prescribed framework, ensuring that the programs address evolving scholarly and industry needs to enhance employability potential of Library and Information Science graduates. The updated document is also available for download on HEC official website.

3. Through the effective implementation of these standards, HEC envisions a transformative future where Pakistani graduates in Library and Information Science have diverse career opportunities in various sectors including academic institutions, research organizations, corporate firms, and government agencies. With advancements in technology, LIS professionals will get careers as information scientist, data analyst, research support specialist, and Library and Information Officer.

Regards,

Muhammad Irfan Sheeraz

Muhammad Irfan Sheeraz

Vice Chancellors/Rectors/Heads
All Public/Private Sector Universities/DAIs

Copy for information to:

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Curriculum for Library and Information Science

Associate Degree
Bachelor of Science
Master of Science
2025

HIGHER EDUCATION COMMISSION

HIGHER EDUCATION COMMISSION

CURRICULUM FOR LIBRARY AND INFORMATION SCIENCE DEGREE PROGRAMS 2025

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Preface

Higher Education Commission, mandated by section 10-1 (v) of HEC Ordinance 2002, has been involved in developing/revising the curricula periodically through National Curriculum Revision Committees (NCRCs) comprising eminent academics, researchers from HEC recognized universities/DAIs, professional councils, R&D organizations of repute and industry professionals.

The Higher Education Commission (HEC) is pleased to introduce the revised curriculum for Library and Information Science (LIS), aligned with the Undergraduate Education Policy 2023, Graduate Education Policy 2023, and National Qualification Framework (NQF) of Pakistan. This updated curriculum reflects the evolving role of information professionals in the digital era, incorporating modern trends, emerging technologies, and global best practices. The revised framework emphasizes interdisciplinary learning, research integration, and practical skill development to equip graduates with competencies require in libraries, knowledge management, digital archiving, data analytics, and AI-driven information retrieval. The curriculum also ensures standardized learning outcomes across degree programs while promoting flexibility for specialization.

HEC remains committed to enhancing academic quality and preparing LIS graduates to meet the demands of libraries, research institutions, and the corporate sector. We look forward to universities implementing this curriculum and fostering a new generation of highly skilled information professionals.

I sincerely appreciate the dedication of all experts from public and private sector higher education institutions who contributed professionally to the development of this document for future LIS graduates.

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GUIDING PRINCIPLES

Minimum Standards

The curricular standards and guidelines prescribed under this policy are mandatory at minimum level. Universities or the concerned departments may however set higher standards provided that the standards prescribed herein are not reduced or compromised.

Course Sequence, Titles and Credits at Undergraduate & Graduate Level

For Bachelor of Science (BS) and Master of Science (MS) in Library and Information Science, the sequence of courses prescribed under this policy document is logically arranged and is suggestive only. The offering department may rearrange the sequence and alter the course titles and credits provided that the essence of the courses prescribed in policy remains intact. The department may add more courses as and when required subject to approval of university's relevant statutory body.

Course Syllabus

This document serves as a comprehensive guideline delineating the course learning outcomes (CLOs) for each course offered in the Bachelor of Science (BS) and Master of Science (MS) in Library and Information Science as minimum standards. The offering department is mandated to meticulously prepare, modify, and tailor the syllabus of each course, ensuring alignment with the stipulated learning outcomes. It is in this regard imperative that the department utilizes instructional, reference, and reading materials that it deems appropriate to effectively meet the CLOs.

General Education at Undergraduate Level

For Bachelor of Science (BS) in Library and Information Science, the courses prescribed for General Education component must mandatorily be offered with the same titles and credits as prescribed under HEC Undergraduate Education Policy V 1.1. The concerned departments may adopt and follow the learning outcomes and study contents developed by HEC for these courses as available on its website. The requirement of general education is not valid for Master of Science (MS) in Library and Information Science.

Requirement of Internship at Undergraduate Level

It is a mandatory degree award requirement of three (03) credit hours for Bachelor of Science (BS) in Library and Information Science. Internship of six (06) to eight (08) weeks (preferably undertaken during semester or summer break) must be graded by a faculty member in collaboration with the supervisor in the field. This requirement cannot be substituted with additional course work, capstone or project work.

Requirement of Capstone Project at Undergraduate Level

It is a mandatory degree award requirement of three (03) credit hours for Bachelor of Science (BS) in Library and Information Science. A capstone project is multifaceted body of work that serves as a culminating academic and intellectual experience for students. The capstone project must be supervised and graded by a faculty member as per the protocols prescribed by the concerned department. This requirement cannot be substituted with additional course work or internship.

Associate Degree in Library and Information Science

In the best interest of students and the discipline, the NCRC of Library and Information Science has decided to recommend launch of Associate Degree in Library and Information Science. The eligibility criteria and the first-four semesters of the Bachelor of Science (BS) in Library and Information Science as prescribed in this policy document guide the admission requirement and the structure of Associate Degree in Library and Information Science. Field experience / internship is not a mandatory requirement for the Associate Degree in Library and Information Science.

Practical/Fieldwork Requirements

Universities / departments offering degree programs in the discipline of Library and Information Science are required to adhere to the requirements specified for Library and Information Science practical/field work (if applicable) in this document, as minimum standards in true spirit. Universities / departments are expected to enhance the practical/field standards as and when required and maintain / upgrade the same to ensure quality education and research in the field of Library and Information Science.

ENTRY AND EXIT PROVISIONS

Pathway for Graduates with Associate Degrees

a) Students having completed Associate Degrees shall be allowed admission in the fifth semester of the undergraduate/equivalent degree program offered in the same discipline without any deficiency course.

b) Where the disciplines of the Associate Degree and the undergraduate/equivalent degree program are different, students shall be required to complete deficiency courses through a bridging semester before the fifth semester as

determined by the admitting university.
c) The minimum eligibility for admission in the fifth semester in above cases is 2.00/4.00 CGPA in the prior qualification i.e., Associate Degree. The admitting university may, however, set higher eligibility criteria for admission in the fifth semester of the four-year undergraduate/equivalent degree program.

Pathway for Graduates with Conventional BA/BSc/Equivalent Degree Programs

a) Students having completed conventional two-year BA/BSc/equivalent degree programs shall be allowed admission in the fifth semester of the undergraduate/equivalent degree program, in which case students shall be required to complete deficiency courses through a bridging semester before commencement of the fifth semester as determined by the admitting university.
b) In case where the deficiency courses are more than 21 credit hours, the university may decide not to offer admission, in accordance with the screening, admission and merit calculation criteria approved by its statutory bodies.
c) The minimum eligibility for admission in the fifth semester in this case is 45% cumulative score in the prior qualification i.e., conventional two-year BA/BSc/equivalent degree programs. The admitting university may however set higher eligibility criteria for admission in the fifth semester of the bachelor of science in Library and Information Science.

Exiting from Bachelor of Science in Library and Information Science with the Associate Degree

Exit from Bachelor of Science (BS) in Library and Information Science with Associate Degree is allowed in accordance with the provisions of HEC Undergraduate Education Policy V 1.1.

BACHELOR OF SCIENCE (BS) IN LIBRARY AND INFORMATION SCIENCE

Program Description

The Bachelor of Science in Library and Information Science (BS LIS) program is structured in line with the HEC Undergraduate Education Policy V 1.1, aiming to prepare students for careers in Library and Information Science, information management, and archives. This interdisciplinary curriculum integrates aspects of library science, information technology, management, and research methodologies, equipping students with the essential skills to efficiently navigate and manage information resources.

The program is crafted to provide a comprehensive education that merges theoretical knowledge with practical skills in organizing, managing, and distributing information and library resources. It prepares students to adapt to the evolving field of Library and Information Science while fostering a commitment to lifelong learning and professional development. As the importance of accessible information and digital literacy grows in today's society, graduates will be ready to contribute meaningfully to their communities as knowledgeable information specialists.

Recommended Nomenclature

For the sake of standardization, all the undergraduate degree programs (NQF level 6 qualifications) in the discipline of Library Science must have the title of **"Bachelor of Science in Library and Information Science (BS LIS)"**, and henceforth, degree programs at equivalent level with same purpose and scope having different nomenclatures shall accordingly be renamed.

Program Learning Outcomes

By the end of a degree in Bachelor of Science (BS) in Library and

Information Science, a graduate shall be able to

- To demonstrate proficiency in identifying, locating, evaluating, and effectively using information for various purposes.
- Graduates will possess the skills to organize and classify information resources using established standards and practices, enabling effective retrieval and access.
- Graduates will be adept at using and applying current technologies in the field of library and information science, including digital libraries, databases, and information management systems.
- Graduates will be equipped with advanced research skills, enabling them to conduct original research and apply findings to improve library and information services.
- Graduates will demonstrate effective communication skills, both oral and written, to convey information and assist users in navigating resources.
- Graduates will exhibit knowledge of library management principles, leadership practices, and project management to oversee library operations and initiatives.
- Graduates will be able to collaborate with diverse groups and stakeholders in the library and information sector and build professional networks to enhance service delivery.

Eligibility Criteria

Higher Secondary School Certificate/A-levels (involving 12 years of schooling) or an IBCC equivalent qualification in any group is the basic eligibility requirement for admission in the Bachelor of Science in Library and Information Science (BS LIS).

Program Structure

The Bachelor of Science in Library and Information Science

follows HEC Undergraduate Education Policy 2023 V 1.1 provisions and comprises a minimum of 08 regular semesters (04 years). Universities may offer courses consisting of a maximum of 144 credit hours provided that the total number of credit hours are reasonably set to achieve the Program Leaning Outcomes.

Minimum Credit Hours	128
General Education Courses	32 credit hours (13 courses)
Discipline Related Courses / Major	77 credit hours (26 courses)
Interdisciplinary Courses	13 credit hours (5 courses)
Internship	3 credit hours
Capstone Project	3 credit hours
Program Duration	Minimum: 4 Years Maximum: 6 Years (Further extendable to another year subject to the approval of the university's statutory body following the provisions of HEC Undergraduate Education Policy 2023 V 1.1)
Semester Duration	16-18 weeks for regular semesters (1-2 weeks for examination) 8-9 weeks for summer semesters (1 week for examination)
Course Load (per semester)	15-18 credit hours for regular semesters Up to 8 credit hours for summer semesters (For remedial/deficiency/failure/repetition courses only)
3 Credit Hours (Theory)	3 classes (1 hour each) OR 2 classes (1.5 hours each) OR 1 class (3 hours) per week throughout the semester.
1 Credit Hours (Practical Work)*	1 Credit hour of practical work requires three contact hours per week throughout the semester.

Scheme of Studies

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

SEMESTER I			
S.N.	COURSE	CREDIT HOURS	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	CREDIT HOURS	CATEGORY
1	Quantitative Reasoning-II**	3 (3-0)	General Education
2	Social Science*	2 (2-0)	General Education
3	Expository Writing**	3 (3-0)	General Education
4	Natural Science* (Everyday Science)	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	CREDIT HOURS	CATEGORY
1	Arts & Humanities*	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	CREDIT HOURS	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	CREDIT HOURS	CATEGORY
1	Communication Skills for Information Professionals	3 (3-0)	Interdisciplinary
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	CREDIT HOURS	CATEGORY
1	Elective-I***	3 (3-0)	Major
3	Library Automation Systems	3 (3-0)	Major
4	Qualitative Research	3 (3-0)	Major
5	Collection Development and Management	3 (3-0)	Major
6	Elective-II***	3 (3-0)	Major
Total Credits (15)			

SEMESTER VII			
S.N.	COURSE	CREDIT HOURS	CATEGORY
1	Information Visualization	2 (1-1)	Interdisciplinary
2	Knowledge Management	3 (3-0)	Interdisciplinary
3	Elective-III***	3 (3-0)	Major
4	Digital Libraries	3 (3-0)	Major
5	Elective-IV***	3 (3-0)	Major
6	Application of Information System	3 (3-0)	Major
Total Credits (17)			

SEMESTER VIII			
S.N.	COURSE	CREDIT HOURS	CATEGORY
1	Elective-V***	3 (3-0)	Major
2	Elective-VI***	3 (3-0)	Major
3	Information Literacy Instructions	2 (2-0)	Major
4	Elective-VII***	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/offering department may offer any course within the broader subject domain/cluster to meet the given credits.

** The university may use HEC-designed model courses.

*** The university/offering 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.

Degree Award Requirements

The following minimum requirements are prescribed for the award of a Bachelor of Science (BS) in Library and Information Science:

a) All courses in the General Education category must be completed as prescribed by HEC Undergraduate Policy 2023 V 1.1.

b) As prescribed in this policy, a minimum of 128 credit hours must be completed in a minimum of 08 semesters spread over a minimum of four years.

c) The capstone project (03 credit hours) must be completed following HEC-prescribed guidelines for the degree award. This requirement cannot be substituted with additional coursework.

d) 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.

e) CGPA must not be below 2.00/4.00 at the completion of the degree program. The university may, however, set a higher standard in this regard.

f) The minimum duration to complete the degree is eight (08) regular semesters spread over four (04) years. The maximum duration may be extended to two (02) more semesters / one (01) year in extraordinary circumstances, subject to the approval of the university's relevant statutory body. The summer semester is not considered a regular semester.

Guidelines

1. The listed courses are not exhaustive. Higher Education Institutions (HEIs) are encouraged to offer additional specializations and/or courses, if available. It's essential to note that all BS Library and Information Science degrees, regardless of specialization, are considered equivalent under this scheme of studies. There is no inherent difference between them. However, employers may prefer specific specializations, depending on their requirements.
2. All previous degrees with varying nomenclature are deemed equivalent to a 16-year schooling BS in Library and Information Science regardless of the degree title. All previous qualifications are considered equal in value and have the same academic standing. This equivalence applies to BSc (Hons), BS, and defunct MSc/MA degrees with the

aforementioned titles.

3. It is noteworthy that universities can redistribute courses across the first four and last four semesters. This adjustment can be made based on factors such as teaching staff availability and other facilities. The course distribution outlined is not rigid and is subject to modification by the concerned universities.

4. All universities are directed to implement this revised scheme of studies and align their degree programs accordingly, effective Fall 2025. As of this date, degrees with previous nomenclatures will no longer be recognized or accepted for attestation; only Bachelor of Science in Library and Information Science will be acceptable.

MASTER OF SCIENCE IN LIBRARY AND INFORMATION SCIENCE

Program Description

The Master of Science (MS) in Library and Information Science is structured in accordance with the HEC Graduate Education Policy 2023 and is designed to provide students with a rigorous and in-depth understanding of advanced theories, concepts, and methodologies in the field of Library and Information Science. The program will equip students with the analytical skills and research expertise necessary to critically examine and address complex global and regional challenges, bridging theoretical frameworks with practical applications. The program spans four semesters, combining core courses with a selection of advanced electives that facilitate specialization in various subfields of Library and Information Science. Students will engage in independent research, culminating in a thesis, which enables them to contribute original insights to the academic and policy discourse. The research component is supported by advanced training in research methods, enabling students to design and conduct robust studies using both qualitative and quantitative approaches. Throughout the program, students will enhance their ability to critically evaluate scholarly literature, apply theoretical frameworks to real-world scenarios, and produce research-driven solutions to global issues. They will also develop strong communication skills, enabling them to effectively present and disseminate their findings to both academic and policy-oriented audiences. The ultimate goal of the program is to prepare graduates for successful careers in academia, think tanks, policy-making institutions, international organizations, media, and other fields requiring expertise in Library and Information Science.

Recommended Nomenclature

To ensure uniformity, the standard nomenclature of all graduate degree programs (NQF-7) in Library and Information Science must be **"Master of Science (MS) in Library and Information Science."**

NOTE

In line with future academic reforms in Pakistan, all universities will adopt the uniform title of 'Master of Science in Library and Information Science' for their postgraduate programs.

To ensure parity and equity, it is clarified that previously awarded MPhil degrees in Library and Information Science, with 18 years of schooling, will be considered equivalent to the MS degree. No discrimination will be made against holders of either degree title, and both will be recognized as having equal academic standing.

Program Learning Outcomes

By the completion of a Master of Science (MS) in Library and Information Science, the graduates will be able to:

- Apply advanced techniques and methodologies to conduct independent research and solve complex problems in Library and Information Science.
- Demonstrate the ability to organize and classify information resources using appropriate standards and technologies.
- Conduct effective research using various methods and frameworks.
- Evaluate information sources, tools, and services for quality, relevance, and ethical considerations.
- Assess user needs and preferences through direct engagement and usability testing.
- Develop effective information literacy programs and instructional materials to enhance the information-seeking skills of users.

- Stay current with emerging technologies and trends in the library and information science field.
- Understand and apply ethical principles and professional standards related to library and information practice.
- Address issues such as intellectual freedom, privacy, and access to information.
- Demonstrate leadership and management skills in library settings, including project management, strategic planning, and staff development.

Eligibility Criteria

a) An undergraduate degree (involving 16 years of education) in Library and Information Science or equivalent is the basic eligibility requirement for admission to the Master of Science (MS) in Library and Information Science.

b) Candidates having undergraduate degrees (involving 16 years of education) in any discipline relevant to the field of Library and Information Science (the university relevance committee will determine relevancy) are also eligible for admission to the Master of Science (MS) in Library and Information Science subject to completion of deficiency courses from 6-9 credit hours to be determined by the offering department. The offering department will also determine the relevance of the prior qualification in this regard.

c) In addition to the basic eligibility, the admitting university is further required to conduct a rigorous admission test as an eligibility condition for admission to the program, with a passing score of 50% (OR) accept the GRE/HAT General/equivalent tests, with a passing score of 50%. The admitting university may also set minimum eligibility scores (above 50%) as per the screening, admission, and merit calculation criteria approved by its statutory bodies.

Program Structure

The Master of Science (MS) in Library and Information Science is structured in accordance with the provisions of the HEC Graduate Education Policy (GEP-2023). The standard structure of the program is as under:

Minimum Credit Hours	30
Course Work	Minimum 24 credit hours (8 courses)
Research Work / Thesis/Course Work	Minimum 06 credit hours
Program Duration	Minimum: 1.5 Years (3 regular semesters) Maximum: 4 Years (8 regular semesters) Note: If a student cannot secure an MS within the prescribed timeframe and claims an extension in duration, the university may constitute an appropriate authority to determine the causes of the delay. In the event of force majeure (i.e., delay on account of circumstances beyond the control of the student), the university may grant an extension in the period of award of the MS degree in accordance with the duration limiting factor(s) and shall also take corrective measures in case the delay is caused by process or administrative reasons.
Semester Duration	16-18 weeks for regular semesters (1-2 weeks for examination) 8-9 weeks for summer semesters (1 week for examination)
Course Load (per semester)	09-12 credit hours for regular semesters Up to 8 credit hours for summer semesters (for remedial/deficiency/failure/repetition courses only)
3 Credit Hours (Theory)	3 classes (1 hour each) OR 2 classes (1.5 hours each) OR 1 class (3 hours)
1 Credit Hours (Practical Work)	1 credit hour of practical work requires three contact hours per week throughout the semester.

Scheme of Studies

The standard scheme of studies for Master of Science (MS) in Library and Information Science is given below:

SEMESTER I			
S.N.	COURSE	CREDIT HOURS	CATEGORY
1	Theoretical Foundation of Library and Information Science	3	Core
2	Quantitative Research Methods	3	Core
3	Elective – I **	3	Elective
4	Elective – II **	3	Elective
Total Credits (12)			

SEMESTER II			
S.N.	COURSE	CREDIT HOURS	CATEGORY
1	Qualitative Research Methods	3	Core
2	Elective – III **	3	Elective
3	Elective – IV **	3	Elective
4	Elective – V **	3	Elective
Total Credit Hours (12)			

SEMESTER III			
S.N.	COURSE	CREDIT HOURS	CATEGORY
1	Thesis ***/Course Work	6 ****	Research/Course Work

SEMESTER IV			
S.N.	COURSE	CREDIT HOURS	CATEGORY
1	Thesis ***/ Course Work	Continued	Research/Course Work

NOTE

* These are core mandatory courses for the program.

** The university/offering department may offer any advanced course in Library and Information Science as an elective, where required, as per its program objectives, the university's geographical location, and available academic and faculty resources. Credit combination (reflecting a balance of theory and practical work) must be arranged in accordance with the nature of the course.

*** Research work for a thesis must be performed by students individually as per the university's policy, including but not limited to the protocols for topic selection, allocation of supervisor and co-supervisor (where required), thesis submission, defense, and evaluation as approved through its statutory bodies.

**** Credit hours for research work/thesis/course work may be increased (above 6 credit hours) subject to the approval of the university's relevant statutory body.

Degree Award Requirements

The following minimum requirements are prescribed for the award of a Master of Studies (MS) in Library and Information Science:

a) A minimum of twenty-four (24) credit hours, including nine (9) credit hours for core courses and fifteen (15) credit hours for elective courses as prescribed in this policy document, must be completed.

b) In addition to the twenty-four (24) credit hours of coursework, research work/thesis of a minimum of six (06) credit hours must also be completed individually as partial fulfillment of the degree program. Those students who do not want to do research work, can take minimum of 6 credit hours of course work.

c) A 6-credit hour coursework can be substituted for research as per HEC Graduate Education Policy 2023.

d) CGPA must not be below 2.50/4.00 at the time of completion of the degree program. The university may, however, set higher standards in this regard.
e) The minimum duration required to complete the degree is three (03) regular semesters, which may be extended to eight (08) regular semesters. The summer semester is not considered a regular semester.

COURSE LEARNING OUTCOMES

For BS & MS Library and Information Science

FOUNDATION OF LIBRARY AND INFORMATION SCIENCE

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

- Demonstrate an understanding of the fundamental principles, theories, history and concepts in library and information science (LIS),
- Know the standardization in LIS profession
- Aware with the nature of LIS profession, education and ethics

INFORMATION, LIBRARY AND SOCIETY

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

- To explore the environment in which library and information professionals work.
- To understand 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.

COMMUNICATION SKILLS FOR INFORMATION PROFESSIONALS

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 users guide
- Learn technical writing skills, writing proposal, letters, formal & informal reports

MANAGEMENT OF LIBRARY AND INFORMATION CENTERS

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.

KNOWLEDGE MANAGEMENT

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.

COLLECTION DEVELOPMENT AND MANAGEMENT

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

APPLIED CATALOGUING

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

- Learn basic principles and rules of cataloguing procedure according to AACR2.
- Perform cataloging practice of print, non-print material, serials and electronic material.
- Develop basic understanding about English and Urdu choice of access points.
- Learn and practice different cataloguing formats, standards and frameworks (MARC, Metadata, FRBR, RDA, BIBFRAME etc.)

APPLIED CLASSIFICATION

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

- Classify library collection using classification schemes such as DDC.
- Demonstrate an appreciation for the importance of standardized classification systems by consistently adhering to established protocols during cataloging exercises
- Demonstrate the application of subject heading and understand the nature of subject heading lists

MARKETING OF LIBRARY AND INFORMATION SERVICES

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

ARCHIVES AND RECORD MANAGEMENT

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.

INFORMATION SOURCES AND SERVICES

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

- Develop the ability to understand reference and information queries through conducting effective reference interviews.
- Able to identify and use appropriate reference and information sources to find answers to reference questions.
- Apply criteria to be used in evaluating reference and information sources.
- Demonstrate knowledge of users' information needs, seeking, and information use.

EMERGING TECHNOLOGIES APPLICATION IN INFORMATION ORGANIZATION

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, blockchain, and the Internet of things etc, on information organizations and their services
- Apply IT tools and techniques to support information management and services.

PROJECT MANAGEMENT

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.

WEB DEVELOPMENT IN LIBRARIES

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 cybersecurity measures to protect library users and data.

ONLINE INFORMATION RETRIEVAL

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.

ORGANIZATION OF INFORMATION

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

- 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

INFORMATION ETHICS, POLICY AND LAWS

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.

QUANTITATIVE RESEARCH

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

LIBRARY AUTOMATION SYSTEMS

By the end of the course, students will be able to:
- 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)
- Understanding of library automation standards and protocols
- Students learn about various library software, including open-source options like Koha etc.

INFORMATION VISUALIZATION

By the end of the course, students will be able to:
- Familiarize with the history, importance and types of information visualization
- Applications of visualization in libraries and visualization of library data (circulation, collections, user behavior)
- Understand the principles and design of data visualization

- Comprehend data types, formats, cleaning and processing techniques using Excel/Biblioshiny etc.

QUALITATIVE RESEARCH

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

- Basic philosophical and methodological approaches of qualitative research.
- Familiarize with various steps and specific methods of qualitative research
- Learn about basic qualitative data collection, analysis and interpretation techniques

INFORMATION LITERACY INSTRUCTIONS

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.

DIGITAL LIBRARIES

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.

APPLICATION OF INFORMATION SYSTEMS

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

THEORATICAL FOUNDATION OF LIBRARY AND INFORMATION SCIENCE

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

- Evaluate critically the philosophical and epistemological foundations of Library and information science
- Elaborate the purpose and role of Library and information science in society
- Study the growth of LIS as a discipline and profession
- Understand and apply models, theories, laws and practices in information science

QUANTITATIVE RESEARCH METHODS

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

- Understand nature and purpose of quantitative research
- Understand the specific quantitative research designs
- Develop the ability to use quantitative data analysis software
- Develop the ability to interpret the quantitative data

QUALITATIVE RESEARCH METHODS

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

- Comprehend the philosophical and methodological approaches of qualitative research.
- Familiarize with various qualitative research designs, such as phenomenology, grounded theory, and case study etc.
- Learn about qualitative data collection methods, including interviews, observations, and document analysis.
- Familiarize various qualitative data analysis techniques, such as coding, memoing, and theme identification.
- Introduce with various qualitative data analysis software as NVivo, Atlas.ti etc

HIGHER EDUCATION COMMISSION

GOVERNMENT OF PAKISTAN