THE UNIVERSITY OFBURDWAN

Department of Library and Information Science

Syllabus of 2 Year Post Graduate Programme
in
Library and Information Science

[Master of Library and Information Science] (M.L.I.S)

Under
Curriculum and Credit Framework for Postgraduate Programme (CCFPP), as per N.E.P. 2020
w.e.f. 2026 – 2027

Approved in the PGBS meeting held on 13-07-2026

1. Title and Commencement

The programme shall be called the 2 Year (4 semesters) full-time Integrated Master of Library and Information Science (M.L.I.S.) programme under the Faculty of Arts, Commerce, etc.

This syllabus shall come into force from the academic session 2026-2027.

2. Objectives

- The primary objective is to train the students in the basics of professional skills for information / knowledge management, so that they serve the society through an institution of library or information centre.
- To give the students an understanding of the basic principles of Library and Information Science and to enable them to understand, appreciate and develop professionalism to work in contemporary “Information Age”.
- To acquaint the students with the development of the Universe of Knowledge and methods of its organization in a library/information system.
- To train students in the techniques of Information Management and equip them with skills for applying Information Communication Technologies (ICT) in libraries and information centres.
- To make students fully aware of various sources of information and train them in techniques of dissemination of information in the context of different user groups.

Duration and Semester System

The duration of the programme leading to the Degree of Master of Library and Information Science (M.L.I.S.) shall be with 4 semesters in two academic years. A student must complete the programme within four years from the date of admission to the programme.

Each academic year shall be divided into two semesters. The first and third semesters shall ordinarily commence in the month of July of the first and second academic years and the second and the fourth semesters in the month of January of the first and second academic years or on such dates as may be fixed by the University.

3. Academic Calendar

Academic Calendar will be as approved by the University.

4. Programme Outcomes (PO)

- Students understand the role, important and usefulness of this programme.
- Libraries and information centers are described as a social institution and it plays a vital role for education and culture.
- Students are learned about organizing, storing and disseminating library resources and providing various types of services to the patrons.

- The programme makes the students as professionals to serve in libraries and information centres.
- Beyond libraries and information centres, students are being experts in the other field like museums, archive centres, and documentation centres.
- The programme includes the applications of computer in libraries and information centres. The students are well equiped with computers tools and technologies that are being applicable in libraries and information centres.
- The students are well learned about library management software, digital library software to provide the services in digital environment.

5. Course Specific Outcomes(CSO)

- The programme includes the course ‘Knowledge Organization’. The students are learned ‘Knowledge Organization’ to organize documents, information and knowledge systematically in library.
- The course ‘Resource Description’ enables students to describe the various resources in different format like AACR2, CC, ISBD.
- The course ‘Content Designation and Metadata Encoding’ enables students to describe the various content designator and metadata schema like MARC21, Dublin Core metadata schema etc.
- The course ‘Neoteric Library Technology’ provides learning about advanced library and information technologies that includes automated library system, digital library system, semantic web technologies etc.
- The Course ‘Guided Research Project’ is about a dissertation work that helps students becoming a library professional in traditional and digital library environment.

6. Programme Structure

- The 2 Year M.L.I.S. programme is in the level 6.5 of NHEQF and follows NcrF and CCFPPof NEP-2020.

- The 2 Year M.L.I.S Programme consists of **90 credits** (Sem-I: 28 credits, Sem-II: 22 credits, Sem-III: 20 credits, Se-IV: 20 credits) and Total **1250 marks** (Sem-I: 375 marks, Sem-II: 375 marks, Sem-III: 250 marks, Se-IV: 250 marks).

- In 2 Year M.L.I.S. programme comes there are three options. The Semester-I and Semester-II are same of all three options. The semester-I and semester-II contain 42 credits of 8 major/Core courses and 8 credits 2 Minor Courses.

- **In Option-I** of Semester-III and Semester-IV: 20 credits of 5 Major/Core courses in Semester-III and 20 credits of Research Thesis /Project in Semester -IV.

- **In Option-II** of Semester-III and Semester-IV: 20 credits of 5 Major/Core courses in Semester-III and 5 Major/Core courses in Semester-IV.

- **In Option-III** of Semester-III and Semester-IV: 20 credits of Research Thesis / Project in Semester-III and 20 credits of Research/Project in Semester-IV

- A minimum of 2 credits shall have to earned from the compulsory course **PG2LISC4041: Coomunity Engagement**. This shall not be taken into consideration in the calculation of SGPA and CGPA. It is a complusory course.

- **8 credits** are assigned to **Minor Courses** (In Sem-I and Sem-II) (**PG2LISC1021 and PG2LISC2021**). Students of M.L.I.S. course are to opt for one Minor Course in Semester-I and Semester-II offered by any other department of the University. However, students may opt for two 4 credit courses (for Sem-I and Sem-II) from **SWAYAM** Platform and can avail the option of credit transfer as per PG Regulations NEP-2020 by this University.

- Students from other departments of this University may opt for the Minor Courses offered by this Department.

- In Semester-III (in Option-III), the course **PG2LISC3031: Research Thesis / Project** is with 20 credits and it is compulsory course. Preparation & Submission of Research Thesis/ Project Report (12 Credits)-150 Marks, Seminar Presentation (4 credits, 50 Marks) & Viva-voce (4 Credits, 50 Marks,)- 8 Credits, 100 Marks.

- In Semester-IV (in Option-I and III), the course **PG2LISC4031: Research Thesis / Project** is with 20 credits and it is compulsory course. Preparation & Submission of Research Thesis/ Project Report (12 Credits)-150 Marks, Seminar Presentation (4 credits, 50 Marks) & Viva-voce (4 Credits, 50 Marks,)- 8 Credits, 100 Marks.

- The courses **PG2LISC3031 and PG2LISC4031** shall follow a well-defined research structure comprising research objectives, the statement of the problem, research questions, research methodology, research findings, and conclusions. All submissions must comply with the plagiarism limits prescribed under the UGC Regulations on Academic Integrity and Prevention of Plagiarism.

7. Equivalence

1st and 2nd semesters of 2 Year M.L.I.S. be equivalent to 1 year Bachelor of Library and Information Science (B.L.I.S.) and 3rd and 4th semesters of 2 Year M.L.I.S. be equivalent to 1 Year Master Degree of Library and Information Science (M.L.I.S.) which should be metioned in 4th Semester (Final) marksheet.

8. Guidelines for Evaluation Pattern

The performance of a candidate in a theoretical and practical both courses (papers) will be assessed for a maximum of 75 marks (Semester-I) and 50 marks (Semester-II, III, IV) as explained below (except the courses PG2LISC3031 and PG2LISC4031 which are discussed below):

Semester-I:

- 60 marks as end-semester examination for the papers: PG2LISC1011, PG2LISC1012, PG2LISC1013, PG2LISC1021 and 40 marks as end-semester examination for the paper: PG2LISC1014.

- 10 marks as Internal Assessment based on class test, assignment, seminar etc, modalities for which are to be decided by the concerned course-in- charge and notified to the students at the beginning of the semester.
- 20 marks as practical examination for the paper: PG2LISC1014.

Semester-II:

- 60 marks as end-semester examination for the papers: PG2LISC2014, PG2LISC2021 and 40 marks as end-semester examination for the paper: PG2LISC2011.
- 10 marks as Internal Assessment based on class test, assignment, seminar etc, modalities for which are to be decided by the concerned course-in- charge and notified to the students at the beginning of the semester.
- 20 marks as practical examination for the paper: PG2LISC1014 and 60 marks as practical examination for the paper: PG2LISC2012 and PG2LISC2013.

Semester-III (Option-I and II):

- 40 marks as end-semester examination for the papers: PG2LISC3011, PG2LISC3012, PG2LISC3013, PG2LISC3015.
- 10 marks as Internal Assessment based on class test, assignment, seminar etc, modalities for which are to be decided by the concerned course-in- charge and notified to the students at the beginning of the semester.
- 40 marks as practical examination for the paper: PG2LISC3014.

Semester-III (Option-III):

- Total 250 marks are assigned to the paper: PG2LISC3031 (Research Thesis / Project).
- 150 marks as Preparation & Submission of Research Thesis/ Project Report.
- 50 marks as Seminar Presentation.
- 50 marks as Viva-voce.

Semester-IV (Option-I and III):

- Total 250 marks are assigned to the paper: PG2LISC3031 (Research Thesis / Project).
- 150 marks as Preparation & Submission of Research Thesis/ Project Report.
- 50 marks as Seminar Presentation.
- 50 marks as Viva-voce.

Semester-IV (Option-II):

- 40 marks as end-semester examination for the papers: PG2LISC4011, PG2LISC4012, PG2LISC4013, PG2LISC4014 and PG2LISC4015.

- 10 marks as Internal Assessment based on class test, assignment, seminar etc, modalities for which are to be decided by the concerned course-in- charge and notified to the students at the beginning of the semester.

Course Structure
2-Years M.L.I.S. Programme

Semester wise and Course wise Distribution of Credit & Marks under CCFPP as per NEP, 2020

SEM	Course Type	Course Code & Level	Name of the Course	Credit	L-T-P	Marks	Marks Distribution Th.-Pr.-1A
Sem-I	Major/Core Course	PG2LISC1011 (400-499)	Research Methodology and Ethics	6	5-1-0	75	60-0-15
	Major/Core Course	PG2LISC1012 (400-499)	Document Classification (Theory)	6	5-1-0	75	60-0-15
	Major/Core Course	PG2LISC1013 (400-499)	Document Cataloguing (Theory)	6	5-1-0	75	60-0-15
	Major/Core Course	PG2LISC1014 (400-499)	Library Information Technology	6	5-1-0	75	40-20-15
	Minor Course	PG2LISC1021 (300-399)	AI Literacy for Information Search	4.	3-1-0	75	60-0-15
			Total	**28**		**375**	
Sem-II	Major/Core Course	PG2LISC2011 (400-499)	Metadata Intelligence	6	5-0-1	75	40-20-15
	Major/Core Course	PG2LISC2012 (400-499)	Document Classification (Practice)	4	0-0-4	75	0-60-15
	Major/Core Course	PG2LISC2013 (400-499)	Document Cataloguing (Practice)	4	0-0-4	75	0-60-15
	Major/Core Course	PG2LISC2014 (400-499)	Library Society and Information Communication	4	3-1-0	75	60-0-15
	Minor Course	PG2LISC2021 (300-399)	Curent Trends in LIS	4	3-1-0	75	60-0-15
			Total	**22**		**375**	
			Total (Sem-I + Sem-II)	**50**		**750**	

Option- I: Course-work in the 3rd Semester & Research Thesis/Project in the 4th Semester

SEM	Course Type	Course Code & Level	Name of the Course	Credit	L-T-P	Marks	Marks Distribution Th.-Pr.-1A
Sem-III	Major/Core Course	PG2LISC3011 (500-599)	Indian Knowledge Systems in Libraries	4	3-1-0	50	40-0-10
	Major/Core Course	PG2LISC3012 (500-599)	Information Retrieval	4	3-1-0	50	40-0-10
	Major/Core Course	PG2LISC3013 (500-599)	Automated and Digital Library Systems	4	3-1-0	50	40-0-10
	Major/Core Course	PG2LISC3014 (500-599)	Smart Library Systems (Practice)	4	0-0-4	50	0-40-10
	Major/Core Course	PG2LISC3015 (500-599)	Intelligent Discovery and Scholarly Networks	4	3-1-0	50	40-0-10
			Total	**20**		**250**	
Sem-IV	Research Thesis/Project	PG2LISC4031 (500-599)	Research Thesis/Project	20	0-0-20	250	0-250-0 Preparation & Submission of Research Thesis/Project Report (12 Credits) – 150 Marks, Seminar Presentation (50 Marks, 4 Credits) & Viva-voce (50 Marks, 4 Credits)- 100 Marks, 8 Credits
	Two-Credit Compulsory Couse	PG2LISC4041 (500-599)	Community Engagement (NC)	(This shall not be taken into consideration in the calculation of SGPA and CGPA)			
			Total	**20**		**250**	
			Total (Sem-III + Sem-IV)	**40**		**500**	

Option- II: Only Course-work in the 3rd Semester & 4th Semester

SEM	Course Type	Course Code & Level	Name of the Course	Credit	L-T-P	Marks	Marks Distribution Th.-Pr.-1A
Sem -III	Major/Core Course	PG2LISC3011 (500-599)	Indian Knowledge Library Systems	4	3-1-0	50	40-0-10
	Major/Core Course	PG2LISC3012 (500-599)	Information Retrieval	4	3-1-0	50	40-0-10
	Major/Core Course	PG2LISC3013 (500-599)	Automated and Digital Library Systems	4	3-1-0	50	40-0-10
	Major/Core Course	PG2LISC3014 (500-599)	Smart Library Systems (Practice)	4	0-0-4	50	0-40-10
	Major/Core Course	PG2LISC3015 (500-599)	Intelligent Discovery and Scholarly Networks	4	3-1-0	50	40-0-10
			Total	**20**		**250**	
Sem-IV	Major/Core Course	PG2LISC4011 (500-599)	Academic Library System	4	3-1-0	50	40-0-10
	Major/Core Course	PG2LISC4012 (500-599)	Semantic Digital Library System	4	3-1-0	50	40-0-10
	Major/Core Course	PG2LISC4013 (500-599)	Learning Content Management System	4	3-1-0	50	40-0-10
	Major/Core Course	PG2LISC4014 (500-599)	Open Access System	4	3-1-0	50	40-0-10
	Major/Core Course	PG2LISC4015 (500-599)	Informetrics	4	3-1-0	50	40-0-10
	Two-credit Compulsory Course	PG2LISC4041 (500-599)	Community Engagement	(This shall not be taken into consideration in the calculation of SGPA and CGPA)			
			Total	**20**		**250**	
			Total (Sem-III + Sem-IV)	**40**		**500**	

Option- III: Only Course-work in the 3rd Semester & 4th Semester

SEM	Course Type	Course Code & Level	Name of the Course	Credit	L-T-P	Marks	Marks Distribution Th.-Pr.-1A
Sem-III	Research Thesis/Project	PG2LISC3031	Research Thesis/Project	20	0-0-20	250	0-250-0 Preparation & Submission of Research Thesis/ Project Report (12 Credits)-150 Marks, Seminar Presentation (4 credits, 50 Marks) & Viva-voce (4 Credits, 50 Marks,)- 8 Credits, 100 Marks
Sem-IV	Research Thesis/Project	PG2LISC4031	Research Thesis/Project	20	0-0-20	250	0-250-0 Preparation & Submission of Research Thesis/ Project Report (12 Credits)-150 Marks, Seminar Presentation (4 credits, 50 Marks) & Viva-voce (4 Credits, 50 Marks,)- 8 Credits, 100 Marks
	Two-credit Compulsory Course	PG2LISC4041 (500-599)	Community Engagement	(This shall not be taken into consideration in the calculation of SGPA and CGPA)			
Total (Sem-III + Sem-IV)				**40**		**500**	

First Semester

Major/Core Course

Course Code : PG2LISC1011 (400-499)

Course Title : Research Methodology and Etheics

Name of Courses		Type	Credit	Pattern of Teaching-learning (hours per week)			Marks Distribution Th.-Pr.-1A			
Course Code	**Course Title**			L	T	P	Th.	Pr.	IA	Total
PG2LISC1011 (400-499)	**Research Methodology and Etheics**	Major /Core	6	5	1	0	60	0	15	75

Unit-1 : Introduction to Research Methodology

- Concept, meaning, objectives and process of research;
- Types of research – Fundamental and Applied Research, Qualitative and Quantitative Research; Ranganathan's spiral of scientific method; Indian approaches to research;
- Ethical aspects of research.

Unit-II : Research Design and Methods

- Research Design, Research Proposal; Identification and formulation of research problem and Hypothesis; Sampling Technique; Literature Search and Review of Literature;
- Types of research method – Descriptive method, Historical method, Experimental method, Survey method and Case Study.

Unit-III : Data Collection and Presentation

- Data Collection Tools and Techniques – Questionnaire, Interview, Observation, Library records, Reports; Data Types, Scales; Data presentation – Generalization, Tabulation and Graphical presentation.

Unit-IV : Data Analysis and Interpretation

- Application of statistical techniques in LIS and Statistical Pakages- MS-Excel, SPSS, Other Softwares for Statistical Analysis; Measures of Central Tendency – Mean, Medan and Mode; Measures of Dispersion, Standard Deviation, Correlation and regression; Hypothesis Testing, Null and Alternative Hypothesis, Sampling Error, Chi-Square Test.

Unit-V : Report writing and Research communication

- Research reporting – Formats, Structure, Style, Contents
- Guidelines, Style manuals and Citation standards,
- Research support tools – on-line survey tools, research profile, research guides, plagiarism checker,
- Research communication channels (Research-in-progress, ETD repositories, Institutional repositories, Subject repositories).
- Trends in LIS research

Unit-VI : Research and Publication Ethics

- Introduction of philosophy: Definition, Nature and scope, concept, branches
- Ethics: Definition, moral philosophy, nature of moral judgements and reactions
- Ethics with respect to science and research
- Intellectual honesty and research integrity
- Scientific misconducts: Falsification, Fabrication, and Plagiarism (FFP)
- Redundant publications: Duplicate and overlapping publications, Salami Slicing
- Selective reporting and misrepresentation of data
- Publication ethics: Definition, introduction and importance
- Best practices/standards setting initiatives and guidelines: COPE, WAME, etc.
- Conflicts of interest
- Publication misconduct: Definition, concept, problems that lead to unethical behavior and vice-versa, types
- Violation of publication ethics, authorship and contributorship
- Identification of publication misconduct, complaints and appeals
- Predatory publishers and journals
- Subject specific ethical issues, FFP, authorship
- Conflicts of interest
- Complaints and appeals: Examples and fraud from India and abroad
- Use of plagiarism software like DrillBit, iThenticate, Turnitin, Urkund and etc.

Reading List

Boyce, R.R., Meadow, C.T. & Kraft, D.H. (1994). *Measurement in information science*. San Diego, CA: Academic Press.

Busha, Charles A, & Harter, Stephen P. (1980). *Research methods in*

librarianship: techniques and interpretations. New York: Academic Press. Connaway, Lynn Silipigni & Powell, Ronald R. (2010). *Basic research methods for librarians*. 5th ed. Santa Barbara, CA: Libraries Unlimited. Daniel, R., Mills, J., & Classification Research Group. (1975). *A classification of library & information science*. London: Library Association. Das, N.G. (2009). *Statistical methods*. Calcutta: Tata McGraw-Hill.

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Goon, A.M., Gupta, M.K. and Dasgupta, B. (1978). *Basic statistics*. Calcutta: World Press.

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Gupta, S.P. (2002). *Statistical Methods*. New Delhi: Sultan Chand.

Donald, H. K. & Boyce, Bert R. (1991). *Operations research for libraries and information agencies: techniques for the evaluation of management decision alternatives.* San Diego: Academic Press.

Hafner, Arthur W. (1997). *Descriptive statistical techniques for librarians.* (2nd ed.). Chicago: American Library Association.

Hernon. P. (1989). *Handbook of statistics for library decision making*. Norwood, NJ: Ablex.

Khan, M. A. (2002). *Research methods in library and information science*. New Delhi: Cosmo Publications.

Krishan Kumar (1992). *Research methods in library in social science*. New Delhi: Vikas.

Lawal, I. O. (2009). *Library and information science research in the 21st century: a guide for practicing librarians and students*. Oxford,l UK: Chandos Pub. Losee, Robert M., Jr., & Worley, Karen A. (1993). *Research and evaluation for information professionals.* San Diego: Academic Press.

Lynam, P., Slater, M. &Walker, R. (1982). *Research and the practitioner: dissemination of research results within the library-information profession.* London: Aslib.

Martyn, John, & Lancaster, F. Wilfrid. (1981). *Investigative methods in library and information science: an introduction.* Arlington, VA: Information Resources Press.

McClure, C. R., & Hernon, P. (1991). *Library and information science research: perspectives and strategies for improvement.* Norwood, N.J: Ablex Pub. Corp. Mellon, Constance A. (1990). *Naturalistic inquiry for library science: methods and applications for research, evaluation, and teaching.* New York: Greenwood. Moore, N. (2006). *How to do research*. 3rd ed. London: Facet Publishing.

Pickard, Alison Jane. (2012). *Research Methods in Information*. 2nd ed. London: Facet.

Prytherch, Ray. (1994). *Information management and library science: a guide to the literature.* Brookfield, VT: Gower.

McClure, Charles R. & Hernon, Peter, Ed. (1991). *Library and Information science research: perspectives and strategies for improvement.* Norwood,NJ: Ablex Publishing Corporation.

Simpson, I. S. (1990). *How to interpret statistical data: A guide for librarians and information scientists*. London: Library Association. Slater, Margaret, Ed. (1990). *Research methods in library and information studies.* London: Library Association.

Stephen, Peter, & Hornby, Susan. (1995). *Simple statistics for library and information professionals.* London: Library Association.

Williamson, K., Ed. (2002). *Research methods for students, academics and professionals: Information management and systems*. 2nd ed. Wagga Wagga, Australia: Center for Information Studies, Charles Stuart University

Adil E. Shamoo and David B. Resnik, Responsible Conduct of Research, Oxford University Press.

Gary Comstock, Research Ethics: A Philosophical Guide to the Responsible Conduct of Research, Cambridge University Press.

Robin Levin Penslar, Research Ethics: Cases and Materials, Indiana University Press.

Tony Mayer and Nicholas H. Steneck, Promoting Research Integrity in a Global Environment, World Scientific Publishing.

Relevant research papers and articles from reputed journals.

First Semester

Major/Core Course

Course Code : PG2LISC1012 (400-499)

Course Title : Document Classification (Theory)

Name of Courses		Type	Credit	Pattern of Teaching-learning (hours per week)			Marks Distribution Th.-Pr.-1A			
Course Code	**Course Title**			L	T	P	Th.	Pr.	IA	Total
PG2LISC1012 (400-499)	**Document Classification (Theory)**	Major /Core	6	5	1	0	60	0	15	75

Unit-I : Basic concepts

- Meaning, purpose and function of classification, Knowledge classification and document classification;
- Universe of subjects and Modes of formation of subjects;
- Catagories – Ranganathan, Farradane, Vikckery etc;
- Facets and Facets analysis, Speciators and their kinds, phase relations: levels and kinds/nature;
- Isolates: Common and Special.

Unit-II : Schemes of Library Classification

- Classification schedule and its components, Kinds of scheme: Enumarative and Faceted;
- Major Classification Schemes: structure and features;
- Steps involved in practical classification, Call number and its parts;
- Study of classification schemes – DDC, UDC, CC;
- Switching languages – BSO.

Unit-III : General Theory of Library Classification

- Three planes of work;
- Normative principles – Laws, Canon, Principles and Postulates, Application in DDC, UDC and CC;
- Theory of Integrative Levels;
- Contributions of CRG, FID/CR and DRTC;
- Notational techniques in different classification systems.

Unit-IV : Special Classification Schemes

- Need and purpose of special classification schemes;
- Theories of facet analysis and depth schedule;
- Application of theories of facet analysis: Ranganathan's theory, CRG's theory and Louise Spiteri's theory;
- Study of special classification scheme;
- Design of special classification schemes: steps and processes.

Unit-V : Trends and Future of Library Classification

- Classification and Computers: Digital versions of classification schemes;
- Automatic classification – Application of NLP and AI techniques, Projects and initiatives, Indian school of research in automatic classification;
- Classification and Digital resource organization;
- Classification and Ontology (dewey.info, udcdata.info) and Classification in Organizing and Searching on the web;
- Classification and SKOS.

Unit-VI : Practical Component (Colon Classification 6th edition)

- Colon Classification – History, Genesis and Structure;
- Colon Classification – Structure and rules;
- Building of class number – simple and compound subjects;
- Building of class number – complex subjects;
- Colon Classification – use of index.

Reading List

Broughton, Vanda. (2004). *Essential classification*. London: Facet Publishing.
Batty, C. D. (1966). *An introduction to Colon Classification*. London: Bingley.
Chan, L. M. (1985). *Cataloguing and classification: an introduction.* New York: McGraw Hill.
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Foskett, D. J. (1974). *Classification and indexing in social sciences.* London: Aslib.
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Halgamuge, S. K., & Wang, L. (2005). *Classification and clustering for knowledge discovery*. Berlin: Springer. Hunter, E. J. (1988). *Classification made simple.* Aldershot: Gower,.
Husain, Sabahat. (2004). *Library classification: facets and analysis*. Delhi: B. R. Publishing.
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Rowley, J.E. & Farrow, J. (2000). *Organizing knowledge: an introduction to managing access to information*. 3rd ed. Aldershot: Gower. Satija, M. P. (2011). *A guide to the theory and practice of Colon Classification*. New Delhi: Ess Ess Publications.

Sood, S. P. (1998). *Universe of knowledge and universe of subjects*. Jaipur: G. Star Printers. Taylor, A. G. (2007). *Introduction to cataloguing and classification*.10th ed. New Delhi: Atlantic.

Vickery, B. C. (1968). *Faceted classification: a guide to construction and use of special schemes.* London: Aslib.

First Semester

Major/Core Course

Course Code : PG2LISC1013 (400-499)

Course Title : Document Cataloguing (Theory)

Name of Courses		Type	Credit	Pattern of Teaching-learning (hours per week)			Marks Distribution Th.-Pr.-1A			
Course Code	**Course Title**			L	T	P	T.	Pr.	IA	Total
PG2LISC1013 (400-499)	**Document Cataloging (Theory)**	Major /Core	6	5	1	0	60	0	15	75

Unit-I : Basic Concepts and Genesis

- Library catalogue – historical and theoretical foundations, Difference of Library catalogue from Library Accession Register, Shelf List and Bibliography; Objectives (objectives propounded by Cutter, Osborn, Lubetzky, Svenonius and FRBR) and Functions of library catalogue;
- Cataloguing rule base – need, types and applications;
- Physical forms – book, sheaf, card and machine-readable (including OPAC) forms – their advantages and disadvantages and suitability in different types of libraries; Inner forms – dictionary, classified and alphabetico-classed forms and their comparative studies;
- Entries – types, formats and their functions; Filing of entries – rules and tools.

Unit-II : Principles and Rules

- Normative principles – objectives, scope and applications;
- Normative principles – History and time line of development; International Conference on Cataloguing Principles (ICCP), 1961; Canons and principles of cataloguing as propounded by Ranganathan;
- IME/ICC principles;
- Standardization of Bibliographic Description – ISBDs, Consolidated ISBD, FRBRized ISBDs.

Unit-III : Cataloguing Codes

- Cataloguing codes – definition, objectives, scope, need, components;
- Cataloguing codes – historical development;
- Features of Anglo-American Cataloguing Rules (AACR 2);
- Features of Classified Catalogue Code (CCC 5th edition);

- Features of RDA (Resource Description and Access).

Unit-IV : Authority Data and Subject Cataloguing

- Authority data – name authority and subject authority, Rendering of Indic names;
- General principles of subject cataloguing;
- Subject heading lists and their features – Sears List of Subject Headings (SLSH);
- Subject heading lists and their features – Library of Congress Subject Headings (LCSH);
- Subject cataloguing by chain procedure.

Unit-V : Cataloguing – Policies and Initiatives

- Cataloguing Policies: need, purpose and advantages, Organization of cataloguing department;
- Centralized and co-operative cataloguing and Limited and selective cataloguing; Union Catalogue – layout, compilation, services (Indian and International);
- Content Designation initiatives – CCF, MARC, UNIMARC; IFLA initiatives – FRBR, FRAD, FRSAD, etc;
- Subject and Name authority initiatives – Program for Cooperative Cataloguing (BIBCO, CONSER, SACO, NACO) and VIAF.

Reading List

ALA (1968). *ALA Rules for filing Catalog Cards*. Chicago: ALA.

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First Semester

Major/Core Course

Course Code : PG2LISC1014 (400-499)

Course Title : Library Information Technology

Name of Courses		Type	Credit	Pattern of Teaching-learning (hours per week)			Marks Distribution Th.-Pr.-1A			
Course Code	**Course Title**			L	T	P	End Sem	Pr.	1A	Total
PG2LISC1014 (400-499)	**Library Information Technology**	Major/ Core Course	6	5	1	0	40	20	15	75

Unit-I : Introduction to ICT

- Data, information and knowledge, ICT – definition, scope, application in human activities, social implication, Application of ICT in activities of library and information centres;
- Brief history of computer development, Generation of computers, Characteristics and classification of digital computers;
- Anatomy of digital computers – System hardware, Memory units and auxiliary storage devices, Peripheral devices (Input and output devices);
- Communication devices, Transmission media (Bound links and Unbound links), Switches;
- Data Representation in Computer – Bits, bytes and word, Number system (Binary, Octal, Decimal, Hexadecimal and their conversion), Text representation codes (ASCII, ISCII, EBCDIC and UNICODE), 7 bit & 8 bit ASCII and UTF-8 & UTF-16.

Unit-II : Logical Units of ICT: Software

- System software – Operating System, Simulators, Emulators, Translators;
- Application software, System utility software, Software packages and their domains of application;
- Operating Systems – Types and functions, Basic concepts related to MSDOS, Windows and Linux operating system;
- Open source software and open standards; Software and standards related to LIS domain.

Unit-III : Computer Programming Languages

- Definition, scope and use of programming languages, Types of programming languages – machine language, assembly language and high level language;
- High level programming languages – classification, application domain and generations;
- Program development tools – compiler, interpreter, loader, linker and locator;
- Programming process – steps, algorithm and flowcharting;
- Overview of popular high-level languages – C, C++, Java, PHP, Python etc.

Unit-IV : Computer Networks and Distributed Information System

- Computer networks – definition, scope, purpose, features and advantages, Types of network – LAN, MAN and WAN;
- Internet – origin, development, architecture, connection options; Internet in India – GIAS, ISPs and connection options; Internet addressing system – IP address and domain name system; Internet, Intranet and Extranet;
- Internet resource access tools – Telnet, FTP, Gopher, Archie, Mosaic and WWW;
- Web retrieval tools – subject directories, search engines and meta search engines;
- Distributed information system and library – Web 2.0, Library 2.0, Linked Data, Cloud Computing, Semantic Web.

Unit-V : Database Management System (DBMS)

- Concept, scope, purpose and advantages of DBMS;
- Entity, attributes and properties, Field, record and database;
- Data models – hierarchical, network and relational, Basics of RDBMS;
- Bibliographic databases, Search strategy and techniques of data retrieval, CD-ROM database searching;
- WINISIS as bibliographic database management system.

Unit-VI : Practical Components

- Operating System Fundamentals: Basic operations and file management in Windows and Linux environments.
- Office Productivity Applications: Hands-on use of word processing, spreadsheets, presentations, and related office management tools.
- Programming Fundamentals: Basic programming concepts, problem-solving, and simple application development using languages such as C, C++, Java, and PHP.
- Database Management Systems: Practical exposure to multipurpose and bibliographic DBMS, including MySQL, PostgreSQL, SQLYog, MariaDB, MongoDB, and SQLite.
- Information Retrieval and Academic Searching: Searching bibliographic and full-text databases using advanced search techniques and AI-powered academic search tools.
- AI Tools for Scholarly Research: Practical use of AI-assisted tools for literature discovery, academic searching, citation analysis, and research support using tools such as Semantic Scholar, Research Rabbit, Connected Papers, OpenAlex and etc.

Reading List

Basandra, Suresh K. (2002). Computers today. New Delhi: Galgotia

Bob, W., & McKellen, M. (1995). A beginner's guide to the PC. Delhi: Affiliated East West Press,.

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Bradley, P. (2007). How to use Web 2.0 in your library. London: Facet.

Bradley, P. (1999). Internet power searching: the advanced manual. New York: Neal-Schuman Publishers.

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Devarajan, G., & Asari, K. R. (2014). *Information technology and library automation*. Ess Ess Publiations.

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Rawlins, B. (2016). *Mobile technologies in libraries: A lita guide*. Bloomsbury Publishing PLC.
Scott, M. L. (2006). Programming language pragmatics. San Francisco, CA: Morgan Kaufmann Pub.
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Tanenbaum, A. S. (1984). Structured computer organization. Englewood Cliffs, N.J: Prentice-Hall.
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Walsh, T. (2005). Introducing ICT: Basic to intermediate. Dublin: Gill & Macmillan.
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First Semester

Minor Course

Course Code : PG2LISC1021 (300-399)

Course Title : AI Literacy for Information Search

Name of Courses		Type	Credit	Pattern of Teaching-learning (hours per week)			Marks Distribution Th.-Pr.-1A			
Course Code	**Course Title**			L	T	P	Th.	Pr.	IA	Total
PG2LISC1021 (300-399)	**AI Literacy for Information Search**	Minor Course	4	3	1	0	60	0	15	75

Unit-I : Foundations of AI and Information Search

- Concept of information search;
- Evolution of search technologies;
- Introduction to Artificial Intelligence;
- AI in information retrieval;
- Applications of AI in daily life.

Unit-II : Search Techniques and Information Sources

- Search strategies and techniques;
- Search engines and web resources;
- Academic databases and digital libraries;
- Open Access information resources;
- Evaluation of information sources.

Unit-III : AI-Powered Search Tools

- Generative AI tools;
- Conversational AI for searching;
- Semantic and intelligent search;
- AI-assisted literature discovery;
- Personalized recommendation systems.

Unit-IV : Prompt Engineering for Effective Search

- Fundamentals of prompt engineering;

- Designing effective search prompts;
- Refining AI-generated results;
- AI for academic and professional search;
- Hands-on applications of AI tools.

Unit-V : Ethical and Responsible Use of AI

- Verification and fact-checking;
- AI bias and limitations;
- Privacy and data security;
- Academic integrity and plagiarism;
- Future trends in AI-powered search.

Unit VI: Knowledge Discovery in the AI Era

- AI Literacy: Concept, scope, significance, AI-assisted information searching and retrieval, traditional versus AI search, and ethical issues.
- AI-Powered Information Search Tools: Applications of ChatGPT, Gemini, Claude, Microsoft Copilot, Perplexity AI, You.com and NotebookLM for information discovery and summarisation.
- Scholarly Information Discovery: Literature searching and research discovery using Google Scholar, Semantic Scholar, OpenAlex, Dimensions AI, Lens, SciSpace, Elicit, Consensus, Connected Papers, ResearchRabbit and Litmaps.
- Information Evaluation and Verification: Evaluation of AI-generated information, misinformation, hallucinations and fact-checking using Google Fact Check Explorer, Snopes and PolitiFact.
- Practical Components: Prompt engineering, AI-assisted searching, literature review, citation discovery, reference management and verification using major AI search and scholarly discovery platforms.

Reading List

Al-Sowaidi, B., & Mohammed, T. (Eds.). (2026). *Human-ai collaboration and the evolving role of educators*. IGI Global Scientific Publishing.

Bashir, D. (2021). *Ai literacy: Understanding shifts in our digital ecosystem*. New Degree Press.

Blanchard, E., Chen, G., Chi, M., & Isotani, S. (Eds.). (2027). *Artificial intelligence in education: 27th international conference, aied 2026, seoul, south korea, june 27–july 3, 2026, proceedings, part vi* (1st ed. 2027). Springer Nature Switzerland.

Carillo, E. C. (2026). *Mla guide to digital literacy(Updated with ai guidance)*. Modern Language Association.

Cristea, A. I., Walker, E., Lu, Y., Santos, O. C., & Isotani, S. (Eds.). (2025). *Artificial intelligence in education. Posters and late breaking results, workshops and tutorials, industry and innovation tracks, practitioners, doctoral consortium, blue sky, and wideaied: 26th international conference, aied 2025, palermo, italy, july 22–26, 2025, proceedings, part iii* (1st ed. 2025). Springer Nature Switzerland.

Jitendra, P. (2025). *Developing ai literacy in students*. IGI Global.
Khamis, I. (Ed.). (2024). *Applications of artificial intelligence in libraries*. Information Science Reference.
Kluge, A., Peifer, C., Wilkens, U., Nitsch, V., Berretta, S., & Ontrup, G. (2024). *Human-centered ai at work: Common ground in theories and methods*. Frontiers Media SA.
Mavodza, J. (2022). *Navigating and managing an academic library: Best practices from the Arabian Gulf region*. De Gruyter Saur.
Ng, D. T. K., Chu, S. K. W., O'Dea, X., & Leung, J. K. L. (2026). *From ai literacy to generative ai literacy: Theory, policy and practice*. Springer Nature.
Papadakis, S. (Ed.). (2026). *AI in early education: Integrating artificial intelligence for inclusive and effective learning*. Wiley.
Papadakis, S. (2026). *Teacher perspectives and responsible practice for integrating AI in the classroom*. IGI Global Scientific Publishing.
Paulus, M. J. (2026). *Hope in the library: How libraries can help shape our future with artificial intelligence*. Bloomsbury Academic.
Pegrum, M., Hockly, N., & Dudeney, G. (2022). *Digital literacies* (Second edition). Routledge.
Thoseby, C. (2026). *Book 1 – digital & ai literacy: Understanding the systems shaping your decisions: student edition*. RezOne Press.
Wrench, J. S., & Elmoudden, S. (2026). *The future is now: Empowering society through ai literacy*. Milne Open Textbooks.

Second Semester

Major/Core Course

Course Code : PG2LISC2011 (400-499)

Course Title : Metadata Intelligence

Name of Courses		Type	Credit	Pattern of Teaching-learning (hours per week)			Marks Distribution Th.-Pr.-1A			
Course Code	**Course Title**			L	T	P	Th.	Pr.	IA	Total
PG2LISC2011 (400-499)	**Metadata Intelligence**	Major/ Core Course	6	5	0	1	40	20	15	75

Unit-I : Foundations of Metadata Intelligence

- Concept, scope, objectives and significance of metadata in information organization and retrieval.
- Evolution of metadata and bibliographic control in libraries and digital environments.
- Metadata types: descriptive, administrative, structural, preservation and semantic metadata.
- Metadata standards ecosystem and its role in resource discovery and information exchange.

- Overview of content designation standards: ISBD, RDA, FRBR, FRAD, FRSAD, IFLA-LRM, CCF, UNIMARC and MARC 21.

Unit-II : Bibliographic Metadata Standards and Interoperability

- Bibliographic metadata: concepts, characteristics, structure and applications.
- MARC 21 Bibliographic Format, CCF and UNIMARC.
- Metadata interoperability and data exchange mechanisms.
- Metadata crosswalks, mapping and transformation.
- Z39.50, SRU/SRW, OAI-PMH and API-based metadata services.

Unit-III : Authority Control and Identity Management

- Authority data: concepts, objectives, types and applications.
- Authority files, authority lists and authority control systems.
- MARC 21 Authority Format and authority record creation.
- FRAD, FRSAD and IFLA-LRM in authority management.
- VIAF, ISNI, ORCID and Wikidata for identity management and linked authority control.

Unit-IV : Metadata Schemas and Encoding Technologies

- Metadata models, application profiles and best-practice guidelines.
- Dublin Core Metadata Element Set (Simple and Qualified).
- Metadata encoding standards and syntax.
- XML, RDF, RDF Schema, SKOS and semantic metadata frameworks.
- Introduction to BIBFRAME and metadata representation in linked data environments.

Unit-V : Domain-Specific Metadata and Knowledge Systems

- Need, scope and applications of domain-specific metadata schemas.
- Learning Object Metadata and Educational Resource Description: IEEE-LOM, CanCore, GEMS, LRMI, IMS Learning Resource Metadata and SCORM.
- Cultural heritage metadata: VRA Core, CDWA Lite and MODS.
- ETD metadata frameworks: ETD-MS, NDLTD, OATD, BASE, CORE, PQDT Open and Shodhganga.
- Metadata for research data, digital repositories, multimedia resources, knowledge graphs and Linked Open Data environments.

Unit-VI : Practical Components

- Creation and editing of MARC 21 Bibliographic and Authority Records.
- Bibliographic data creation using MARC 21 and selected metadata schemas.
- Dublin Core (Simple and Qualified) implementation.
- Authority control using VIAF, ORCID and Wikidata.
- Metadata mapping, crosswalks, validation and interoperability testing.
- Hands-on use of Koha, SLIMS, MARCEdit, OpenRefine and metadata editors.

- Metadata harvesting, data conversion, migration and quality assessment.
- Metadata analytics, automation and linked data applications using Python.
- Introduction to BIBFRAME, Linked Data and AI-assisted metadata generation tools.

Reading List

Aalberg, T., Merčun, T., & Žumer, M. (January 01, 2011). Coding FRBR-structured bibliographic information in MARC. Digital Libraries.

Anderson, C. B., & Fisher, D. H. (2025). *Artificial intelligence for academic libraries*. Taylor & Francis.

Baca, M. (2008). *Introduction to metadata*. Getty Publications.

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Dou, H., Juillet, A., & Clerc, P. (2019). *Strategic intelligence for the future 2: A new information function approach*. John Wiley & Sons.

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information (CCF/B). Paris: General Information Programme and UNISIST, United Nations Educational, Scientific and Cultural Organization.

Intner, S. S., Lazinger, S. S., & Weihs, J. (2006). *Metadata and its impact on libraries*. Libraries Unlimited.

Jones, W., Ahronheim, J. R., & Crawford, J. (2002). Cataloging the Web: Metadata, AACR, and MARC 21. Lanham, Md: Scarecrow Press.

Konstantopoulos, S., Perantonis, S., Karkaletsis, V., Spyropoulos, C. D., & Vouros, G. (2010). *Advances in artificial intelligence: Theories, models, and applications: 6th hellenic conference on ai, setn 2010, athens, greece, may 4-7, 2010. Proceedings*. Springer.

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Library of Congress, Library and Archives Canada, British Library, & National Library of Canada. (2000). MARC 21 format for holdings data: Including guidelines for content designation. Washington: Library of Congress, Cataloging Distribution Service.

Library of Congress, Library and Archives Canada, British Library, National Library of Canada, & British Library. (1999). MARC 21 format for bibliographic data: Including guidelines for content designation. Washington: Library of Congress, Cataloging Distribution Service.

Library of Congress, Library and Archives Canada, British Library, National Library of Canada, & British Library. (2000). MARC 21 format for community information: Including guidelines for content designation. Washington: Library of Congress, Cataloging Distribution Service.

Liu, J. (2007). Metadata and its applications in the digital library: Approaches and practices. Westport, Conn.: Libraries Unlimited.

Lugmayr, A., Niiranen, S., & Kalli, S. (2004). *Digital interactive tv and metadata: Future broadcast multimedia*. Springer Science & Business Media.

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Smiraglia, R. P. (2005). *Metadata: A cataloger's primer*. Psychology Press.

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Žumer, M., Zeng, M. L., & Salaba, A. (2010). FRBR: A generalized approach to Dublin Core application profiles. (Pittsburgh proceedings, 21-30.)

Second Semester

Major/Core Course

Course Code : PG2LISC2012 (400-499)

Course Title : Document Classification (Practice)

Name of Courses		Type	Credit	Pattern of Teaching-learning (hours per week)			Marks Distribution Th.-Pr.-1A		
Course Code	**Course Title**			L	T	P	Th.	Pr.	IA
PG2LISC2012 (400-499)	**Document Classification (Practice)**	Major/ Core Course	4	0	0	4	0	60	15

Unit-I: Introduction

- History and Genesis of DDC;
- Structure and rules of DDC, Steps in practical classification;
- History and Genesis of UDC;
- Structure and rules of UDC, Steps in practical classification;
- Comparative study of DDC, UDC and CC.

Unit-II: Dewey Decimal Classification – Stage 1 (Edition as decided by Department)

- Summary;
- Schedule;
- Tables;
- Building class number for simple and compound subjects;
- Building class number for complex subjects.

Unit-III: Dewey Decimal Classification – Stage 2 (Edition as decided by Department)

- Relative index;
- Call number (use of Cutter number, use of Dewey Cutter Program of OCLC http://www.oclc.org/support/services/dewey/program/license.en.html);
- Shelf order;
- Web Dewey trial (http://www.oclc.org/content/forms/worldwide/en/webdewey-free-trail.html);
- Use of DDC for organization of digital resources (CyberDewey, DDC Linked Data – Dewey.info).

Unit-IV: Universal Decimal Classification – Stage 1 (Edition as decided by Department)

- Main tables;
- Auxiliary tables;
- Common auxiliaries;
- Special auxiliaries;
- Facetisation and Synthesis.

Unit-V: Universal Decimal Classification – Stage 2 (Edition as decided by Department)

- Building class number for simple and compound subjects;
- Building class number for complex subjects;
- Call number and Shelf orders;
- Use of DDC in organization of digital resources, UDC Consortium (http://www.udc.org), UDC in Indic Scripts (http://www.udc.org/udcsummary/php/index.php);
- UDC Linked Data (http://udcdata.info/**)**

Reading List

Aida, S. (January 01, 2008). Use of the Universal Decimal Classification: A world-wide survey. *Journal of Documentation, 64,* 2, 211-228. British Standards Institution. (1963). *Guide to the Universal Decimal Classification (UDC)*. London: BSI.

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Chan, L. M., Comaromi, J. P., Mitchell, J. S., & Satija, M. P. (1996). *Dewey decimal classification: A practical guide*. Albany: Forest Press. Davis, S. W. (1992). *DDC 20 workbook: A practical introduction to the Dewey Decimal Classification*. Albany, N.Y: Forest Press.

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Science, Bangalore.

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Robinson, G. (1979). *UDC, a brief introduction*. The Hague: International Federation for Documentation.

Rozman, D. (January 01, 2009). The practical value of classification summaries in information management and integration. *Extensions and Corrections to the UDC,* 31, 275-283.

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Sharma, P. S. K. (1998). *Practical approach to DDC: Dewey Decimal Classification made easy*. New Delhi: Ess Ess.

Singh, K. P. (2013). *UDC: A manual for classification practical and information resources*. New Delhi: Today & Tomorrow's Printers and Publishers.

Slavic, A., Civallero, E., & The International UDC seminar. (2011). *Classification & ontology: Formal approaches and access to knowledge : proceedings of the international UDC seminar 19-20 September 2011, The Hague, The Netherlands, organized by UDC Consortium, The Hague*. Würzburg: Ergon.

Second Semester

Major/Core Course

Course Code : PG2LISC2013 (400-499)

Course Title : Document Cataloging (Practice)

Name of Courses		Type	Credit	Pattern of Teaching-learning (hours per week)			Marks Distribution Th.-Pr.-1A			
Course Code	**Course Title**			L	T	P	Th.	Pr.	1A	Total
PG2LISC2013 (400-499)	**Document Cataloging (Practice)**	Major/ Core Course	4	0	0	4	0	60	15	75

Unit-I : Introduction

- Entries related with AACR II – main entry, added entry, reference entry, analytical entry;
- AACR II – structure and rules (description and access points);
- Entries related with CCC;
- CCC – structure and rules;
- Filling rules related with AACR entries and CCC entries.

Unit-II : CCC 5th Edition – Rules for Description

- Simple books, Multi-volume books and Composite books;
- Government document and reports;
- Serials and Conference proceedings;
- Special materials;
- Other forms.

Unit-III : CCC 5th Edition – Rendering of Access Points

- Personal authors;
- Corporate authors;
- Title;
- Conflict of authorship;
- Subject access by Sears List of Subject Headings.

Unit-IV : AACR II – Rules for Description

- Monographs, Multi-volume books and composite books;
- Government documents and reports;

- Serials and Conference proceedings;
- Cartographic materials, Special materials and Electronic resources;
- Other forms.

Unit-V : AACR II – Rendering of Access Points

- Persons;
- Corporate bodies;
- Title;
- Conflict of authorship;
- Subject access by Sears List of Subject Headings.

Unit-VI : AI Tools and Techniques for Document Cataloguing

- AI-assisted ISBD cataloguing and catalogue card generation;
- Automated bibliographic description, metadata generation, subject analysis, classification, authority control, and access-point generation;
- Application of NLP, Machine Learning, LLMs, and Knowledge Graphs for intelligent cataloguing, metadata enrichment, validation, and quality control.

Reading List

Clack, D. H. (1990). *Authority control: Principles, applications, and instructions*. Chicago: American Library Association. Hasan, N. (1984). *Cataloguing practice: According to classified catalogue code (Ed 5)*. New Delhi: Gitanjali Pub. House.

Hoffmann, C. F. B. (1980). *Getting ready for AACR 2: The cataloger's guide*. White Plains, NY: Knowledge Industry Publications. Hunter, E. J. (1979). *AACR 2: An introduction to the second edition of Anglo-American cataloguing rules*. London: C. Bingley.

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Maxwell, Robert and Maxwell, Margaret F. (1997). *Maxwell s handbook of AACR2R: Explaining and illustrating the Anglo American Cataloguing Rules and the 1993 amendments*. Chicago: ALA.

Olson, N. B., Intner, S. S., & Swanson, E. (1992). *Cataloging of audiovisual materials: A manual based on AACR 2*. DeKalb, Ill: Minnesota Scholarly Press. Olson, N. B., Swanson, E., & Intner, S. S. (1985). *Cataloging of audiovisual materials: A manual based on AACR 2*. Mankato, Minn: Minnesota Scholarly Press.

Parameswaran, M. (1988). *Headings and access points for personal authors and*

corporate bodies: A comparative study of the Anglo-American Cataloguing Rules (2nd ed.) and the Classified Catalogue Code (5th ed.). Thesis (MSc) -- Loughborough University of Technology.

Ranganathan, S. R., & Neelameghan, A. (1964). *Classified Catalogue Code, with additional rules for dictionary catalogue code.* 5th ed. London: Asia Pub. House.

Rogers, J. A. V., & Saye, J. D. (1987). *Nonprint cataloging for multimedia collections: A guide based on AACR 2*. Littleton, Colo.: Libraries Unlimited. Salinger, F. A., & Zagon, E. (1985). *Notes for catalogers: A sourcebook for use with AACR 2*. White Plains, NY: Knowledge Industry Publications.

Sharma, C. D. (1973). *Classified catalogue code in theory and practice*. Delhi: Metropolitan Book Co.

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Swanson, E., & Minnesota AACR 2 Trainers. (1982). *A Manual of advanced AACR 2 examples*. Lake Crystal, Minn.: Published for the Minnesota AACR 2 Trainers by Soldier Creek Press.

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Swanson, E., McClaskey, M. J., & Minnesota AACR 2 Trainers. (1980). *A Manual of AACR 2 examples*. Lake Crystal, Minn.: Soldier Creek Press. Taylor, A. G. (1982). *AACR 2 headings: A five-year projection of their impact on catalogs*. Littleton, Colo.: Libraries Unlimited.

Varma, A. K. (1987). *Classified catalogue code: Entries and procedure*. Delhi: Vishwa-Kala Prakashan.

Welsh, A., & Batley, S. (2012). Practical cataloguing: AACR, RDA and MARC 21. Chicago: Neal-Schuman, an imprint of the American Library Association.

Second Semester

Major/Core Course

Course Code : PG2LISC2014 (400-499)

Course Title : Library Society and Information Communication

Name of Courses		Type	Credit	Pattern of Teaching-learning (hours per week)			**Marks Distribution Th.-Pr.-1A**			
Course Code	**Course Title**			L	T	P	Th.	Pr.	1A	Total
PG2LISC2014 (400-499)	**Library Society and Information Communication**	Major/ Core Course	4	3	1	0	60	0	15	75

Unit-I : Library as a Social Institution: Types, Levels, Features & Functions

- Objectives and functions of social institutions with special reference to libraries and information centers (LICs);
- Historical development of LICs, Information resources, Tools, Techniques and Technologies;
- Five Laws of Library Science, Modifications of Five Laws, other normative principles; Library and Information Employability Program;
- National and Copyright libraries, Academic libraries, Public libraries, Special libraries and Information centres, Other information agencies and concerns, Automated, Digital and Virtual library systems.

Unit-II : Library Policy and Legislation, Library Movement and Profession

- IFLA/UNESCO Public Library Manifesto, IFLA/UNESCO Guidelines;
- Acts relating to information with special reference to India, including Press and Registration of Books Act, Delivery of Books (Public Libraries) and Newspapers Act, Intellectual Property Rights;
- Library legislation – needs, Indian scenario, WB Public Libraries Act, 1979 (including amendments), Comparative study of library legislations in Indian states;
- International and national programmes and policies – NAPLIS, Recommendations of National Knowledge Commission, India;
- Occupation, Vocation and Profession, Attributes of Profession, Librarianship as a profession in India and abroad, Professional ethics and duties of Library and Information workers;
- Professional associations and their role in library development;
- Library movement and development in India with special reference to West Bengal;

- Role of Professional Associations (RRRLF, ILA, IASLIC, ALA, CILIP, ASLIB, IFLA and etc.).

Unit-III : Public Relations and Extension Activities

- Library Public Relations and Extension Service;
- Community Information Service;
- Local History Collection;
- Resource sharing and networking.

Unit-IV : Introduction to Information Science, Information Communication and Society

- Information and knowledge: Definition, kinds, attributes, sources, use;
- Conceptual relation between data, Information, knowledge and wisdom;
- Process of Cognition: views and methodologies;
- Information Science: Origin and development, scope and coverage, relationship with other disciplines and professions;
- Information Communication: Types, Models, Barriers, Process and Theories, Information transfer process – Generation to Utilisation;
- Information Society: Social implications; Genesis; Changing role of information institutions and information professionals; Information Policies: National and International plans, policies and programmes relating to information for development with special reference to India and developing countries;
- Politics of information: Universal data flow, Free flow of information vs. New World Information and Communication Order, Information poverty, Digital divide;
- Recent trends in Information Communication.

Unit-V : Economics and Marketing of Information

- Economics of information: Concept, scope and objectives; Information as a commodity;
- Information economics vs. Economics of information;
- Theories and Models: Demand and supply of information; Economic principles relevant to information, Production, distribution and consumption of information and knowledge, Machlup's model;
- Marketing of information products and services, Planning, process and strategies, Economic analysis models, Cost-benefit analysis and Cost-effectiveness, Market research.

Unit-VI : Information and Knowledge Management, Information Literacy

- Document management vs. Information management vs. Knowledge management;
- Information Industry;
- Knowledge society and Knowledge economics;
- Knowledge Management: Concepts, tools, data and text mining;
- Definition: Information Literacy, Computer Literacy, E-Literacy, Information Literacy: Skills and Competencies;
- Information Literacy and Bridging the Digital Divide;
- Policies and Guidelines: UNESCO, IFLA and ALA.

Reading List

Bandyopadhyay, A.K. (2008). Our public libraries. Burdwan: R.Bandyopadhyay.
Cornish, Graham P. (2001). Interpreting the law for libraries, archives and information services. Rev. 3rd ed. London: Facet Publishing. Davis, D. W. (1975). Public libraries as cultural and social centres. New York: Scarecrow.
Greer, Roger C., Grover, Robert J. & Fowler, Susan G. (2013). Introduction to the library and information professions. 2nd ed. Westport, CT: Libraries Unlimited.
IFLA. (1977). Standards for library service. 2nd ed. Munich: Verlag.
India. (1959). Advisory Committee for Libraries, Report. Delhi: Manager of Publications. Khanna, J. K. (1987). Library & society. Kurukshetra: Research Publications.
Koontz, C. & Gubbin, B., Eds. (2010). IFLA public library service guidelines. Berlin: De Gruyter Saur. Krishan Kumar (1986). Library organization. Delhi: Vikas.
Kumar, P.S.G. (2001). Indian encyclopedia of library & information science. Vol. 3. New Delhi: S. Chand. Kumar, P.S.G. (2002). A student's manual of library & information science. Delhi: BR Publishing House.
Laxman Rao, N., Vishwa Mohan, & Sudarshan Rao, S. (2001). Changing dimensions of LIS education. Hyderabad: IATLIS. Mittal, R. L. (1984). Library administration: theory & practice. 5th ed. Delhi: Metropolitan.
Norman, S. (2001). Practical copyright for information professional. London: Facet Publishing.
Pilling, S., & Kenna, S. (2002). Co-operation in action: Collaborative initiatives in the world of information. London: Facet Publishing. Ranganathan, S. R. (1957). Five laws of library science. Madras: Madras Library Association.
Ranganathan, S. R., & Neelameghan, A. (1972). Public library system. Bangalore: Sarada Ranganathan Endowment. Rout, R. K. (1991). Library legislation in India. New Delhi: Reliance.
Ray, Swapna (2005). Public library act in Indian perspective. Kolkata: Prova Prakashani. Sahai, S. (1973). Library and community. New Delhi: Today & Tomorrow.
Sandy, N. (1999). Copyright in further and higher education libraries. 4th ed. London: Facet Publishing. Sharma, Pandey S.K. (1987). Library and society. New Delhi: Ess Ess Publications.
Shera, J. H. (1970). The foundations of education of librarianship. Bombay: Asia.
Shera, J. H. (1970). Sociological foundations of librarianship. New York: Asia Pub. House.
UNESCO. (2000). Unesco school library manifesto: the school library in teaching and learning for all. The Hague: IFLA Headquarters. UNESCO & International Federation of Library Associations and Institutions. (1995). Public library manifesto. The Hague, Netherlands: IFLA. Vashisht, C. P. (1994). Library movement and library development in India. Delhi: ILA.
Venkatappaiah, V. (1990). Indian library legislation. 2 vols. New Delhi: Daya.
Withers, F. N. (1974). Standards for library service: an international survey. Paris: Unesco.
Bawden, David & Robinson, Lyn (2012). Foundations of information science. London: Facet Publishing.
Bell, D. (1980). The social framework of the information society. In Derrouzos M C & Moses,L. (eds), The computer age: a twenty year view. Cambridge: MIT Press.
Benjamine, J.B. (1986). Communication: concept and contexts. New York: Harper & Row.
Dearnley, J. & Feather, J. (2001). The wired world: an introduction to the theory and practice of the information society. London: Library Association. Debons, Anthony and Larson, Arvid G.,

Ed. (1983). Information science in action: system design. 2 vols. Boston: Martinus Nijhoff Publishers.

Delanty, G. (2001). Challenging knowledge: the university in the knowledge society. Open University Press. Dordick, H.S. & Wang, G. (1993). The information society: a retrospective view. Newbury Park, CA: Sage. Drucker, P. (1998). From capitalism to knowledge society. The knowledge economy, 15-34.

Feather, J. (2008). The information society: a study of continuity and change. 5th ed. London: Facet Publishing. Gilchrist, Alan, Ed. (2009). Information science in transition. London: Facet Publishing.

Machlup, F. (1984). The economics of information and human capital. Princeton: Princeton University Press. Martin, W. J. (1995). The global information society. Brookfield, VT: Gower.

McGarry, K. J. (1993). The changing concept of information: an introductory analysis. (2nd. ed.). London: Facet Publishing. Masuda, Y. (1980). The information society as post-industrial society. Washington, D.C.: World Future Society.

Salvaggio, J.L. (1989). The information society: economic, social, and structural issues. Hilsdale, NJ: Lawrence Erlbaum.

SinghaRoy, D. K. (2014). Knowledge society: new identities in emerging India. New York: Cambridge University Press. Taragowski, A.S. (1998). Global information infrastructure: the birth, vision and architecture. Harrisburg: Idea Group. Vickery B. C. & Vickery A. (1987). Information science in theory and practice. London: Butterworth.

Webster, F. (2002). Theories of the information society. 2nd Ed. London: Routledge.

Second Semester

Minor Course

Course Code : PG2LISC2021 (300-399)

Course Title : Curent Trends in LIS

Name of Courses		Type	Credit	Pattern of Teaching-learning (hours per week)			**Marks Distribution Th.-Pr.-1A**			
Course Code	**Course Title**			L	T	P	Th.	Pr.	IA	Total
PG2LISC2021 (300-399)	**Curent Trends in LIS**	Minor Course	4	3	1	0	60	0	15	75

Unit-I : Foundations of Library & Information Science

- Libraries, Documentation and Information Centres;
- Five Laws of Library Science and their Implications;
- Types, Objectives and Functions of Libraries: Public, National, Academic and Research Libraries;
- Library Extension Activities;
- User Studies.

Unit-II : Information Centre Management

- Principles of Management and their application in Libraries and Information Centres (POSDCORB and TQM);
- Library Records (Technical records, Administrative records);
- Processing of Library Documents;
- Library circulation, Library statistics and Annual report;
- Preservation and conservation of library materials.

Unit-III : Open Access Sources and Services

- OA Pathfinders – DMOZ, DOAB, OATD;
- Gold Path of OA – DOAJ and Green Path of OA – OpenDOAR, ROAR;
- Open Data;
- OA Gateways – SSRN, PLOS, OA Federation – BASE, CORE;
- OA Educational Resources and OA Citation Services.

Unit-IV : Library Information Technology

- Definition, Generations of Computer and Types;
- Applications of Computer in Libraries;
- Library software;
- Reference Management System;
- Anti-plagiarism software.

Unit-V : Virtual Learning System

- Definition, characteristics and benefits;
- Types of Virtual Learning Systems (VLS);
- Learning Content Management System;
- Moodle and Moodle Cloud;
- E-learning Systems (SWAYAM, MOOCs, NPTEL and etc.).

Reading List

Bailey, C. W., & Association of Research Libraries. (2005). Open access bibliography: Liberating scholarly literature with e-prints and open access journals.
Washington, DC: Association of Research Libraries.
Chan, L., & Chan, Leslie. (2012). Re-imagining research impact in the open knowledge environment.
Chan, L., Kirsop, B., & Arunachalam, S. (2005). Open access archiving: the fast track to building research capacity in developing countries. London: Science and development network (SciDevNet)
Clinic on Library Applications of Data Processing, Sutton, B., Davis, C. H., University of Illinois at Urbana-Champaign., & Committee on Institutional Cooperation. (1992). Networks, open access, and virtual libraries: implications for the research library. Urbana-Champaign: Graduate School of Library and Information Science, University of Illinois at Urbana-Champaign.
Crawford, W. (2011). Open access: what you need to know now. Chicago: American Library Association.
D'Antoni, S., Savage, C., & Unesco. (2009). Open educational resources: Conversations in cyberspace. Paris: United Nations Educational, Scientific and Cultural Organization.
European Union., & UNESCO (2008). Open Access: opportunities and challenges. Luxembourg: EUR-OP.
Fong, Y. S., & Ward, S. M. (2004). The changing landscape for electronic resources: Content, access, delivery, and legal issues. Binghamton, NY: Haworth Information Press.
Godwin, P., & Parker, J. (2012). Information literacy beyond Library 2.0. London: Facet Pub.
Guibault, L. M. C. R., & Angelopoulos, C. (2011). Open content licensing: from theory to practice. Amsterdam: Amsterdam Univ Pr. Harnad, Stevan. (2008). Mandate Open Access to maximizing research progress. (http://hdl.handle.net/10077/2603.)
Harnad,S. (2005). Impact analysis in the open access era. Retrieved September 5, 2013 from http://openaccess.eprints.org/index.php?/archives/2005/10/10.html Hood, A. K., & Association of Research Libraries. (2007). Open access resources. Washington, D.C: Association of Research Libraries.

ISSN International Centre., & Unesco. (2013). ROAD: Directory of open access scholarly resources. Jacobs, N. (2006). Open access: key strategic, technical and economic aspects. Oxford: Chandos.

Mandal, S. Advanced Integrated Information Management and Retrieval System: The Practical Approach. Kolkata: Prova Prakashani.

Mandal, S. (2020). Neoteric Library Technology. New Delhi: ABS Books.

Mukhopadhyay, P. (2014). Retrieval. In UNESCO course on Open Access (Module 4: Interoperability and Retrieval in OA – Unit 2). New Delhi: CEMCA/UNESCO.

Okada, A., Connolly, T., & Scott, P. J. (2012). Collaborative learning 2.0: Open educational resources. Hershey PA: Information Science Reference.

Schmidt, B., & Kuchma, I. (2012). Implementing open access mandates in Europe: OpenAIRE study on the development of open access repository communities in Europe. Göttingen: Universitätsverlag Göttingen.

Suber, P. (2012). Open access. Cambridge, Mass: MIT Press.

Swan, A., & Chan, L. (2009). Open access scholarly information sourcebook: practical steps for implementing open access. S.l.: Openoasis.org.

Swan, A., & UNESCO. (2012). Policy guidelines for the development and promotion of open access. Paris: United Nations Educational, Scientific, and Cultural Organization.

UNESCO. (2013). An open door to UNESCO's knowledge.

UNESCO. (2006). UNESCO open access resource directory. Paris: United Nations Educational Scientific and Cultural Organization. Willinsky, J. (2006). The access principle: the case for open access to research and scholarship. Cambridge, Mass: MIT Press.

Option- I: Course-work in the 3rd Semester & Research Thesis/Project in the 4th Semester

Third Semester

Major/Core Course

Course Code : PG2LISC3011 (500-599)

Course Title : Indian Knowledge Systems in Libraries

Name of Courses		Type	Credit	Pattern of Teaching-learning (hours per week)			**Marks Distribution Th.-Pr.-1A**			
Course Code	**Course Title**			L	T	P	Th.	Pr.	1A	Total
PG2LISC3011 (500-599)	**Indian Knowledge Systems and Libraries**	Major/ Core Course	4	3	1	0	40	0	10	50

Unit-I : Foundations of Indian Knowledge Systems

- Concept, nature, and scope of Indian Knowledge Systems (IKS);
- Historical development of knowledge traditions in India;
- Vedas, Upanishads, Puranas, Epics, and classical knowledge traditions;
- Contributions of ancient Indian scholars to knowledge creation and dissemination;
- Relevance of IKS in contemporary education and research.

Unit-II : Traditional Knowledge Resources and Institutions

- Ancient centres of learning: Nalanda University, Takshashila, Vikramashila, Vallabhi, and Odantapuri;
- Manuscripts, palm-leaf records, inscriptions, and archival materials;
- Indigenous systems of knowledge preservation and transmission;
- Libraries and repositories in ancient and medieval India;
- Oral traditions and community knowledge systems.

Unit-III : Organization and Preservation of Indigenous Knowledge

- Traditional methods of knowledge organization and classification;
- Documentation and bibliographic control of indigenous knowledge resources;
- Manuscript conservation and preservation techniques;
- Digitization of cultural heritage resources;

- Intellectual property rights and protection of traditional knowledge.

Unit-IV : Libraries as Custodians of Indian Knowledge

- Role of libraries in preserving and promoting IKS;
- Collection development and management of indigenous knowledge resources;
- Digital libraries, institutional repositories, and cultural heritage portals;
- Information services for IKS users and researchers;
- National initiatives for preservation and access to Indian knowledge resources.

Unit-V : Emerging Trends in IKS and Libraries

- Artificial Intelligence and digital technologies for IKS management;
- Linked Open Data and semantic technologies for cultural heritage resources;
- Research support services for IKS studies;
- Indian Knowledge Systems in the National Education Policy (NEP 2020);
- Future directions for libraries in preserving, disseminating, and revitalizing Indian knowledge traditions.

Reading List

Wasthi, D. S. (2024). Indian knowledge systems: A comprehensive analysis of various contexts. Shashwat Publication.

B, M., & M, S. (2025). Indian knowledge systems: Principles and practices. Sss Publications.

Chakraborty, A. K., Singh, A. P., & Banerjee, S. (2026). Indian knowledge systems and viksit bharat 2047: Library and information science and allied subjects. Cambridge Scholars Publishing.

Devi, D. P., Dr Ashok kumar Yadav and Dr Reeba. (2024). Indian knowledge system: Educational book. Uttkarsh Prakashan.

ltd, W., Lock and co. (1885). The library of national information and popular knowledge.

Gupta, A., Menon, V. A., & Sharma, S. (2025). Essays on the indian knowledge system. Cambridge Scholars Publishing.

KUMAR, S., & Rathod, A. K. (2025). Indian knowledge system. Taneesha Publishers.

Kurtkoti, D. D. A. O., Dr Manasi S., Tripathi, D. K. S., Gireesh, S, D. S. S. R., Dr Shobita P., & M, D. K. M., Dr Damla. (2024). Indian knowledge systems. REDSHINE Publication.

Mahalakshmi, D. N. (2025). Indian knowledge systems: Catalysts for building a developed india. IIP Iterative International Publishers.

Malakar, D. D., Das, D. R., Bala, D. S., Pandey, D. P., & Chattopadhyay, D. A. (2026). Essence of indian knowledge systems: Culture, science, and spirituality. REDSHINE Publication UK.

Mehrotra, D. D. (2025). Indian knowledge systems (Iks): A legacy of wisdom and innovation. Notion Press Media Pvt. Limited.

Nikam, M. (2025). Indian knowledge systems: Ancient wisdom for the modern world. Dattsons.

Pandey, D. A. (2025). Indian knowledge systems: Syllabus-based guide aligned with nep and ugc framework for students and educators. Notion Press Media Pvt. Limited.

Privitera, P. (Dr) N. M. R., Dr Adam John. (2026). Indian knowledge systems in school education: Pedagogical practices and learning outcomes. Geh press.

Raghavan, D. M., S, D. H. S. M., & Ramaswamy, D. C. R. (2023). Elements of indic knowledge systems & heritage. HTSR Institute.

Sahoo, P. C., Pandey, D. P., & Das, A. K. (2026). Indian knowledge systems: Journey from vedic wisdom to digital repositories. Luminus International Publishers.

Singh, D. A. K. (2025). Indian knowledge system: Principles and practices. The Readers Paradise.

Singh, D. J. (2026). Indian knowledge systems: Sustainability and nep 2020 perspectives: sustainability and nep insights | agph books. AGPH Books.

Swain, D. P., Upadhyay, D. P., & Pandey, D. P. (2026). Indian knowledge system: Interdisciplinary approaches to heritage, sustainability, and innovation. Zykra Publications.

Yadav, D. N., & Goswami, D. R. (2025). Scientific marvels of ancient india: Technological insights from the indian knowledge system. Notion Press Media Pvt. Limited.

Third Semester

Major/Core Course

Course Code : PG2LISC3012 (500-599)

Course Title : Information Retrieval

Name of Courses		Type	Credit	Pattern of Teaching-learning (hours per week)			Marks Distribution Th.-Pr.-1A			
Course Code	**Course Title**			L	T	P	Th.	Pr.	1A	Total
PG2LISC3012 (500-599)	**Information Retrieval**	Major/ Core Course	4	3	1	0	40	0	10	50

Unit-I : Introduction to Information Retrieval Systems

- Information Retrieval (IR) – meaning, history and development, differences with data retrieval; IR Systems – meaning, purpose, functions, operational stages, components, and kinds;
- Digital IR systems, Multilingual/Cross-lingual IR and Multimedia IR; Designing IR Systems;
- Query representation and IR – retrieval techniques (Boolean, Relational, Positional operators, Fuzzy search) and retrieval approaches (building-block, snowballing, successive fraction approach, most specific facet approach, convenient approach).

Unit-II : Subject Indexing: Principles and Practices

- Subject Headings: Contributions of Cutter, Kaiser, Ranganathan, Farradane, Coates, Austin, and Bhattacharyya; Derived and Assigned Indexing;
- Derived indexing system: Printed (keyword and citation indexing) and automatic/full-text indexing (MGPP, Lucene, HTDig etc.);
- Assigned indexing system (Syntax): Pre-coordination and Post-coordination; Pre-coordinate indexing system: Chain, PRECIS, POPSI, COMPASS, etc.;
- Post-coordinate indexing system: Computerized indexing system, Database vs. Card-based (Item entry and Term entry) systems, Tools for improving Post-coordinate retrieval (Links, Roles, and Weights);
- Intelligent IR and NLP – concept and applications.

Unit-III : Indexing Languages and Vocabulary Control

- Indexing Languages: Generations, types, and characteristics;
- Natural Language Indexing vs. Controlled Language Indexing, Problems of Assigned Indexing (Semantics); Vocabulary Control: Need, purpose, tools (alphabetical and classed);
- IR Thesaurus: Structure, standards (ISO 2788, ISO 25964-1 and ISO 25964-2), SKOS compatibility; Design and development of integrated online thesaurus: tools and methods.

Unit-IV : Digital IR Systems

- Digital IR – types, features, file design and organization;
- IR models – Boolean Logic Model, Vector Space Model, Probability Model, Cognitive Model, Natural Language Model; Digital IR types – Online IR, Optical-disk-based IR, OPAC and Web IR;
- Multiple database searching, Common Command Language, NISO and ISO standards, Multilingual/Cross-language Information Retrieval systems and projects;
- Web IR: Meaning, scope and characteristics, Models and standards, Operational aspects of the Web, Web Indexing, Search Engines, Meta Search Engines, Subject Directories, Subject Gateways, Institutional/Subject Repositories, Digital Libraries, Text Retrieval Engines, Semantic Web.

Unit-V : IR Systems – Users, Evaluation and Trends

- Users: Nature, Types of information needs, Information-seeking behaviour (ASK, Sense-making etc.);
- Meaning, Purpose, and Levels of IR Evaluation (System effectiveness, Cost effectiveness, Cost-benefit evaluation), Evaluation – measures, criteria and methodology;
- Evaluation initiatives (Cranfield 1 and 2, SMART, MEDLARS Test, STAIRS, TREC experiments, FIRE etc.); Recent developments and Future trends in IR.

Reading List

Aitchison, J., Gilchrist, A. & Bawden, D. (2000). *Thesaurus construction and use: a practical manual*. 4th ed. London: Aslib.

Anderson, James D. (1997). *Guidelines for indexes and related information retrieval devices: a technical report*. Bethesda, Maryland: National Information Standard Organization.

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Chu, H. (2003). *Information representation and retrieval in the digital age*. Medford, N.J: Published for the American Society for Information Science and Technology by Information Today.

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Fugmann, R.: *Subject analysis and indexing: theoretical foundation and practical advice.* Frankfurt: Verlag, 1983.

Ghosh, S. B. and Satpathi, J. N., *Eds*. (1998). *Subject indexing systems: concepts, methods and techniques*. Calcutta. IASLIC. Gilchrist, A.: *From classification to knowledge organization*, 1997.

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Rasmussen, E. (2003). Indexing and retrieval for the web. *Annual Review of Information Science and Technology,* 37, 91–124. Medford, NJ: Information Today Inc.

Rüger, Stefan M. (2010). *Multimedia information retrieval*. San Rafael, Calif.: Morgan & Claypool.

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Third Semester

Major/Core Course

Course Code : PG2LISC3013 (500-599)

Course Title : Automated and Digital Library Systems

Name of Courses		Type	Credit	Pattern of Teaching-learning (hours per week)			Marks Distribution Th.-Pr.-1A			
Course Code	**Course Title**			L	T	P	Th.	Pr.	IA	Total
PG2LISC3013 (500-599)	**Automated and Digital Library Systems**	Major/ Core Course	4	3	1	0	40	0	10	50

Unit-I : Foundations of Automated and Digital Library Systems

- Evolution of library services from traditional to automated and digital environments; Concepts, objectives, scope and components of automated and digital library systems;
- Historical development and emerging paradigms of library automation and digital libraries;
- Comparative analysis of traditional, automated, digital, virtual and hybrid libraries;
- International initiatives, standards and best-practice frameworks for digital transformation.

Unit-II : System Architecture and Service Workflow

- Structure and functional components of automated and digital library systems;
- Architecture of integrated information systems and digital library environments;
- Workflow design for acquisition, processing, access and service delivery;
- Software infrastructure, implementation planning and system integration;
- User-centred, multilingual and accessible system design principles.

Unit-III : Knowledge Organization and Metadata Management

- Resource organization through cataloguing, acquisition, circulation and serials control;
- Metadata standards and encoding schemes: MARC 21, Dublin Core, RDF, XML and BIBFRAME;
- Persistent identifiers and resource identification systems: DOI, URI, IRI and Handle System;
- Authority control, subject access systems and interoperability frameworks;
- Metadata mapping, crosswalks, harvesting protocols and linked data integration.

Unit-IV : Information Discovery and Digital Services

- OPAC, Web-OPAC, discovery layers and federated search systems;
- Information retrieval models, search strategies and relevance ranking techniques;
- Web-scale discovery services, semantic technologies and knowledge graphs;
- Digital content management, user experience and interface design;
- Digital preservation, institutional repositories and long-term access services.

Unit-V : Standards, Platforms and Emerging Technologies

- National and international standards for automated and digital library systems;
- Integrated Library Systems (ILS), Digital Library Software and repository platforms;
- Open-source ecosystems, cloud computing and Software-as-a-Service (SaaS) solutions;
- Linked Open Data, Semantic Web technologies and Artificial Intelligence applications;
- Emerging trends in intelligent, data-driven and next-generation digital information systems.

Reading List

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Haravu, L. J. (2004). Library automation design principles and practice (with CD-ROM) /by L.J. Haravu. New Delhi: Allied Publishers.
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Yu, P. K. (2007). Intellectual property and information wealth: Issues and practices in the digital age. Westport, Conn: Praeger Publishers.

Third Semester

Major/Core Course

Course Code : PG2LISC3014 (500-599)

Course Title : Smart Library Systems (Practice)

Name of Courses		Type	Credit	Pattern of Teaching-learning (hours per week)			Marks Distribution Th.-Pr.-1A			
Course Code	**Course Title**			L	T	P	Th.	Pr.	1A	Total
PG2LISC3014 (500-599)	**Smart Library Systems (Practice)**	Major/ Core Course	4	0	0	4	0	40	10	50

Unit-I: Advanced Integrated Library Systems and Discovery Services

- Advanced installation, configuration and administration of Koha;
- Customization of OPAC, circulation, acquisitions, serials and reports in Koha;
- Koha database management, backup, security and performance optimization;
- Data migration from legacy systems to Koha and cross-platform library system migration;
- Integration of Koha with VuFind Discovery Interface;
- API-based interoperability and integration of library systems.

Unit-II: Digital Libraries, Institutional Repositories and Content Management

- Installation, configuration and administration of DSpace;
- Repository creation and management using EPrints;
- Digital exhibition and collection development using Omeka;
- Metadata harvesting through OAI-PMH and interoperability practices;
- Data migration between repositories and digital library platforms;
- Digital collection management, preservation and access services.

Unit-III: Data Management, Metadata Standards and Bibliographic Modeling

- Data cleaning, transformation and reconciliation using OpenRefine and related tools;
- Metadata creation, validation and quality control;
- Metadata crosswalks and schema mapping;
- Authority control, entity reconciliation and identifier management;
- Bibliographic and metadata migration using MARC 21, Dublin Core and BIBFRAME;
- RDA implementation and bibliographic modeling using RIMMF;

- Automated metadata enrichment and interoperability testing.

Unit-IV: Semantic Web, Linked Data and Artificial Intelligence Applications

- Ontology development using Protégé and related tools;
- RDF, RDFS, OWL and SPARQL implementation;
- Linked Data creation, enrichment and publishing;
- Knowledge Graph development using Wikidata, DBpedia and graph databases;
- Automated subject indexing using Annif;
- AI-assisted metadata generation, classification and knowledge organization;
- Practical use of Generative AI tools for library services.

Unit-V: Smart Library Applications and User-Centred Technologies

- Development of Angular-based library discovery interfaces;
- Library website design and development using modern web technologies;
- Mobile application development for library services;
- Reference management systems using Zotero, Mendeley and EndNote;
- Development of integrated discovery and knowledge access services;
- Design and implementation of a Smart Library project integrating Koha, SLIMS, VuFind, DSpace, EPrints, Omeka, RIMMF, Annif, Linked Data and Knowledge Graph technologies.

Reading List

Barbara, H. (2020). Emerging trends and impacts of the internet of things in libraries. IGI Global.

Breeding, M. (1996). Integrated library systems for pcs and pc networks: Descriptive and analytical reviews of the current products. Information Today.

Chen, C.-C. (2019). Smart libraries: The application of emerging and innovative technologies. Emerald Publishing Limited.

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Mishra, C. (n.d.). Evidence -based innovation in academic libraries: Transforming services and practices. The Readers Paradise.

Prasad, S. (2017). Modern technologies for reshaping libraries in the digital era (1st ed). GRIN Verlag GmbH.

Tella, A., & Onyancha, O. B. (2026). Robotic technology, artificial intelligence and the 4ir libraries. Walter de Gruyter GmbH & Co KG.

Vuren, A. J. van. (2022). Academic libraries: Reflecting on crisis, the fourth industrial revolution and the way forward. UJ Press.

Wang, H., Zhang, B. J., Liu, X. Z., Luo, D. Z., & Zhong, S. B. (2010). Smart materials and intelligent systems, smis2010. Trans Tech Publications Ltd.

Yang, L., & Salaz, A. (2025). Digital libraries across continents. Taylor & Francis.

Third Semester

Major/Core Course

Course Code : PG2LISC3015 (500-599)

Course Title : Intelligent Discovery and Scholarly Networks

Name of Courses		Type	Credit	Pattern of Teaching-learning (hours per week)			Marks Distribution Th.-Pr.-IA			
Course Code	**Course Title**			L	T	P	Th.	Pr.	IA	Total
PG2LISC3015 (500-599)	**Intelligent Discovery and Scholarly Networks**	Major/ Core Course	4	3	1	0	40	0	10	50

Unit-I: Foundations of Scholarly Discovery and Knowledge Ecosystems

- Evolution of scholarly communication, digital scholarship and knowledge ecosystems;
- Knowledge discovery, information retrieval and scholarly workflows;
- Open Science, Open Access, Open Data and FAIR Principles;
- Scholarly publishing models and knowledge dissemination;
- Scholarly identifiers and information infrastructures;
- ORCID, DOI, ISNI, Research Organization Registry (ROR), Crossref and DataCite;
- Global scholarly communication initiatives and emerging trends.

Unit-II: Scholarly Discovery Systems and Intelligence Platforms

- Principles of scholarly information discovery and academic search;
- Academic search engines and scholarly discovery platforms;
- Google Scholar, Semantic Scholar, Dimensions, Lens.org, OpenAlex, BASE and CORE;
- AI-powered discovery tools and intelligent literature exploration;
- SciSpace, Elicit, Consensus, Scinapse and Connected Papers;
- Scholarly mapping and literature discovery using ResearchRabbit and Litmaps;
- Search strategies, citation chasing, recommendation systems and semantic retrieval;
- Scholarly intelligence and knowledge discovery using Dimensions Analytics.

Unit-III: Scholarly Networks, Knowledge Graphs and Academic Visibility

- Concepts and structure of scholarly, citation and collaboration networks;
- Co-authorship, co-citation and bibliographic coupling networks;
- Knowledge graphs and linked scholarly data;

- Wikidata, OpenAlex Graph, Dimensions Knowledge Graph and Semantic Web applications;
- Scholar profiling and academic identity management;
- ORCID, ResearchGate, Vidwan, IRINS, Google Scholar Profiles and Scopus Author Profiles;
- LIB-VAHINI and national scholarly information initiatives;
- Scholarly visibility, reputation, impact and digital presence.

Unit-IV: Scholarly Analytics, Big Data and Academic Integrity

- Scientometrics, bibliometrics, webometrics, informetrics and altmetrics;
- Fundamentals of Big Data Analytics in scholarly communication;
- Scholarly data mining, citation analytics and trend analysis;
- ScholarGPS, SciRank Global Scientific Index, Dimensions, Lens.org and OpenAlex analytics;
- Impact indicators, Field Citation Ratio (FCR), Relative Citation Ratio (RCR) and alternative metrics;
- AI and Machine Learning applications in scholarly analytics;
- Academic integrity, publication ethics and responsible metrics;
- Turnitin, DrillBit, iThenticate and similarity detection systems.

Unit-V: Practical Applications of Intelligent Discovery and Scholarly Networks

- Scholarly discovery using Google Scholar, Semantic Scholar, Dimensions, Lens.org and OpenAlex;
- Scholar profiling using ORCID, Vidwan, IRINS and ResearchGate;
- Exploration of scholarly resources through ROAD, DOAJ, OpenDOAR and CORE;
- Scholarly intelligence and ranking analysis using ScholarGPS, SciRank Global Scientific Index and Dimensions;
- Citation, bibliometric and Big Data analysis using Dimensions and OpenAlex datasets;
- Network visualization using VOSviewer, CiteSpace and Gephi;
- Knowledge graph exploration using Wikidata, Open Knowledge Maps and Dimensions Knowledge Graph;
- AI-assisted scholarly discovery using SciSpace, Elicit and Consensus;
- Practical exercises on literature discovery, analytics, network mapping and scholarly assessment;
- Mini project on intelligent discovery, scholarly networks and Big Data analytics.

Reading List

Adeyinka, T., & Tom, K. (2017). *Handbook of research on managing intellectual property in digital libraries*. IGI Global.

Ball, R. (2020). *Handbook bibliometrics*. Walter de Gruyter GmbH & Co KG.

Dinh, T. N., & Li, M. (2023). *Computational data and social networks: 11th international conference, csonet 2022, virtual event, december 5–7, 2022, proceedings*. Springer Nature.

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Tamer, E., Esraa, H., Thanh, T., Genghui, L., & Abeer, S. (2025). *The role of artificial intelligence in advancing applied life sciences*. IGI Global.

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Fourth Semester

Research Thesis/Project

Course Code : PG2LISC4031 (500-599)

Course Title : Research Thesis/Project

Name of Courses		Type	Credit	Pattern of Teaching-learning (hours per week)			Marks Distribution Th.-Pr.-IA			
Course Code	**Course Title**			L	T	P	Th.	Pr.	IA	Total
PG2LISC4031 (500-599)	**Research Thesis/Project**	Research Thesis/Project	20	0	0	20	0	250	0	250

PG2LISC4031(Research Thesis / Project): Based on Survey research, experimental research, assignment Presentation and Viva-voce. Presentation and Viva-Voce (in the presence of external experts from other Universities/Institutions). Preparation & Submission of Research Thesis/ Project Report (12 Credits)-150 Marks, Seminar Presentation (50 Marks, 4 credits)& Viva-voce (50 Marks, 4 Credits)-100 Marks, 8 Credits.

PG2LISC4031	Description	Marks	Credits
Research Thesis / Project	Based on Survey Research, Experimental Research, or Assignment. Preparation and submission of the Research Thesis/Project Report.	**150**	**12**
Seminar Presentation	Presentation of the Research Thesis/Project before the Department.	**50**	**4**
Viva-Voce	Oral examination conducted in the presence of External Experts from other Universities/Institutions.	**50**	**4**
Total	Research Thesis/Project Evaluation	**250**	**20**

Fourth Semester

Two-Credit Compulsory Couse

Course Code : PG2LISC4041 (500-599)

Course Title : Community Engagement

Community Engagementshall be a two-credit compulsory course for all students of One-year and Two-Year PG programmes. However, this shall not be taken into consideration in the calculation of SGPA and CGPA.

Fourth Semester

Major/Core Course

Course Code : PG2LISC4011 (500-599)

Course Title : Academic Library System

Name of Courses		Type	Credit	Pattern of Teaching-learning (hours per week)			Marks Distribution Th.-Pr.-IA			
Course Code	**Course Title**			L	T	P	Th.	Pr.	IA	Total
PG2LISC4011 (500-599)	**Academic Library System**	Major/ Core Course	4	3	1	0	40	0	10	50

Unit-I: Academic Libraries and their Users

- Higher education and libraries in India;
- Academic libraries – definition, meaning, importance, functions and types;
- Users of academic libraries – types of users and their needs, user study and user education;
- Structure and hierarchies of academic libraries, Role of UGC, AICTE, NCTE and other bodies in academic library development;
- Changing role of academic libraries – National and global scenario, Recommendations, Standards and Best practices.

Unit-II: Management of Academic Libraries

- Records management and library planning;
- Collection Development/Resource Optimization;

- Human Resource Management;
- Financial Management;
- Application of MIS, OR and TQM;
- Library Co-operative Organizations and Network services.

Unit-III: Services in Academic Libraries

- Traditional services;
- Documentation services;
- ICT-enabled services;
- Advanced scholar-specific services;
- Reference and information services to Research Scholars.

Unit-IV: Change Management in Academic Libraries

- Effects of Globalization on Libraries;
- Generation Gap due to Knowledge-based society;
- Change of academic environment and management style;
- Change of users' interests and learning techniques;
- Leadership style and qualities of Librarians.

Unit-V: Introduction of New Digital Applications in Academic Libraries

- Application of Academic Library 2.0;
- International academic library scenario;
- Academic Library Repositories;
- Library e-resource management, policy and programmes;
- Future trends in academic library development.

Reading List

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Poole, Herbert, Ed. (1977). Academic library by the year 2000. New York: Bowker. Prashar, R G. (1991). Managing university libraries. New Delhi: Today & Tomorrow. Saini, B.S. (1976). Library organisation for higher education. New Delhi: Ess Ess.

Singh, Sewa and Arora, M., Ed. (1995). Handbook of college libraries: problems, finance and related aspects. New Delhi: Beacon Books. Srivastava S.N. and Verma S.C., (1980). University libraries in India. New Delhi: Vikas.

Trehan, G.L., (1985). College library development. New Delhi: Sterling Publishing.

University Grants Commission. (2001). Model curriculum: library and information Science. New Delhi: UGC.

Fourth Semester

Major/Core Course

Course Code : PG2LISC4012 (500-599)

Course Title : Semantic Digital Library System

Name of Courses		Type	Credit	Pattern of Teaching-learning (hours per week)			Marks Distribution Th.-Pr.-IA			
Course Code	**Course Title**			L	T	P	Th.	Pr.	IA	Total
PG2LISC4012 (500-599)	**Semantic Digital Library System**	Major/ Core Course	4	3	1	0	40	0	10	50

Unit-I: Institutional Digital Repository

- Genesis, Essential benefits of IDR, Aggregators;
- Projects of IDR; Integration of CMS and Visual Vocabulary with DSpace;
- Digital Media Archiving Cluster.

Unit-II: Designing and Configuration of IDR Software Framework in Generic Level

- Generic level software framework;
- Digital media archiving framework;
- Parameters selection for DMA Cluster.

Unit-III: Semantic Web Enabled IDR

- Key standards of Semantic IDR;
- Concept of IDR at the semantic level;
- Designing and configuration of IDR in semantic-level software framework;
- Designing controlled and visual vocabulary (MultiTes and TemaTres);
- Semantic graph interface.

Unit-IV: Development of Museum-related IDR

- Objectives of VRA Core in Omeka;
- Installation and configuration;
- Open-source standards in image cataloguing and digital CMS Metadata Editor;
- Single-window-based interface;
- Bibliography management repository, e-book viewer and cloud computing.

Unit-V: Development of Document Management and Community Communication

- Repository tools and standards requirements;
- Components and objectives of Document Management System (DMS);
- Installation and configuration of Providence;
- Import-based digital repository through Providence.

Unit-VI: AI-enabled Tools for Institutional Digital Repositories

- AI-enabled repository management: Application of ChatGPT (OpenAI), Google Gemini, Microsoft Copilot, and NotebookLM for intelligent repository management and digital library services.
- AI-assisted scholarly discovery: Use of SciSpace AI, Elicit, Consensus, and Semantic Scholar AI for literature discovery, research synthesis, scholarly communication, and knowledge exploration.
- AI-based metadata and indexing: Application of Annif and GROBID AI for automated metadata generation, bibliographic information extraction, semantic indexing, subject classification, and metadata enrichment.
- Intelligent repository services: AI-supported document processing, information retrieval, knowledge organization, semantic search, repository automation, and intelligent digital repository services.

Reading List

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Devedžic, V., Devedzic, V. (2006). Semantic Web and education. Netherlands: Springer US.

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Lukácsy, G., Benkő, T., Szeredi, P., Nagy, Z. (2014). The Semantic Web Explained: The Technology and Mathematics Behind Web 3.0. United Kingdom: Cambridge University Press.

Fourth Semester

Major/Core Course

Course Code : PG2LISC4013 (500-599)

Course Title : Learning Content Management System

Name of Courses		Type	Credit	Pattern of Teaching-learning (hours per week)			Marks Distribution Th.-Pr.-IA			
Course Code	**Course Title**			L	T	P	Th.	Pr.	IA	Total
PG2LISC4013 (500-599)	**Learning Content Management System**	Major/ Core Course	4	3	1	0	40	0	10	50

Unit-I: Learning Management Systems and E-Learning

- Learning Management System (LMS): concept, architecture, features and components;
- E-Learning, Learning Content Management System (LCMS), MOOCs, Open Educational Resources (OER) and Open Access;
- National and international e-learning initiatives: SWAYAM, SWAYAM PRABHA, NPTEL, e-PG Pathshala, DIKSHA, National Digital Library of India (NDLI), Coursera, edX, FutureLearn and Udemy;
- Installation, configuration and administration of Moodle, Canvas, Google Classroom, Blackboard Learn and Open edX;
- AI-enabled learning platforms using ChatGPT, Google Gemini, Microsoft Copilot and NotebookLM.

Unit-II: E-Learning for Courses and Categories; Activities of Online Education

- Course and category creation, enrolment and user management;
- Learning activities: assignments, lessons, discussions, workshops, quizzes and collaborative learning;
- Blended learning, flipped classroom and competency-based learning;
- Learning analytics, student engagement and progress monitoring;
- AI-assisted course design and adaptive learning using MagicSchool AI, Khanmigo, ChatGPT and Google Gemini.

Unit-III: Quiz Creation, Assessment and Course Completion

- Question banks, quizzes and online examinations;
- Assignment submission, grading, rubrics and feedback;

- Course completion tracking, digital badges and certificates;
- Academic integrity and plagiarism detection using Turnitin, DrillBit and Ouriginal;
- AI-assisted question generation and assessment using Quizizz AI, QuestionWell, ChatGPT and Microsoft Copilot.

Unit-IV: Video Conferencing System and Assignments for E-Learning

- Virtual classrooms, webinars and synchronous learning;
- Integration of Zoom, Google Meet, Microsoft Teams, Cisco Webex and BigBlueButton with LMS;
- Multimedia learning resources, lecture recording and content sharing;
- Assignment creation, submission and peer evaluation;
- AI-enabled transcription, captioning, meeting summaries and virtual teaching assistants using Otter.ai, Fireflies.ai, Google Gemini and Microsoft Copilot.

Unit-V: E-Learning Interface and Communication

- User interface design, accessibility and responsive learning environments;
- Discussion forums, messaging, announcements and collaborative learning communities;
- Mobile learning, cloud-based LMS and social learning platforms;
- Integration of H5P, Genially, Canva for Education, Padlet and Mentimeter for interactive learning;
- AI-powered chatbots, recommendation systems, intelligent tutoring systems and personalized learning using ChatGPT, NotebookLM, Khanmigo and Google Gemini.

Reading List

van Oorschot, P. C. (2020). Computer Security and the Internet: Tools and Jewels. Switzerland: Springer International Publishing. Kumail, S. M. N., Chadha, G. (2002). E-Learning: An Expression of the Knowledge Economy. India: Tata McGraw-Hill.

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Buzzetto-More, N. A. (2007). Advanced principles of effective e-learning. United States: Informing Science Press. Hartley, D., Rossen, E. (2001). Basics of E-Learning. United States: ASTD.

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Fourth Semester

Major/Core Course

Course Code : PG2LISC4014 (500-599)

Course Title : Open Access System

Name of Courses		Type	Credit	Pattern of Teaching-learning (hours per week)			Marks Distribution Th.-Pr.-IA			
Course Code	**Course Title**			L	T	P	Th.	Pr.	IA	Total
PG2LISC4014 (500-599)	**Open Access System**	Major/ Core Course	4	3	1	0	40	0	10	50

Unit-I: Foundations of Open Access

- Open Access: definition, principles, purpose and evolution;
- Open Access movement and history;
- Open Information Resources: Open Data, Open Government Data and Open Educational Resources (OER);
- FAIR Principles and Open Science ecosystem;
- National initiatives: NDLI, e-PG Pathshala, SWAYAM, NPTEL.

Unit-II: Open Access Resources and Platforms

- OA pathfinders: DMOZ, DOAB and OATD;
- Gold and Green Open Access: DOAJ, OpenDOAR and ROAR;
- OA gateways and aggregators: SSRN, PLOS, BASE, CORE, OpenAlex and Lens.org;
- Open Data repositories, OA educational resources and citation services;
- Preprint repositories: arXiv, bioRxiv and medRxiv.

Unit-III: Open Access Initiatives and Repositories

- Open Access initiatives, organizations and scholarly publishers;
- OA journals, institutional repositories and disciplinary repositories;
- Major OA networks and collaborations: INASP, JISC, SPARC, SHERPA, UNESCO Global Open Access Portal, OpenAIRE, COAR, EOSC and NDLTD;
- Research repositories: Zenodo, Figshare, Dryad and Dataverse;
- National repositories: Shodhganga, ShodhGangotri and NDLI.

Unit-IV: Open Access Policies and Mandates

- Institutional, national and international Open Access mandates;
- NIH Public Access Policy, UKRI, Europe, Canada, India and Shodhganga mandates;
- Open Access policies of UNESCO, COAPI, World Bank and major research funders;
- Research Data Management (RDM), Data Archiving Policies and FAIR Data Principles;
- Copyright, Creative Commons (CC) licences and Plan S.

Reading List

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Fourth Semester

Major/Core Course

Course Code : PG2LISC4015 (500-599)

Course Title : Informetrics

Name of Courses		Type	Credit	Pattern of Teaching-learning (hours per week)			Marks Distribution Th.-Pr.-IA			
Course Code	**Course Title**			L	T	P	Th.	Pr.	IA	Total
PG2LISC4015 (500-599)	**Informetrics**	Major/ Core Course	4	3	1	0	40	0	10	50

Unit-I: Foundations of Informetrics

- Librametrics, Bibliometrics, Scientometrics and Informetrics: meaning, scope and applications;
- Cybermetrics, Webometrics and Altmetrics: concepts, scope and characteristics;
- Citations, hyperlinks (sitations), article-level metrics and research impact;
- Evolution of research evaluation and scholarly communication;
- Emerging concepts: Research Analytics, Open Science Metrics and Responsible Metrics.

Unit-II: Citation Analysis and Research Impact

- Citation analysis: theory, citation behaviour and citation counts;
- Journal ranking, age study, obsolescence and research productivity;
- Authorship collaboration, self-citation and collaboration networks;
- Bibliographic coupling, co-citation analysis and co-word analysis;
- Science mapping and knowledge visualization.

Unit-III: Bibliometric Laws and Indicators

- Bibliometric laws: Lotka's Law, Bradford's Law, Zipf's Law, and empirical laws of Price, Garfield and Sengupta;
- Applications of bibliometric laws in digital and web environments;
- Research impact indicators: Journal Impact Factor (JIF), h-index, g-index, i10-index, CiteScore, SJR and SNIP;
- Webometric indicators: Web Impact Factor (WIF), WISER and alternative research metrics;
- Responsible metrics and research assessment frameworks.

Unit-IV: Bibliometric Tools and Research Analytics

- Bibliographic databases: Web of Science, Scopus, Google Scholar, OpenAlex, Dimensions AI and Lens.org;
- Bibliometric and visualization tools: VOSviewer, CiteSpace, Bibliometrix/Biblioshiny, Pajek and Gephi;
- Webometric and altmetric tools: Altmetric.com, PlumX, ImpactStory and Internet Archive;
- AI-enabled research analytics using ChatGPT, SciSpace AI, Elicit, Semantic Scholar AI and Consensus;
- Research profiling platforms: ORCID, ResearchGate, Google Scholar Profiles, ScholarGPS and SciRank.

Unit-V: Applications and Emerging Trends

- Applications of bibliometrics, webometrics and altmetrics in research evaluation;
- Open Science, Open Access and research assessment;
- Research intelligence, scientometric mapping and policy analysis;
- AI-driven bibliometric analysis, knowledge graphs and scholarly knowledge discovery;
- Emerging trends in Responsible Metrics, Research Analytics and Open Science.

Reading List

Andres, A. (2009). Measuring academic research: how to undertake bibliometric study. Oxford: Chandos Publishing.

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