

COURSES OF STUDIES

Ph.D. PROGRAMME LIBRARY AND INFORMATION SCIENCE

(UNDER SEMESTER SYSTEM)

2026-27



GANGADHAR MEHER UNIVERSITY,
SAMBALPUR, ODISHA

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J. K. Sahoo
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SEMESTER SYSTEM OF Ph.D.

Sl No.	Paper	Credit Hours	(Marks) Mid Term + Term End
1	711 (Research Trends in Library and Information Science)	4	100 (20+80)
2	712 (Research and Publication Ethics)	2	100 (20+80)
3	713 (Research Methodology)	4	100 (20+80)
4	Paper-714 Review Work	8	200 (150+25+25)
	Total	18	500

Revised Syllabus of pre-registration course work for Ph.D. in GMU.

**School of Library and Information Science
Course No. 711: Ph.D. Course work**

RESEARCH TRENDS IN LIBRARY AND INFORMATION SCIENCE

Objectives:

1. To acquaint the students with the basic concept and research trend in Library and Information Science.
2. To acquaint with the basic concept of Information Communication Technology & Networking.

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

CO-1 Understand the basic concept of research trends in the subject.

CO-2 To analyze the role of consortia and information Centre.

CO-3 To apply the concept of Networking and IPR in electronic environment.

CO-4 To implement the different models and research communication channel in information science.

Unit-I Trends and Developments in Library and Information Management

1. Resource Management and Development: Human, Financial, E-Resources and Open Educational Resources
2. Digital Library: Components, Digitization tools and technologies, Digital Library Initiatives in India, Open Access Initiative
3. Marketing of information Products and Services
4. Disaster Management, Digital Information Resources Management, Knowledge Management

Unit-2 Library Networks and Consortia

1. Networks and Networking: Types, Hardware/ Software Requirements
2. Data Networks, Library & Information Networks and Services
3. Electronic Resource Management (ERM) and Library Consortia
4. Legal Issues: Copy Right and Intellectual Property Rights in Electronic Environment, Creative Commons license

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Unit-3 Emerging Technologies in Library & Information Centre

1. Library Security and Surveillance: RFID, Bar Code, Smart Card, 3M Security, CCTV
2. Web Technology: Web 2.0 and Web 3.0 features and functions; Web 2.0 tools and applications in libraries (Weblogs, Podcasts, RSS Feed, Instant Messaging, Wikis, Flickr, Social Networking), Web-scale discovery, Linked open data
3. Cloud Computing: Concept, Need, Objectives and its application in libraries
4. OER, MOOCs and Digital Library Initiatives: NPTEL, mooKIT, IITBX, SWAYAM Edx; NDLI

Unit-4 Research Communication

1. Research Reporting: Structure, Style, Content, Quality parameters and Citation Standards (Chicago, MLA and APA).
2. Reference management System: Mendeley, Endnote, Zotero, Reference Work etc.
3. Research support tools: Online survey tools, research profile, research guides, Plagiarism checker
4. Research Communication Channels: Research-in-Progress, ETD repositories, Institutional Repositories, Subject Repositories.

References and Further Reading

1. Andreasen, Alan and Kotler, Philip (2002) Strategic Marketing for Non-Profit Organisation. 6th ed., NJ: Prentice Hall.
2. Bayross, Ivan, N. (2003) Database Concepts and Systems. Navi Mumbai: Shroff.
3. Boulos, M. N., I.Maramba, and S. Wheeler. "Wikis, Blogs and Podcasts: A New Generation of Web-based Tools for Virtual Collaborative Clinical Practice and Education". BMC Med Edu 6(2006): 41. Web.
4. Glassman, N. R. (2018). Citation management tools: A practical guide for librarians.
5. Gunasekara, Angappa (2003). Knowledge and Information Technology Management: Human and Social Perspectives. Hershey: Idea Group Publishing.
6. Haynes David (2004) Meta Data for Information Management and Retrieval. London: Facet.
7. <http://www.academia.edu>.
8. <http://www.egyankosh.ac.in/>
9. <http://www.ignou.ac.in/>
10. http://www.wtec.org/loyola/digilibs/00_es.htm
11. Jenkins, Martin. (2006) Supporting Students in e-learning. In Digital Literacies for Learning. (Eds) Allan Martin and Dan Madigan, Facet Pub. London, pp. 162-171.
12. JISC. "Digital Repositories: Helping Universities and Colleges". Briefing Paper.2005. Web.
13. Katy Jordan (2014), Initial trends in enrolment and completion of massive open online courses, The International Review of Research in Open and Distance Learning, Vol. 15 (1), <http://www.irrodl.org/index.php/irrodl/article/view/1651>
14. Kotler, Philip and Armstrong, Gary (2005). Principles of Marketing 11th ed., NJ: Prentice Hall.
15. Lassibille, G and Gomez, Lucia Navarro. (2007) Why do higher education students drop out? Evidence from Spain. Education. Education Economics. 16, 89-105.
16. Lupone, G. (2000) Digital Libraries: Potentials and Risks. Library High Tech. 17(1) 30.
17. Maness, J. M.: Library 2.0 Theory: Web 2.0 and Its Implications for Libraries. Webology, 3(2), 2006. <Available at <http://www.webology.ir/2006/v3n2/a25.html>>
18. Marchal, Benoit (2000) XML by EXAMPLE. New Delhi: Prentice Hall.
19. Martin, Allan and Madigan, Dan. (2006) (Eds) Digital Literacies for Learning. Facet Pub, London.

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20. Meadow, Charles T. Boyce, Bert R. and Kraft, Donald. H. (2000) Text Information Retrieval Systems. 2nd ed., San Diego, CA: Academic Press.
21. Natarajan, Ganesh (2000) Knowledge Management: Enabling Business Growth, New Delhi: Tata McGraw Hills.
22. Oreilly, Tim. "What is Web 2.0: Design Patterns and Business Models for the Next Generation of Software". Communications & Strategies1(2007):17.Web.
23. Powell, Thomas A (2000) The HTML Complete Reference. 2nd ed., New Delhi: Tata McGraw Hill.
24. Raman, A Thoathathri (2003) Knowledge Management: A Resource Book. New Delhi Excel Books.
25. Sollumon, Michael R., Marshall, Greg W. and Stuart, Elnoro (2004) Marketing Real People, Real Choices, 4th ed., NJ: Prentice Hall. Tucson, Arizona: Knowledge Computing Corporation.

PAPER-712 RESEARCH AND PUBLICATION ETHICS

RPE 01: PHILOSOPHY AND ETHICS

1. Introduction to philosophy: Definition, nature and scope, concept, branches
2. Ethics: definition, moral philosophy, nature of moral judgements and reactions

RPE 02: SCIENTIFIC CONDUCT

1. Ethics with respect to science and research
2. Intellectual honesty and research integrity
3. Scientific misconducts: Falsification, Fabrication, and Plagiarism (FFP)
4. Redundant Publications: duplicate and overlapping publications, salami slicing
5. Selective reporting and misrepresentation of data

RPE 03: PUBLICATION ETHICS

1. Publication ethics: definition, introduction, and importance
2. Best practices/ standards setting initiatives and guidelines: COPE, WAME, etc.
3. Conflicts of interest
4. Publication misconduct: definition, concept, problems that lead to unethical behaviour and vice-versa, types
5. Violation of publication ethics, authorship, and contributors
6. Identification of publication misconduct, complaints and appeals
7. Predatory publishers and journals

RPE 04: OPEN ACCESS PUBLISHING

1. Open access publications and initiatives
2. SHERPA/ RoMEO online resources to check publisher copyright and self-archiving policies
3. Software tool to identify predatory publications developed by SPPU
4. Journal finder/ journal suggestion tools, viz. JANE, Elsevier Journal Finder, Springer Journal Suggester, etc.

RPE 05: PUBLICATION MISCONDUCT

A. Group Discussions

1. Subject-specific ethical issues, FFP, authorship
2. Conflicts of interest
3. Complaints and appeals: examples and fraud from India and abroad

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B. Software tools

1. Use of plagiarism software like Turnitin, Urkund, and other open-source software tools

RPE 06: DATABASES AND RESEARCH METRICS

A. Databases

1. Indexing databases
2. Citation databases: Web of Science, Scopus, etc.

B. Research Metrics

1. Impact Factors of journal as per Journal Citation Report, SNIP, SJR, IPP, Cite-Score
2. Metrics: h-index, g-index, i10 index, altmetrics

**PAPER-713
RESEARCH METHODOLOGY**

Unit-I

IPR AND CYBER LAW.

1. Patents, Patent laws, process of patenting research finding
2. Intellectual property (IP), Intellectual property right (IPR)
3. Copyright, Trademarks, GI
4. Cyber laws
5. COPE

Unit-II

QUANTITATIVE DATA ANALYSIS

1. Types of Data, Data Collection – Methods and Tools
2. Hypothesis testing
3. Literature survey: Need and purpose.
4. Research Design: Aims, objectives, scope, components and limitations;
5. Sampling methods: Types and techniques.
6. Data analysis technique: Statistical techniques – Measures of Central Tendency, Mean, Mode, Median; Measures of Dispersion, Correlation and Regression

Unit-III

COMPUTER FUNDAMENTALS

1. Introduction to MS-Office software: MS-Word (Track change)
2. MS-Excel
3. MS-Power Point
4. Features for Statistical Data Analysis Tool Pack, SPSS
5. Tables, Figures and Pictures using Excel
6. Preparation of Posters
7. Electronic submission of manuscripts
8. Communication skills, oral and poster

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Unit-IV

ADVANCED TOOLS & TECHNIQUES IN RESEARCH

1. Indexing databases
2. Bibliometrics, Scientometrics, Webometrics, Infometrics
3. Bibliometric Softwares: Vosviewer, Bibexcel, R Studio
4. Trends in Scholarly Communication
5. Research Report Writing: Structure and parts of Research Report
6. Artificial Intelligence (AI) Tools in Research: ResearchRabbit, Perplexity, NotebookLM, Elicit, Semantic Scholar & Gamma.

References and Further Reading

- Powell Ronald R. (1991). Basic Research Methods for Librarians (2nd ed.). Norwood, NJ: Ablex
- Rao, I.K.R. (1983). Quantitative Methods for Library and Information Science. New Delhi: Wiley Eastern.
- Ghosh, B. N. (1982). Scientific methods and social research. Sterling.
- Kumar, P.S.G. (2004). Research and Statistical Techniques. B R Publishing.
- Ranjit Kumar. (1999). Research Methodology: A Step-by-Step Guide for Beginners. Delhi: Sage.
- Flick, U. (2015). Introducing Research Methodology: A Beginner's Guide to Doing a Research Project. Sage.

Paper-714

Marks-200(150+25+25)

REVIEW WORK

**(Report Writing + Seminar Presentation of the
Report + Viva-voce)**

R. Pruthi *J. K. Singh*
1.9.26 *01.09.2026*

S. V. G.
01/9/2026

Dr. Dan.

Dr. M. M.