

COURSES OF STUDIES

PhD PROGRAM  
LIBRARY AND INFORMATION SCIENCE

(UNDER SEMESTER SYSTEM)

2025-26



GANGADHAR MEHER UNIVERSITY,  
SAMBALPUR, ODISHA

*J. K. Saha*  
25/09/25

*P. B. B. B.*  
25/09/25  
Received  
R. Meher  
26.02.25

*D. S. S.*  
25/09/2025  
25/9/25

## SEMESTER SYSTEM OF PHD

Sl No.	Paper	Credit Hours	(Marks) Mid Term + Term End
1	711 (Research Trends in Library and Information Science)	4	100 (30+70)
2	712 (Research and Publication Ethics)	2	100 (30+70)
3	713 (Research Methodology)	4	100 (30+70)
4	Paper-714 Review Work	8	200 (150+25+25)
	<b>Total</b>	<b>18</b>	<b>500</b>

**Revised Syllabus of pre-registration course work for PhD in GMU.**

**School of Library and Information Science  
Course No. 711: PhD 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**

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

#### **Unit-2 Library Networks and Consortia**

- Networks and Networking: Types, Hardware/ Software Requirements
- Data Networks, Library & Information Networks and Services
- Electronic Resource Management (ERM) and Library Consortia
- Legal Issues: Copy Right and Intellectual Property Rights in Electronic Environment

#### **Unit-3 Emerging Technologies in Library & Information Centre**

*Digit 22/09/2023*  
*R. Beut*  
*22/9/23*

*J. S. Sol*  
*25/9/2023*

*25/9/23*

**COURSES OF STUDIES**

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**PhD PROGRAM  
LIBRARY AND INFORMATION SCIENCE**

**(UNDER SEMESTER SYSTEM)**

**2025-26**



**GANGADHAR MEHER UNIVERSITY,  
SAMBALPUR, ODISHA**

*J. S. S. S.*  
25/9/25

*R. Rout*  
25/09/25

*S. S. S.*  
25/09/2025

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25/9/25

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#### Unit-3 Emerging Technologies in Library & Information Centre

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- Library Security and Surveillance: RFID, Bar Code, Smart Card, 3M Security, CCTV
- 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
- Cloud Computing: Concept, Need, Objectives and its application in libraries
- OER, MOOCs and Digital Library Initiatives: NPTEL, mooKIT, IITBX, SWAYAM Edx; NDLI

#### Unit-4 Research Communication

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

#### References and Further Reading

- Andreasen, Alan and Kotler, Philip (2002) Strategic Marketing for Non-Profit Organisation. 6<sup>th</sup> ed., NJ: Prentice Hall.
- Bayross, Ivan, N. (2003) Database Concepts and Systems. Navi Mumbai: Shroff.
- 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.
- Glassman, N. R. (2018). Citation management tools: A practical guide for librarians.
- Gunasekara, Angappa (2003). Knowledge and Information Technology Management: Human and Social Perspectives. Hershey: Idea Group Publishing.
- Haynes David (2004) Meta Data for Information Management and Retrieval. London: Facet.
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- 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.
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- 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>
- Kotler, Philip and Armstrong, Gary (2005). Principles of Marketing 11<sup>th</sup> ed., NJ: Prentice Hall.
- Lassibille, G and Gomez, Lucia Navarro. (2007) Why do higher education students drop out? Evidence from Spain. Education. Education Economics. 16, 89-105.
- Lupone, G. (2000) Digital Libraries: Potentials and Risks. Library High Tech. 17(1) 30.
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- Marchal, Benoit (2000) XML by EXAMPLE. New Delhi: Prentice Hall.
- Martin, Allan and Madigan, Dan. (2006) (Eds) Digital Literacies for Learning. Facet Pub, London.
- Meadow, Charles T. Boyce, Bert R. and Kraft, Donald. H. (2000) Text Information Retrieval Systems. 2<sup>nd</sup> ed., San Diego, CA: Academic Press.

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- Natarajan, Ganesh (2000) Knowledge Management: Enabling Business Growth, New Delhi: Tata McGraw Hills.
- Oreilly, Tim. "What is Web 2.0: Design Patterns and Business Models for the Next Generation of Software". Communications & Strategies 1(2007):17. Web.
- Powell, Thomas A (2000) The HTML Complete Reference. 2<sup>nd</sup> ed., New Delhi: Tata McGraw Hill.
- Raman, A Thothathri (2003) Knowledge Management: A Resource Book. New Delhi Excel Books.
- Sollumon, Michael R., Marshall, Greg W. and Stuart, Elnoro (2004) Marketing Real People, Real Choices, 4<sup>th</sup> 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 contributorship
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

**B. Software tools**

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

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 R. Bant 25/9/25  
 J. S. 28/09/2025  
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## 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.

- i) Patents, Patent laws, process of patenting research finding
- ii) Intellectual property (IP), Intellectual property right (IPR)
- iii) Copyright, Trademarks, GI
- iv) Cyber laws
- v) COPE

### Unit-II

#### QUANTITATIVE DATA ANALYSIS

- i) Types of Data, Data Collection – Methods and Tools
- ii) Hypothesis testing
- iii) Literature survey: Need and purpose.
- iv) Research Design: Aims, objectives, scope, components and limitations;
- v) Sampling methods: Types and techniques.
- vi) Data analysis technique: Statistical techniques – Measures of Central Tendency
- vi) Mean, Mode, Median; Measures of Dispersion

### Unit-III

#### COMPUTER FUNDAMENTALS

- i) Introduction to MS-Office software: MS-Word (Track change)
- ii) MS-Excel
- iii) MS-Power Point
- iv) Features for Statistical Data Analysis Tool Pack, SPSS
- v) Tables, Figures and Pictures using Excel
- vi) Preparation of Posters
- vii) Electronic submission of manuscripts
- viii) Communication skills, oral and poster

### Unit-IV

#### ADVANCED TOOLS & TECHNIQUES IN RESEARCH

- i) Indexing databases
- ii) Reference Management Software/Tool - Zotero
- iii) Correlation and Regression
- iv) Plagiarism
- v) Research Metrics
- vi) Report Writing: Structure and parts of Research Report.

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*P* 25/9/25

- vii) Bibliometrics, Scientometrics, Webometrics, Altmetrics
- viii) Scholarly Communication / Scholarly Publishing
- ix) Library Management Softwares/Tools; Koha, SOUL

### 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)**

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*R. Raet*  
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*J. K. Sui*  
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