

**DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE MAHARSHI
DAYANAND UNIVERSITY, ROHTAK**

Scheme of Examination

PhD Course Work in Library and Information Science

(As per credit system)

Duration: One Semester (Six months)

Total Credit requirement: 14 credits

Program Structure:

SEMESTER 1						
Course Code	Nomenclature of Course	Theory marks (end semester examination)	Internal Assessment marks	Maximum marks	Hours /Week	Credits
20LIBPH11C1	Research Methodology	80	20	100	4	4
20CCPH11C1 (Compulsory for all Ph.D. Course work)	Research and Publication Ethics	40	10	50	2	2
20LIBPH11C3	Computer Applications in Library and Information Science	80	20	100	4	4
20LIBPH11C4	Emerging Trends in Library and Information Science	80	20	100	4	4
Total marks/Credits				350		14

Note: i. The compulsory course on ‘Research and Publication Ethics’ shall be offered by Ch. Ranbir Singh Institute of Social and Economic Change for all UTDs/Centres/Institutes passed vide Resolution No. 27 of the 271st meeting of EC held on 29.7.2020.

Name of the Program	Ph.D. Course work in Library and Information Science	Program Code	LIBPH
Name of the Course	Research Methodology	Course Code	20LIBPH11C1
Hours/Week	4	Credits	4
Max. Marks.	80	Time	3 Hours
<p>Note:The examiner has to set a total of nine questions (two from each unit and one compulsory question consisting of short answer from all units. The candidate has to attempt one question each from each unit along the compulsory question (5 x 16 = 80 marks)</p>			
<p>Course Objectives:</p> <ul style="list-style-type: none"> ▪ The research basics of library and information science in terms of theory and practice will be achieved ▪ Learn to achieve, the different types of research and its practical utility in the society and the course further helps in knowing the recent trends in the field also ▪ The uniqueness of the course is so diversified new research techniques i.e., bibliometrics and scientometrics will be achieved ▪ The students are trained to handle all kinds of statistical techniques including the primary and advanced level including managerial skills 			
<p>Course Outcomes:</p> <ul style="list-style-type: none"> ▪ the basics of research methods in terms of types, category and its usability; ▪ how to examine major concepts of research approach in terms of qualitative, quantitative and mixed; ▪ information about different types of statistical methods and usability; ▪ research ethics and applicability in different situations; ▪ the use of special software to handle the complex statistical situation. 			
<p>Unit I: Research</p> <ul style="list-style-type: none"> • Research: Meaning, Definition, Importance, Characteristics • Types of Research: Pure, Applied and Action Research • Research Problem Identification • Literature Search and Review • Research Ethics 			
<p>Unit II: Research Design</p> <ul style="list-style-type: none"> • Research approach: qualitative- narrative, phenomenology, ethnography, discourse; quantitative-experimental and non-experimental (survey, historical, descriptive) • Research Design: Concept, Need, Purpose and Types • Designing Research Proposal • Research objectives, questions and hypothesis formulation 			

Unit III: Research Methods, Tools and Techniques

- Research Methods: Historical, Case Study, Survey, Experimental
- Research Tools: Questionnaire, Interview, Schedule, Observation
- Population and Sample
- Sampling Methods
- Scaling Techniques

Unit IV: Statistical Techniques

- Measures of Central Tendency: Mean, Median, Mode
- Measures of Dispersion, Variance and Covariance
- Standard Deviation, Chi-square, t-test
- Presentation of Data: Tabular, Graphic, Bar Diagram, Pie Chart, etc.
- Data Analysis: Use of SPSS and Web based Statistical Analysis Tools

References:

1. Busha, C.H & Harter, S.P. (1980). *Research methods in librarianship: Techniques and interpretation*. New York: Academic Press.
2. Goode, W.J. & Hatt, P.K. (1986). *Methods in social science research*. New Delhi: McGraw Hill.
3. Krishan Kumar. (1992). *Research methods in library and information science*. New Delhi: Vikas Publishing House.
4. Kumar, P.S.G. (2004). *Research methods and statistical techniques*. Delhi; B. R. Publishing Corpn.
5. Leddy, Paul D. (1980). *Practical research: Planning design*. London, Clive Bingley.
6. Pickard, A.J. (2013). *Research Methods in Information*. London: Facet Publishing.
7. Rao, I. K. Ravichandra. (1983). *Quantitative methods in library and information science*. New Delhi: Wiley Eastern.
8. Slater, Margaret, ed. (1990). *Research methods in library and information studies*. London: Library Association.
9. Stevens, R.E. Ed. (1971). *Research methods in librarianship*. London, Clive Bingley.

Name of the Program	Ph.D. Course work in Library and Information Science	Program Code	LIBPH
Name of the Course	Computer Applications in Library and Information Science	Course Code	20LIBPH11C3
Hours/Week	4	Credits	4
Max. Marks.	80	Time	3 Hours
<p>Note: The examiner has to set a total of nine questions (two from each unit and one compulsory question consisting of short answer from all units. The candidate has to attempt one question each from each unit along the compulsory question (5 x 16 = 80 marks)</p>			
<p>Course Objectives:</p> <ul style="list-style-type: none"> ▪ to train the basics of computing ▪ to create a manpower for computer-aided research ▪ to utilise the computer-based software for research applications ▪ to aware and train discipline specific in the technology world 			
<p>Course Outcomes: The students will be able to know: CO1: the computer basics in terms of software and hardware; CO2: major areas of computer applications in handling library operations; CO3: about software handling; CO4: about use of internet and e-resources; CO5: about modern computing techniques used in blog, websites and other social networking platforms.</p>			
<p>Unit I: Communication and Internet Technology</p> <ul style="list-style-type: none"> • Data Communication: Components • Internet Protocols: FTP, HTTP, TCP/IP, etc. • Standards: OSI Model, WWW Standards • Web Server and Internet Security • Web 1.0, 2.0, 3.0, Semantic Web 			
<p>Unit II: Database Management</p> <ul style="list-style-type: none"> • DBMS - Concept, Definition, Features and Need • RDBMS - Concept, Definition, Features and Need • Database Design, Development, Evaluation, Query Language • Database Architecture and Models 			
<p>Unit III: Digital Library</p> <ul style="list-style-type: none"> • Digital Library- Genesis, Definition, Need, Objectives and Characteristics 			

- Design and Development of Digital Library - Planning, Design, Implementation, Evaluation and Management
- Digitization process
- Input Capture Devices, OCR
- Digital Library Software: Greenstone and Dspace

Unit IV: Artificial Intelligence and Expert System

- Artificial Intelligence
- Expert Systems
- Tools for Building Expert System
- Data Warehousing
- Data Mining and its Applications

References:

1. Bala, Krishnan Shyama & Paliwal, P. K., ed. (2001). *Networking and the future of libraries*. New Delhi: Anmol Publishing
2. Basandra, Suresh K. (1998). *Computer today*. New Delhi: Galgotia Publication Pvt. Ltd
3. Bradley, P. (2000). *World Wide Web: How to design and construct web pages* (2nd ed). London: ASLIB
4. Forouzan, B. A., Coombs, Catherine & Fegan, S. C. (2000). *Data communication and networking*. 2nd ed. New Delhi: Tata McGraw-Hill
5. Jeanne, F. M. (2006). *A librarian's guide to the Internet: A guide to searching and evaluating information*. Oxford: Chandos publishing
6. Rowley, J. (1998). *The electronic library* (4th ed). London: LA
7. Rydberg-Cox, Jefery A. (2006). *Digital libraries and the challenges of digital humanities*. Oxford: Chandos Publishing
8. Stallings, William. (2001). *Data and computer communications* (6th ed). New Delhi: Pearson Education Asia, 2001
9. Tedd, Lucy, A. (2005). *An Introduction to computer based library system* (3rd ed). Chinchester: Wiley
10. Yadav, D. S. (2006). *Foundations of information technology*. New Delhi: New Age International (P) Ltd, Publishers
11. Zorkoczy, Peter. (2005). *Information Technology: An introduction*. London: Otiman

Name of the Program	Ph.D. Course work in Library and Information Science	Program Code	LIBPH
Name of the Course	Emerging Trends in Library and Information Science	Course Code	20LIBPH11C4
Hours/Week	4	Credits	4
Max. Marks.	80	Time	3 Hours
<p>Note:The examiner has to set a total of nine questions (two from each unit and one compulsory question consisting of short answer from all units. The candidate has to attempt one question each from each unit along the compulsory question (5 x 16 = 80 marks)</p>			
<p>Course Objectives:</p> <ul style="list-style-type: none"> ▪ to find out and trace the trend in study and research in LIS ▪ to create a specialised manpower in the contemporary research ▪ to strengthen the research curricula in the areas of mainstream research ▪ to avoid redundant research activities while highlighting thrust areas 			
<p>Course Outcomes: The students will be able to know: CO1: the general trend in which the discipline of LIS is moving; CO2: to identify major areas in which the researchers are doing research; CO3: the doctoral contribution in the field in terms the research guide and their field of research; CO4: the professional developments in the profession; CO5: the employability areas and to thrive on it.</p>			
Unit I: Research Data World			
<ul style="list-style-type: none"> • Big Data: Concept, Need • Big Data Management: Problems and Challenges • Role of Libraries in Big Data Handling • Data Curation 			
Unit II: Scholarly Communication and Electronic Resources			
<ul style="list-style-type: none"> • Evolution of Scholarly Communication • Open Access and its Development • Green and Gold Open Access • Electronic Resource: Concept, Need and Types • Collection development of e-resources 			
Unit III: Trends in Knowledge Organization			
<ul style="list-style-type: none"> • Automatic classification, Classification in online systems, Web Dewey, Ontology • Metadata- Types, Dublin Core 			

- FRBR
- RDA
- Federated Search

Unit IV: Recent Trends

- Recent trends in LIS research
- Cloud computing in libraries
- Bibliometrics, Scientometrics, Webometrics: Concept, Laws and Applications
- Research Metrics

References:

1. Chambers, Sally, ed. (2013). *Catalogue 2.0: The future of library catalogue*. London: Facet Publishing.
2. Chaudhary, G. G. & Chaudhary, Sudatta (2007). *Organizing Information: From the shelf to the web*. London: Facet Publishing.
3. Chowdhury, G.G. (2014). *Sustainability of Scholarly Communication*. London: Facet Publishing.
4. Cole, Jim et. al. (2003). *E-serials Collection Management: Transition, Trends and Technicalities*. London: CRC Press.
5. Davenport, Thomas H. (2014). *Big data @work: Dispelling myths, uncovering opportunities*. Boston: Harvard business review Press.
6. Jaswal, D.S. (2008). *Recent trends in library and information science*. Chandigarh: Arun Publishing House.
7. Katz, Linda S. (2003). *Collection development policies: New dimension for changing collections*. London: Roulledge.
8. Lancaster. F.W. (1990). *Electronic publishing and their implications for libraries and beyond*. London: Clive Bingley.
9. Oliver, Chris (2010). *Introducing RDA: A guide to the basics*. London: Facet Publishing.
10. Ramaiah, L.S, Reddy, Sankara and Hemant Kumar. (2007). *E-libraries: Problems and perspectives*. New Delhi: Allied Publishers.
11. Shorley, Deborah & Jubb, Michael (Eds) (2013). *The Future of Scholarly Communication*. London: Facet Publishing.
12. Siwach, A.K. (2013). An overview of scholarly communication, its evolution and the impact of ICT. *International Journal of Library & Information Management*, 4 (1), 75-81.
13. Yu, Holly & Breivold, Scott. (2008). *Electronic Resource Management in Libraries: Research and Practice*. Information Science Reference.