

RULES FOR CONDUCT OF Ph.D. COURSE WORK

Prescribed under U.G.C. Regulations, 2016

2020



**Binod Bihari Mahto Koyalanchal University,
Dhanbad, Jharkhand - 828130**

1. Eligibility and Admission:

All students registered for Ph.D. programme in the various University Departments of the Binod Bihari Mahto Koyalanchal University (BBMKU) are eligible for admission to the Ph.D. course work programme. It is mandatory for all Ph.D. aspirants to complete the course work *as per UGC (Minimum Standards and Procedure for Award of M.Phil./PhD Degrees) Regulations, 2016*. Students have to register in the respective University Departments and pay a fee of Rs. 5000/- for the programme. The fee shall be deposited by DD favouring the Head of the respective University Department.

2. Duration of the Course: One semester**3. Venue:** The concerned University Department.**4. Attendance Requirement:** For appearing at the end semester, a minimum of 75% attendance is required.**5. Course Structure:** The one Semester course shall comprise four papers of 100 marks each to be evaluated through mid-semester and end semester examinations, shall be conducted by the concerned Department of the University. **Each course will be of 4 credits.** The course work comprises 16 credits in all.

- One theory paper shall have teaching content of minimum of 60 contact hours.
- Assignment of credits:
 - a) For theory/tutorial lecture, 1 credit shall be assigned for one contact hour per week in the semester (15-week duration).
 - b) For laboratory/field work, two contact hours per week in the semester shall be assigned 1 credit.

Structure of Course Work:

Paper No.	Name of the Paper	Mid-Semester		End Semester	Total Marks
		Written	Attendance & Day-to-Day Activity		
I	Research and Publication Ethics & Computer Application in Research (Credits-4) (Common to All faculty)	20	10	70	100
II	Research Methodology (Credits-4) (Common to All faculty)	20	10	70	100

III	Subject Specific-I (Basic) (Common paper – As decided by concerned University Department) (Credits-4)	20	10	70	100
IV	Subject Specific-II (Advanced) (Elective paper - As decided by concerned University Department) (Credits-4)	20	10	70	100

6. Examination: The concerned Head of the University Department shall be responsible for the conduct of the course, Mid-Semester and End-Semester examination.

6.1 Mid Semester: The Mid Semester written examination of Paper I to IV shall be held in a sitting of 1.5 hrs each. Five questions shall be set of 10 marks each, out of which two questions are to be answered. Each questions carry equal marks.

Evaluation of the answer-scripts of a mid-semester examination shall be done by the teacher(s) who have taught the concerned portion of the paper, within 07 working days. A tabulation register shall be maintained in each department in which these marks (written + attendance and day to day activities) will be tabulated. The marks of the mid semester shall be published on the notice board of the University Department for information of the scholars. It shall be the responsibility of the concerned Head of the University Department to submit the marks of the Mid Semester examination of the University Department well before filling the examination form of the End-Semester Examination to the Examination Department of the University.

6.2 End Semester: The End Semester written examination of paper I to IV shall be of 3 hours duration on the dates decided by the respective Heads of the Departments on the recommendation of Dean of the faculty. The question paper shall comprise nine questions, out of which five will have to be answered. Each question carries fourteen (14) marks. Question No.1 shall be compulsory and shall comprise seven objective/short answer types covering to the entire syllabus of the paper. The End Semester examination of Paper IV shall be held either in one sitting of 3 hours duration or in two modes: 50 % written and 50% oral as decided by the concerned University Head.

It shall be the responsibility of the concerned Head of the University Department and Dean of the faculty to submit the answer-scripts of the End Semester

Examination of the University Department to the Examination Department of the University on that day for further process of evaluation and results.

7. **Grades and Grade Points:** A UGC 07-point grading system with the following grades will be followed as given below:

Grade		Grade Point	Percentage Equivalent
O (Outstanding)		5.50 – 6.00	75 – 100
A (Very Good)		4.50 – 5.49	65 – 74
B (Good)		3.50 – 4.49	55 – 64
C	Fail	2.50 – 3.49	45 – 54
D		1.50 – 2.49	35 – 44
E		0.50 – 1.49	25 – 34
F		0 – 0.49	0 – 24

8. **Declaration of Result:**

8.1 A scholar has to obtain a minimum of 55% of marks or its equivalent grade in the UGC 7-point scale (or an equivalent grade/CGPA in a point scale wherever grading system is followed) in the course work in order to be eligible to continue in the Ph.D. programme and submit the thesis.

8.2 A student obtaining Grade C or below in either all the papers of Mid-Semester taken together or/ and End-Semester taken together, shall be considered failed and will be required to reappear in the succeeding examination. Candidates who do not pass in one or more papers may be given **one chance** with successive batch to clear the same.

9. **Exemption: (As in clause 3(B) of Ph.D. Regulations)**

9.1 M.Phil. holders candidates who have successfully completed an equivalent Ph.D. Course work *as per UGC (Minimum Standards and Procedure for Award of M.Phil./PhD Degrees) Regulations, 2016* from other recognized University/ institution shall be exempted from undergoing the course work in this University.

9.2 On the discretion of the Vice Chancellor, a permanently employed scientist working in a national institution recognised by UGC/AICTE, etc. may be exempted from attending the classes but he/she will have to take the Mid-Semester and the End-Semester examination.

10. A Course Completion Certificate shall be issued by the University after successfully completion of the course work along with the scores of the candidate.

- 11. Appeal:** The Vice-Chancellor shall be the final appellate authority. The decision of the Vice-Chancellor against any grievance shall be final and binding.
- 12. Repeal and Savings:** This Rule repeals all previous rules in this regard, but actions taken under the previous rules are saved.



SYLLABUS FOR COURSEWORK

Paper-I: Research and Publication Ethics & Computer Application in Research

(Credits-04, Lectures-60)

Section-I: Research and Publication Ethics (Credits-02, Lectures-30)

THEORY

UNIT-1: PHILOSOPHY AND ETHICS (3L)

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

UNIT-2: SCIENTIFIC CONDUCT (5L)

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

UNIT-3: PUBLICATION ETHICS (7L)

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 behavior 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

PRACTICE

UNIT-4: OPEN ACCESS PUBLISHING (4L)

1. Open access publications and initiatives
2. SHERPA/RoMEO online resource to check publisher copyright & 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.

UNIT-5: PUBLICATION MISCONDUCT (4L)

- A. Group Discussions (2L)
 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 (2L)

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

UNIT-6: DATABASES AND RESEARCH METRICS (7L)

A. Databases (4L)

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

B. Research Metrics (3L)

1. Impact Factor of journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score
2. Metrics: h-index, g index, i 10 index, altmetrics

Section-II: Computer Application in Research (Theory & Practice) (Credits-02, Lecture-30)

UNIT-7: COMPUTER APPLICATION IN RESEARCH (10L+20P)

- (a) Introduction to Computer – Hardware, Software, Computer Language (BASIC, FORTRAN, C), Introduction to Programming Technique, Flow chart, Generation & History (2 theory, 1 Practical)
- (b) Operating System Software – Introduction to DOS, Windows – 7, File Management, Common Maintenance of Computer using Windows/DOS. (1 Theory – 3 Practical)
- (c) MS-WORD – Writing Reports, Articles, Thesis, Preparing Tables, Formula & Symbols, Mail-Merge. (2 Theory, 6 Practical)
- (d) MS-EXCEL – Preparing Spreadsheet, Using Formulas & Functions, Database Management, Statistical Analysis, Graph, Hands on SPSS. (1 Theory, 5 Practical)
- (e) MS-PowerPoint – Preparing Presentations, slide Show, Handouts (1 Theory, 3 Practical)
- (f) Optimum utilization of data by correlating one Software with other. (1 Theory, 1 Practical)
- (g) Introduction to Paint, Microsoft Picture Manager, Internet. (1 Theory, 1 Practical)
- (h) Conclusion. (1 Theory)

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ESTD: 2017

Paper-II: Research Methodology

(Credits-04, Lectures-60)

Objective: To identify and apply appropriate research methodology in order to plan, conduct and evaluate basic research. The Course will furthermore enable scholars to distinguish between the scientific method and common sense knowledge while laying the foundation for research skills at higher levels.

UNIT-1: INTRODUCTION TO RESEARCH (12L)

- 1.1 Introduction to research – Meaning and definition of research; Objectives of research; Motivations of research; Types of research; Formulating a research problem – selecting the problem, techniques involved in defining a problem
- 1.2 Research process and steps involved in the process; Criteria of good research; problems encountered in research.
- 1.3 Methods of Research (Survey, Observation, Case study, Experimental, Historical and comparative methods).

UNIT-2: RESEARCH DESIGN & SAMPLING DESIGN (08L)

- 2.1 Meaning of research design; Need for research design; Features of research design; Different research designs; Parametric & non parametric methods.
- 2.2 Sampling – Meaning of sample; Sampling techniques; Steps in sampling; Types of sampling, advantages and limitations of sampling

UNIT-3: DATA COLLECTION & PROCESSING (10L)

- 3.1 Literature Review- Need; Procedure for collection of literature; Manual collection from library; Usage of library; Collection of literature from Scopus; ScienceDirect etc.; Compiling literature; Software utilization in literature collection.
- 3.2 Data Collection & Processing - Collection of data – primary data and secondary data; Data Processing – processing the data; editing; coding and classification; tabulation; Analysis and Interpretation of data.

UNIT-4: SCALING & HYPOTHESIS (10L)

- 4.1 Scaling method – types of measured scale and problems of scaling
- 4.2 Correlation – types of correlation; Scatter diagram method; Karl Pearson's Coefficient of Correlation; Regression – simple linear regression; linear growth rate.
- 4.3 Hypothesis – Characteristics of a good hypothesis; Procedure of testing hypothesis – flow diagram; Large sample tests; Small sample tests; Applications of t test, F test, Chi square test.

UNIT-5: RESEARCH WRITING (10L)

- 5.1 Report-Types of Reports; Planning of Report Writing; Research Report Format; Principles of Report Writing; Writing a Review of Paper; Book review
- 5.2 Documentation of Data and its analysis in Thesis; Pictures and Graphs
- 5.3 Citation styles; Bibliography; References; Footnotes.
- 5.4 Writing a Synopsis; Dissertation & Thesis.

- 5.5 Basic knowledge of organizing Conferences, Symposia, Workshop, Exhibition etc.
- 5.6 Plagiarism and how to avoid.

UNIT-6: SCIENTIFIC COMMUNICATION (10L)

- 6.1 Types of Scientific Communications
- 6.2 Importance of publishing research papers
- 6.3 Publishing Research paper:
 - (a) Preliminaries, Format, Choosing Journal
 - (b) Title, Running Title
 - (c) Authors: Single and Multi authorship
 - (d) Writing Abstract
 - (e) Introduction section
 - (f) Materials and Methods Section
 - (g) Result Section
 - (h) Figures: Design Principles, Legends, Table components, Graphs: Types, Style, Tables v/s Graph
 - (i) Discussion Section: Format, Grammar Style, Content.
 - (j) Acknowledgements
 - (k) References: Different Styles
 - (l) Selecting Keywords
 - (m) Communication with the Editor, Handling Referees' Comments, Galley Proofs
- 6.4 Writing Review Articles
- 6.5 Preparing and Delivering of Oral and Poster Presentations
- 6.6 Preparing documents for MoUs, Confidentiality Agreements.

REFERENCES:

1. Research Methodology: Methods and Techniques by C. R. Kothari, New Age International Publishers.
2. Methodology of Research in Social Sciences by O. R. Krishnaswamy and M. Rangnatham Himalaya publication House.
3. Research Methodology-A Step-by-Step Guide for Beginners by Ranjit Kumar (2nd.ed), Pearson Education.
4. Research Methodology: Concepts and Cases by Chawla and Sondhi, Vikas Publication.