

# DEPARTMENT OF EDUCATION

## SYLLABUS OF Ph.D. PROGRAMME



**RAMA DEVI WOMEN'S UNIVERSITY**  
Vidya Vihar, Bhubaneswar-751022, Odisha  
Website: <https://rdwu.ac.in>

**Syllabus For  
Pre-Ph.D. Coursework (Education)**

**With effect from  
Academic Session 2020-21 Admission Batch**

**One Semester Duration (Six Months)**



**FACULTY OF PEDAGOGICAL SCIENCES  
P. G. Department of Education**

**RAMA DEVI WOMEN'S UNIVERSITY  
Vidya Vihar, Bhubaneswar-751022, Odisha, India**

*Mustapha*  
12.10.23  
Controller of Examinations  
R.D. Women's University  
Bhubaneswar

**SCHOOL OF PEDAGOGICAL SCIENCES****P.G. DEPARTMENT OF EDUCATION****Rama Devi Women's University, Vidya Vihar, Bhubaneswar-22, Odisha****SYLLABUS FOR****Pre-Ph.D. COURSE WORK IN EDUCATION**

All the scholars of Ph.D. programme of this Department have to undergo Pre-Ph.D. Coursework of one semester duration. On successful completion of the course work, the scholars may be eligible for final registration for Ph.D. subject to recommendation of Department Research Committee (DRC). The syllabus structure for Pre-Ph.D. Coursework in Education is given below.

<b>Papers</b>	<b>Course Title</b>	<b>Credits</b>	<b>Marks</b>	<b>Pass Mark</b>	<b>Remarks</b>	<b>Page No.</b>
Paper-I	Research Methodology and Computer Application (Theory & Practical)	4	100	50%	Subject Specific	2
Paper-II	Curriculum, Pedagogy and Educational Statistics (Theory)	4	100	50%	Subject Specific	5
Paper-III	Review of Related Literature (Practical)	4	100	50%	Common to all subjects	7
Paper-IV	Research and Publication Ethics (Theory & Practical)	4	100	50%	Common to all subjects	9
-----	<b>Total</b>	<b>16</b>	<b>400</b>	<b>50%</b>	-----	--

**P.G. DEPARTMENT OF EDUCATION  
PROGRAMME OUTCOMES (POs) OF Ph.D. IN  
EDUCATION**

On completion of the programme, the students will be able to:

- PO1. Comprehend concept of quantitative, qualitative and mixed method research methodology
- PO2. Select and explain an appropriate method for a research study and conduct review of related literature
- PO3. Formulate hypothesis or pose research questions based on the objectives of the study.
- PO4. Learn how to prepare research proposal and write research report
- PO5. Understand and apply various quantitative and qualitative techniques of data collection, analysis and interpretation
- PO6. Explain and use various pedagogical skills, technological skills and communication skills in professional career
- PO7. Understand concept types of assessment such as assessment for, of and as learning
- PO8. Learn concept of educational management and TQM
- PO9. Identify research gap and write the review in a synchronized manner
- Po10. Write and summarize the findings of different research studies

**P.G. DEPARTMENT OF EDUCATION  
PROGRAMME SPECIFIC OUTCOMES (PSOs) OF Ph.D. IN  
EDUCATION**

On completion of the programme, the students will be able to:

**PSO1:** Students can go further professional courses like, D.Litt. Distance education, Adult education and Population education etc.

**PSO2:** Acquired passion for multidisciplinary research in the field of Sociology, Psychology, Philosophy, History, Economics and Political Science etc.

**PSO3:** Acquired practical knowledge and skills from various field works, internship, research projects, community activities, formal and non-formal interactive sessions.

**PSO4:** Develop new dimensions of knowledge by opting different open and discipline specific electives to meet the needs of the present society.

**PAPER-I:**  
**RESEARCH METHODOLOGY AND COMPUTER APPLICATION**

Credits: 04

Full Marks: 100 (Theory 75 + Unit-IV Practical 25)

**Course Outcomes (COs)**

On completion of the course, the students will be able to:

- CO1:** Comprehend concept of quantitative, qualitative and mixed research methodology.
- CO2:** Select and explain an appropriate method for a research study and conduct review of related literature.
- CO3:** Formulate hypotheses or pose research questions based on the objectives of the study.
- CO4:** Learn how to prepare research proposal and write research report.  
Select and develop appropriate research tools for the collection of data.
- CO5:** Understand and apply various quantitative and qualitative techniques of data collection, analysis and interpretation.

**COURSE CONTENTS**

**Unit-I: Introduction to Educational Research and Quantitative Methods**

- *Educational Research:* Concept, types, approaches- Quantitative, Qualitative and Mixed research; Review of related literature; Population and sampling; Choice of instruments/tools; Process of data and analysis.
- *Preparation of Research Proposal:* Components; Objectives and hypotheses/ research questions; methodology.
- *Methods and Designs of Quantitative Research:* Survey Designs; Experimental Designs; Causal-Comparative Design; and Correlational Designs. Report Writing.

**Unit-II: Qualitative Research Methods**

- *General Process:* Selecting participants and sites; types of qualitative data, process of data collection; validating the accuracy of findings.
- *Grounded Theory Designs; Ethnographic Designs; Narrative Research Designs:* Concept, purpose, types, characteristics, steps in conducting these researches. Ethical issues and evaluation of these research designs.
- *Case Study Designs:* Concept, purpose, types, characteristics. Types of Case Study Designs-particularistic, descriptive, and heuristic. Process of Conducting Case studies. Ethical issues and evaluation of Case study design.

### Unit-III: Mixed Methods Designs

- *Mixed Method Designs*: Concept, purpose, and characteristics. Designs- Convergent Parallel, Explanatory Sequential, Exploratory Sequential, Embedded, Transformative, and Multiphase.
- *Steps in conducting Mixed Method Study*: Identifying problem; developing mixed method tools; data collection-quantitative and qualitative data; analyzing data separately, concurrently or both; report writing; ethical issues; evaluation of mixed method research.
- *Action Research Design*: Concept, purpose, characteristics and steps. Types - Practical and participatory. Ethical issues and evaluation of action research.

### Unit: IV- Computer Application (Practical Mode) [Practical]

- MS Word, MS Excel, and MS-Power Point: Creating presentations and adding effects. Working with Text, Working with Tables, Graphs and figures, Document preparation, and Formatting.
- Use of software for sample size calculation (Raosoft).
- Use of Spread sheet and SPSS for analysing educational data.
- Referencing Style (APA Style): Bibliography, Webliography.

#### **Course Transaction Mode**

The content will be transacted through face to face/ web based lectures, assigning activities/ assignments, presentation in seminar, peer teaching and self-learning mode. In addition to formal teaching learning activities students may be assigned classes of PG/ PG levels to teach students to get first and knowledge.

#### **Suggested Readings**

- APA Manual (7<sup>th</sup> Edition). Read and Follow for referece writing and others.
- Abdi, H., Edelman, B., Valentin, D., & Dowling, W.J. (2009). Experimental design and analysis for psychology. New Delhi: Oxford University Press.
- American Psychological Association (2010). Publication manual of the American Psychological Association (6th Ed.). Washington, DC: American Psychological Association
- Ary, D., Jacobs, L.C, & Razavieh, A. (2002). Introduction to research in education (6th ed.), Belmont, CA:Wadsworth/Thomson Learning.
- Best, J.W., & Kahn, J.V. (2009). Research in education. New Delhi: Prentice Hall of India Pvt. Ltd.
- Bogdan, R., & Taylor, S.L. (1975). Introduction to qualitative research methods. New Delhi: John wiley and sons.
- Craig, A.M. (2006). Action research-tecahers as researchers in the classroom. New Delhi: Sage Publications.
- Creswell, J.W. (2012). Educational research: Planning, conducting, and evaluating, quantitative and qualitative research (4th Ed.). New Delhi : PHI learning Pvt. Ltd.

- Ferguson, G.A. & Takane, Y. (1989). Statistical analysis in psychology and education (6th Ed.). New York: McGraw-Hill.
- Flick, U. (2012). An introduction to qualitative research. London: Sage Publication.
- Garrett, H.E. (1971). Statistics in psychology and education. New Delhi: Paragon International Publisher
- Gay, L.R., Mills, G.E., and Airasian, P. (2009). Educational research. Competencies for analysis and applications. New Jersey: Merrill and Pearson.
- Guilford, J.P. & Fruchter, B. (1981). Fundamental statistics in psychology and education. New York: McGraw Hill
- Kerlinger, F. N., Lee, H. B. (2000). Foundations of behavioural research. New York: Thomson Learning.
- Mangal, S.K. (2008). Statistics in Education and Psychology. New Delhi: Prentice-Hall of India Private Limited
- Seigel, S. & Castellan Jr., N.J. (1988). Non-parametric statistics for the behavioral sciences. New York: McGraw- Hill.

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#### Mapping of Course Outcomes with the Program outcomes:

COs/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	5	5	5	4	2	4	5	5	4	5
CO2	4	4	2	4	5	4	5	4	2	5
CO3	4	5	5	4	5	5	4	5	5	4
CO4	5	4	4	5	4	5	4	5	2	5
CO5	5	5	4	4	4	4	5	4	4	5

- Note related: 1
- From What Related: 2
- Neutral: 3
- Moderately Related: 4
- Highly Related: 5

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EDUCATION**



**PAPER-II:**

**CURRICULUM, PEDAGOGY AND EDUCATIONAL STATISTICS**

Credits: 04

Full Marks: 100 (Theory)

**Course Outcomes (COs)**

On completion of the course, the students will be able to:

**CO1:** Explain and use various pedagogical Skills, technological Skills, and communication skills in professional career.

**CO2:** Understand concept and types of assessment such as: Assessment for, of and as learning.

**CO3:** Apply various alternative Assessment techniques such as rubrics, portfolio, competency-based assessment and learning outcome

**CO4:** Learn concept of educational management and TQM.

**CO5:** Explain the use of normal probability of curve in analysing educational data.

**COURSE CONTENTS**

**Unit-I: Curriculum and Pedagogical Practices**

- Curriculum: Concept and types, Difference between curriculum framework, curriculum, syllabus and textbook, Role of the teacher in designing curriculum
- Curriculum planning, designing and implementation.
- Constructivist pedagogy, Experiential learning, Concept Mapping, Collaborative learning and Critical pedagogy
- Pedagogical Skills, Technological Skills, Communication skills.

**Unit-II: Transforming Assessment, Evaluation and Educational Management**

- Assessment and Evaluation: Concept and classification
- Assessment for, of and as learning.
- Alternative Assessment: Rubrics, Portfolio, Competency based assessment and learning outcome
- Educational Management: Concept and need; Total Quality Management.

### Unit-III: Analysis and Interpretation of Educational Data -I

- Normal Probability Curve (NPC): Its applications and Deviation from normality.
- Pearson's Product Moment and Spearman's Rank Order Correlation: Assumptions, computation and interpretation.
- Partial and Multiple Correlation; Linear Regression.
- Sampling Error, Standard Error, Level of significance, Confidence level, Degrees of freedom, One-tailed and two-tailed tests; Types of Errors in testing null hypothesis.

### Unit-IV: Analysis and Interpretation of Educational Data -II

- Significance of difference between Two Means- Small sample and large sample; Independent and Correlated Samples.
- Chi-square test: Assumptions and Computation.
- Analysis of Variance (ANOVA): assumptions, computation (one way, two-way) and interpretations.
- Analysis of Covariance (ANCOVA)- Assumptions, Calculation & interpretations.

### **Course Transaction Mode**

The content will be transacted through face to face/ web based lectures, assigning activities/ assignments, presentation in seminar, peer teaching and self-learning mode. In addition to formal teaching learning activities students may be assigned classes of PG/PG levels to teach students to get first and knowledge.

### **Suggested Readings (Unit-I & II)**

- Anandan, K. (2010). Instructional technology in teacher education. New Delhi: APH Publishing Corporation.
- Anderson, C.A & Bowman, M.J (1971). Educational management, London, U.K: Frankas
- Ashima V, Deshmukh & Naik A.P (2010). Educational management. Girgaon, Mumbai: Himalaya Publishing House.
- Bhatnagar, R.P & Verma, I.B (1978). Educational administration. Meerut, India: Loyal Book Depot.
- Blooms, B.S.(1956). Taxonomy of educational objectives. New York: Longman Green and Company
- Chand, T. (2008). Principles of teaching. New Delhi: Anmol Publications Pvt. Ltd.
- Chau, Ta-Ngoc (2003): Demographic aspects of educational planning. Paris: International Institute for Educational Planning.
- Chiniwar, P. S. (2014). Technology of teaching. New Delhi: Anmol Publications Pvt. Ltd.
- Cohen, R.J., Swerdlik, M.E., & Phillips, S.M. (1996). Psychological testing and assessment. an introduction to the tests and measurement. California: Mayfield Publishing Co.
- Earl, L.M. (2006). Assessment as learning: using classroom assessment to maximize student learning. Thousand Oaks, California: Corwin Press

- Goswami, M. (2011). Measurement and evaluation in psychology and education. Hyderabad: Neelkamal Publishers
- Gronlund, N.E. (2003). Assessment of student Achievement. Boston: Allyn & Bacon.
- Hopkins, KD. (1998). Educational and psychological measurement and evaluation. Boston: Allyn and Bacon.
- Kimbrough, S.Ralph, Michall & Nunnery. Educational administration. New York: Mc Millan Company.
- Kizlik, B. (2012). Measurement, assessment, and evaluation in education. website: <http://drjj.uitm.edu.my/drjj/obe%20fsg%20dec07/obejan2010/drjj-measure-assess-evaluate-adprima-n-more-17052012.pdf>. Retrieved on December 01, 2015.
- Kochar, S.K (2011). School Administration and Management. New Delhi: Sterling Publishers Private Limited.
- Linn, R.L. & Gronlund, N.E. (2000). Measurement and assessment in teaching. London: Merrill Prentice Hall.
- Oliva, P.F. (2001). Developing the curriculum (Fifth Ed.). New York, NY: Longman
- Ornstein, A.C. & Hunkins, E (1998). Curriculum. foundations, principles and issues. Allyn & Bacon, Boston.
- Purayil, A. V. (2015). Educational technology. New Delhi: APH Publishing Corporation.
- Ranford, C. P. (2013). Strategies for successful student teaching. New Jersey: Pearson Publications.
- Singh, A.K. (2016). Tests, measurements and research methods in behavioural sciences. New Delhi: Bharati Bhawan Publishers.
- Taba Hilda (1962). Curriculum development: Theory and Practice. New York, Harcourt Brace, Jovanovich Inc.

### **Suggested Readings (Unit-III & IV)**

- Abdi, H., Edelman, B., Valentin, D., & Dowling, W.J. (2009). Experimental design and analysis for psychology. New Delhi: Oxford University Press.
- Ferguson, G.A. & Takane, Y. (1989). Statistical analysis in psychology and education (6th Ed.). New York: McGraw-Hill
- Garrett, H.E. (1971). Statistics in psychology and education. New Delhi: Paragon International Publisher
- Glass, G.V. & Stanley, J.C.(1970). Statistical methods in education and psychology. New Jersey: Prentice Hall.
- Guilford, J.P. & Fruchter, B. (1981). Fundamental statistics in psychology and education. New York: McGraw Hill
- Lichtman, M. (2006). Qualitative research in education-A user guide..London: Sage Publication.
- Mangal, S.K. (2008). Statistics in Education and Psychology. New Delhi: Prentice-Hall of India Private Limited
- McCall, R. (1993). Fundamental Statistics for the Behavioral Science. New York: Harcourt Brace
- Ravid, Ruth. (2000). Practical Statistics for Education. New York: University Press of America.
- Seigel, S. & Castellian Jr., N.J. (1988). Non-parametric statistics for the behavioral sciences. New York: McGraw- Hill.

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**Mapping of Course Outcomes with the Program outcomes:**

<b>COs/POs</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>	<b>PO10</b>
<b>CO1</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>2</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>5</b>
<b>CO2</b>	<b>4</b>	<b>4</b>	<b>2</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>2</b>	<b>5</b>
<b>CO3</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>4</b>
<b>CO4</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>2</b>	<b>5</b>
<b>CO5</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>5</b>

**PAPER- III:**

**REVIEW OF RELATED LITERATURE**

Credits: 04

Full Marks: 100 (Practical)

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**Course Outcomes (COs)**

On completion of the course, the students will be able to:

**CO1:** Identify the research gap and write the review in a synchronized manner

**CO2:** Select a research area of their interest

**CO3:** Identify variables relevant to the selected research area

**CO4:** Summarize the findings of different research studies

**CO5:** Write a thematic paper on any contemporary issue in the subject

**CONTENTS**

Each student is required to select a problem on which she has to do intensive review of related studies under the supervision of a faculty member of the Department. She has to review adequate research studies related to the problem and prepare a report.

The student is required to submit a report on the review carried out by her and need to give a power point presentation before the RAC. Assessment shall be made on the basis the following criteria:

- 1) Relevance of the reviews.
- 2) Finding the research gap.
- 3) Standard and quality of writing the review.
- 4) Style of presentation.
- 5) Answering the question

**Distribution of Marks for Evaluation**

- |                                  |            |
|----------------------------------|------------|
| 1) Report writing and submission | : 50 Marks |
| 2) Presentation                  | : 30 Marks |
| 3) Viva-voce Test                | : 20 Marks |

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Total: 100 Marks

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**Mapping of Course Outcomes with the Program outcomes:**

<b>COs/POs</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>	<b>PO10</b>
<b>CO1</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>2</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>5</b>
<b>CO2</b>	<b>4</b>	<b>4</b>	<b>2</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>2</b>	<b>5</b>
<b>CO3</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>4</b>
<b>CO4</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>2</b>	<b>5</b>
<b>CO5</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>5</b>

**PAPER- IV:**

**RESEARCH AND PUBLICATION ETHICS**

Credits: 04

Full Marks: 100 (Theory-50) + (Practical-50)

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**Course Outcomes (COs)**

On completion of the course, the students will be able to:

**CO1:** Understand the basics of philosophy of science and ethics, research integrity, publication ethics.

**CO2:** Identify research misconduct and predatory publications.

**CO3:** Comprehend indexing and citations, open access publications, research metrics (citations, h-index, impact factor etc).

**CO4:** Use plagiarism tools for a valid and ethical research report

**COURSE STRUCTURE**

**A: THEORY**

**Unit-I:Philosophy and Ethics**

- Introduction to Philosophy: Definition, nature and scope, concept, branches.
- Ethics: definition, moral philosophy, nature of moral judgement and reactions.
- Intellectual honesty and research integrity
- Conflict interest

**Unit-II: Scientific Conduct**

- Ethics with respect to science and research
- Scientific misconduct: Falsification, Fabrication, and Plagiarism (FFP)
- Redundant Publications: Duplicate and overlapping publications.
- Selective reporting and misrepresentation of data.

**Unit-III: Publication Ethics**

- Publication ethics: Definition, introduction and importance
- Violation of publication ethics, authorship and contributorship
- Publication misconduct: Definition, concept, problems that lead to unethical behaviour, types, identification of publication misconduct, complaints and appeals
- Predatory publishers and journals

## B: PRACTICAL

### Unit-I: Open Access Publishing

- Open Access Publications and initiatives
- Online resource to check publisher copyright and self-achieving policies (SHERPA/RoMEO)
- Journal finder/ journal suggestion tools viz. Elsevier finder, Springer, Journal suggester etc.

### Unit-II: Publication Misconduct

- Use of plagiarism software like Turnitin, Urkund and other open source software tools
- Software tools to identify predatory publications developed by SPPU
- Indexing databases

### Unit-III: Database and Research Metrics

- Citation databases: Web of Science, Scopus. etc.
- Impact Factor of journal as per Journal Citation Report.
- Metrics: h-index, g-index, i10 index, altmetrics

### Unit-IV: Group Discussion/Seminar

- Subject Specific ethical issues, FFP, authorship
- Conflict of interest
- Complaints and appeals: examples and fraud from India and abroad

## REFERENCES

- Bird, A. (2006). *Philosophy of Science*. Routledge.
- MacIntyre, A. (1967). *A short history of ethics*. London.
- P.Chaddah (2018). *Ethics in competitive Research: Do not get scooped; do not get plagiarised*.
- National Academy of Sciences (2009). *On being a scientist: A guide to responsible conduct in Research* (3<sup>rd</sup> Ed.), National Academics Press.
- Resnik, D.B. (2011). *What is ethics in research & why is it important*. National Institute of Environmental Health Sciences, 1-10.
- Beall, J. (2102). *Predatory publishers are corrupting open access*. *Nature*, 489 (7415), 179-179.
- Indian National Science Academy (INSA). *Ethics in science education, research and governance* (2019).



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**Mapping of Course Outcomes with the Program outcomes:**

COs/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	5	5	5	4	2	4	5	5	4	5
CO2	4	4	2	4	5	4	5	4	2	5
CO3	4	5	5	4	5	5	4	5	5	4
CO4	5	4	4	5	4	5	4	5	2	5

- Note related: 1
- From What Related: 2
- Neutral: 3
- Moderately Related: 4
- Highly Related: 5

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