

<b>PhD-Coursework (Structure &amp; Syllabus)</b>								
<b>Course Code and Course Title</b>			<b>Teaching Scheme</b>			<b>Assessment Scheme</b>		
						<b>Theory</b>		<b>Practical/Oral/ Presentation</b>
<b>Sl. No.</b>	<b>Course Code</b>	<b>Course Title</b>	<b>Th</b>	<b>P</b>	<b>C</b>	<b>CIA</b>	<b>ESA</b>	<b>CIA</b>
1	PHRPET101	Research and Publication Ethics (RPE)	2	-	2	20	30	-
2	PHRMET101	Research Methodology	4	-	4	40	60	-
3	PHQMET101	Quantitative Methods/Qualitative Methods	2	-	2	20	30	-
4	PHDS101	Domain Specific 1	TBD by School		2	-	-	50
5	PHDS102	Domain Specific 2	TBD by School		2	-	-	50
6	PHRAET101	Academic / Technical Writing and Presentation Skills	-	2	2	-	-	50
<b>Total</b>					<b>14</b>	<b>80</b>	<b>120</b>	<b>150</b>
<b>350</b>								

(TBD = To be Decided By School/ Research Supervisor)

## COURSE CURRICULUM

### Course Contents/Syllabus:

(All the units carry equal weightage in Summative Assessment and equal engagement)

<b>Name of the Program:</b>		Ph.D.		<b>Semester: I</b>		<b>Level: Ph.D.</b>	
<b>Course Name</b>		Research and Publication Ethics		<b>Course Code/ Course Type</b>		PHRPET101	
<b>Course Pattern</b>		2024		<b>Version</b>		1.0	
<b>Teaching Scheme</b>					<b>Assessment Scheme</b>		
<b>Theory</b>	<b>Practical</b>	<b>Self Work</b>	<b>Total Credits</b>	<b>Hours</b>	<b>CIA (Continuous Internal Assessment)</b>	<b>ESA (End Semester Assessment)</b>	<b>Practical/ Oral</b>
2	-	-	2	2	20	30	-
<b>Pre-Requisite:</b>							
Course Objectives (CO):				The objectives of Research and Publication Ethics are: 1. To introduce the fundamental ethical principles governing research and publication. 2. To familiarize with the ethical review processes, including Institutional Review Boards (IRB) and Ethics Committees. 3. To clarify the criteria for authorship and contributorship in academic publications and collaborative research projects. 4. To identify and manage conflicts of interest that may arise in research and publication processes. 5. To assess quality parameters and metrics			
Course Learning Outcomes (CLO):				Students would be able to: 1. Comprehend the Ethics concerning science and research 2. Apply intellectual honesty and research integrity 3. Examine the Scientific misconducts: Falsification, Fabrication, and Plagiarism (FFP) 4. Assess the open-access publications' copyright and policies, indexing, and citation database 5. Evaluate the intellectual property rights and research metrics			
<b>Descriptors/Topics</b>						<b>CLO</b>	<b>Hours</b>
<b>UNIT I</b>							
Research Philosophy and Ethics: Introduction to research philosophy: definition, nature and scope, concept, branches Ethics: definition, moral philosophy, nature of moral judgments and reactions						<b>CLO 1</b>	<b>6</b>
<b>UNIT II</b>							
Scientific Conduct: Ethics with respect to science and research, Intellectual honesty and research integrity, Scientific misconducts: Falsification, Fabrication, and Plagiarism (FFP), Redundant publications (duplicate and overlapping publications, salami slicing), Selective reporting and misrepresentation of data						<b>CLO 2</b>	<b>6</b>
<b>UNIT III</b>							

Publication Ethics and misconduct: Publication ethics: definition, introduction and importance, Conflicts of interest, Publication misconduct: definition, concept, problems that lead to unethical behavior and vice versa, types, Violation of publication ethics, authorship and contributor ship, Identification of publication misconduct, complaints and appeals, Predatory publishers and journals	<b>CLO3</b>	<b>6</b>
<b>UNIT IV</b>		
Open Access Publishing: Open access publications and initiatives, SHERPA/RoMEO online resource to check publisher copyright & self-archiving policies, Journal finder / journal suggestion tools viz. JANE, Elsevier Journal Finder, Springer Journal Suggester, etc., Database: Indexing database and citation database like Web of Science, Scopus, etc.	<b>CLO4</b>	<b>6</b>
<b>UNIT V</b>		
<b>Quality parameters and practices:</b> Intellectual Property Rights (IPR): Copyrights, Patent, Trademark and Geographical Indication, Research Metrics: Impact factor of Journal as per Journal Citation Report, SNIP, SJR, IPP, cite score, h-index, g-index, i10-index, and other related metrics, Plagiarism check: Software tools (TURNTIN, URKUND and other open source tools) and practice	<b>CLO5</b>	<b>6</b>
		<b>30</b>

### **Learning resources**

1. Verma Videsh, Research and Publication Ethics, jaya Publishing House, ISBN: 978-93-56511-45-3Edition: First, January 2022

## COURSE CURRICULUM

### Course Contents/Syllabus:

(All the units carry equal weightage in Summative Assessment and equal engagement)

<b>Name of the Program:</b>	Ph.D.	<b>Semester: I</b>	<b>Level: Ph.D.</b>
<b>Course Name</b>	Research Methodology	<b>Course Code/ Course Type</b>	PHRMET101
<b>Course Pattern</b>	2024	<b>Version</b>	1.0
<b>Teaching Scheme</b>			
<b>Theory</b>	<b>Practical</b>	<b>Self Work</b>	<b>Total Credits</b>
4	-	-	4
<b>Hours</b>			
4			
<b>Assessment Scheme</b>			
<b>CIA (Continuous Internal Assessment)</b>		<b>ESA (End Semester Assessment)</b>	<b>Practical/Oral</b>
40		60	-

#### Pre-Requisite:

Course Objectives (CO):

The objectives of Research Methodology are:

1. To introduce the basic principles and concepts of research.
2. To allow students to choose acceptable research designs based on their research questions or hypothesis.
3. To Introduce various data collection methods, including surveys, interviews, observations, and experiments.
4. To Improve students' abilities to produce excellent research proposals, papers, and presentations.
5. To develop critical thinking abilities to critically examine research literature and develop robust research investigations.

Course Learning Outcomes (CLO):

Students would be able to:

1. **Comprehend basic concepts of research and its methodologies**
2. **Apply various methodological tools for social scientific research**
3. **Collect, analyze and interpret research data**
4. **Define appropriate research problem and its parameters**
5. Use various conventions of APA and MLA style for scholarly writing

Descriptors/Topics	CLO	Hours
<b>UNIT I</b>		
<b>Introduction to Scientific Research:</b> Definition, Need of Research, Types of Research, Research Approaches - Quantitative & Qualitative, Research Process, Research Ethics.	<b>CLO 1</b>	<b>12</b>
<b>UNIT II</b>		
<b>Planning of Research and Hypothesis:</b> Identification of the Problem, Literature Review, Objectives and Hypothesis formulation, Research Design – Components, Tools of Research, and Preparation of Research Proposal.	<b>CLO 4</b>	<b>12</b>
<b>UNIT III</b>		
<b>Sampling:</b> Sampling techniques or methods, Sample size determination, Sampling errors, Data Collection meaning, Data collection sources: Primary & Secondary, Various methods of data collection, Data arrangement and	<b>CLO3</b>	<b>12</b>

presentation, Formation of table and charts,		
<b>UNIT IV</b>		
<b>Data Analysis:</b> Data processing preparation: editing, coding, classification & tabulation, statistical tools for data analysis - Univariate, Bivariate & Multivariate analysis, inferential statistics- Point & Interval estimation, Hypothesis testing: parametric test (z, t F), Chi-square test, Analysis of variance (ANOVA) correlation, non-parametric tests (Sign test, Wilcoxon signed ranked test, Wald-Wolfowitz test, Kruskal-Wallis H test, Mann Whitney U Test), Measure of central tendency and dispersion (Variance, Standard deviation, Standard error), Regression and Correlation analysis, Introduction to analytical/statistical software (SPSS, MINITAB, MATLAB) and presentation of data (Graphical)	<b>CLO2</b>	<b>12</b>
<b>UNIT V</b>		
<b>Report Writing:</b> Layout of research paper (title, abstract, keywords, methodology, results, discussion, conclusion, references, acknowledgement, appendix), Format and Structure, Review of Literature, Reference List Style (MLA and APA), Referencing software, Citation, Preparation of report in MS-Word and Latex	<b>CLO5</b>	<b>12</b>
		<b>60</b>

#### Learning Resources

1. Kothari C.R. , Garg Gaurav, *Research Methodology*, New Age International Publishers, edition-fourth, September 2019
2. Panneerselvam, R., *Research Methodology*, Prentice Hall of India Learning Pvt. Ltd. (2014)

#### COURSE CURRICULUM

**Course Contents/Syllabus:**

(All the units carry equal weightage in Summative Assessment and equal engagement)

<b>Name of the Program:</b>		Ph.D.		<b>Semester: I</b>		<b>Level: Ph.D.</b>	
<b>Course Name</b>		Quantitative/ Qualitative Research		<b>Course Code/ Course Type</b>		PHQMET101	
<b>Course Pattern</b>		2024		<b>Version</b>		1.0	
<b>Teaching Scheme</b>				<b>Assessment Scheme</b>			
<b>Theory</b>	<b>Practical</b>	<b>Self Work</b>	<b>Total Credits</b>	<b>Hours</b>	<b>CIA (Continuous Internal Assessment)</b>	<b>ESA (End Semester Assessment)</b>	<b>Practical/ Oral</b>
2	-	-	2	2	20	30	-
<b>Pre-Requisite:</b>							
Course Objectives (CO):				The objectives of Quantitative and Qualitative Research are: 1. To comprehend the philosophical and epistemological difference between quantitative and qualitative research methods 2. To recognize various concepts of descriptive and inferential statistics 3. To interpret the results drawn on elementary statistics. 4. To introduce students to various data collection methods and instrumentation 5. To familiarize various data analysis techniques			
Course Learning Outcomes (CLO):				Students would be able to: 1. Build up capacity and confidence to make a research proposal 2. Comprehend various qualitative approaches and dominant paradigms of qualitative research 3. Use of quantitative approaches and selection of approach for their problem of interests 4. Recognize the various data collection and instrumentation techniques to solve different problems. 5. Interpret graphs and summary statistics presented in academic papers, reports, and studies.			
<b>Descriptors/Topics</b>						<b>CLO</b>	<b>Hours</b>
<b>UNIT I</b>							
<b>Introduction:</b> Introduction to research, Types of research, types of research design and stages in research process, Concept of theory, empiricism, deductive and inductive theory						<b>CLO 1</b>	<b>6</b>
<b>UNIT II</b>							
<b>Qualitative Research:</b> Characteristics, Qualitative Research – Approaches Methodological (Theoretical), Approaches to Qualitative Research: Post-Positivism, Interpretive Strand, Critical Strand, Designing Qualitative Approaches, Qualitative Research Inquiry, Role of						<b>CLO 2</b>	<b>6</b>

Methodology in the Research Process, Formulating Research Tools, Deriving Research Topics and Questions, Major paradigms & perspectives, Dominant paradigms of qualitative research, Interpretivist thinking		
<b>UNIT III</b>		
<b>Quantitative Research:</b> Characteristics, Advantages of Quantitative Research, Comparative study of Quantitative, Qualitative and Mixed Methods Approach, Experimental/Quasi-experimental methods	<b>CLO3</b>	<b>6</b>
<b>UNIT IV</b>		
<b>Data Collection Methods and Instrumentation:</b> Methods of collecting & analyzing empirical materials, Surveys, Experiments, Archival data, Observations, Interviews, Focus groups, Analyzing talk & text, Interpretation, evaluation & presentation, Validity and reliability of research instruments, Ethical considerations in data collection	<b>CLO4</b>	<b>6</b>
<b>UNIT V</b>		
<b>Data Analysis and Interpretation:</b> Introduction to statistical analysis techniques: descriptive and inferential statistics, Parametric and non-parametric tests based on research design and data type, Qualitative data analysis techniques: thematic analysis, content analysis, and grounded theory, Interpretation of research findings and drawing conclusions	<b>CLO5</b>	<b>6</b>
		<b>30</b>

#### Learning resources

1. Creswell, John W., and J. David Creswel, Research design: Qualitative, quantitative, and mixed methods approaches, Sage publications, 2017.
2. Kothari, C.R. [2005]. Quantitative Techniques, Vikas Publishing House, New Delhi

