Pre-Ph.D. Course Work

Course Structure, Course Content, Instruction and Assessment

Duration: Minimum – I Semester (06 Months)

Maximum – II Semester (01 Year)

Total Credits: 16

Course Structure

Paper	Paper Name	Credit	Teaching Hrs
Paper - I (PCWRM-01)	Research Methodology and Publication Ethics *	08	120
Paper-II (PCWCS-02)	Subject Centric *** (Concerned School) [15 to 20 units]	08	120
Practicum	Related with PCWRM-01 **	Non-Credit	15
Field/Lab/Library work	----------------	Non-Credit	--------
Total		**16**	**255**

Note:

    *   Prepared by CIQA

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    *** To be prepared by concern school of study

Course Content
Paper I - RESEARCH METHODOLOGY AND PUBLICATION ETHICS
(Common Syllabus for all Ph.D. Schaller's) Scholars

Course Code: PCWRM-01

Credits: 8

UNIT 1 BASICS OF RESEARCH

Knowledge and the Approaches of Acquiring knowledge
- (deductive, inductive and scientific)

Meaning of Research

Objectives of Research

Motivation in Research

Significance of Research

Importance of knowing How Research is Done

Criteria of Good Research

UNIT 2: APPROACHES OF RESEARCH

Types of Research

Research Approaches

Research Methods versus Methodology

Research and Scientific Method

Research Process

UNIT 3 DEFINING THE RESEARCH PROBLEM

What is a Research Problem?

Selecting the Problem

Necessity of Defining the Problem

Technique involved in Defining a Problem

UNIT 4 RESEARCH DESIGN

Meaning of Research Design

Need for Research Design

Features of Good Design

Important Concepts Relating to Research Design

Different Research Design

Basic Principles of Experimental Designs

UNIT 5: REVIEW OF LITERATURE

Meaning and importance of Review of Literature

Types of research literature

Applications/uses of review of literature

Presentation of references/ bibliography

UNIT 6 SAMPLING DESIGN

Census and Sample Survey

Implications of a Sample Design

Steps in Sampling Design

Criteria of Selection of Sampling Procedure

Characteristics of a Good Sample Design

Different Types of Sample Designs

UNIT 7 TYPES AND METHODS OF DATA COLLECTION
Meaning and concept of data
Types of data- primary and secondary
Introduction of data collection
Sources of data collection
Collection of Primary Data

UNIT 8: TOOLS AND TECHNIQUES OF DATA COLLECTION
Tools of Primary data collection
- Observation
- Interview
- Questionnaire
- Schedules
- Checklist
Collection of secondary data

UNIT 9 DATA CLASSIFICATION AND TABULATION
Introduction
Classification of Data
Basis of Classification
Frequency Distribution
Tabulation of Data
Objectives of Tabulation

UNIT 10: DATA PRESENTATION
Graphical Presentation of Data
Functions of a Graph
Advantages and Limitations of Diagrams (Graph)
General and Summary Tables
Types of Diagrams
One Dimensional Diagrams
Two Dimensional Diagrams
Three-Dimensional Diagrams

UNIT 11 PROCESSING AND ANALYSIS OF DATA
Processing Operations
Some Problems in Processing
Elements/Types of Analysis
Statistics in Research
Measures of Central Tendency
Measures of Dispersion
Measures of Asymmetry (Skewness)
Measures of Relationship

UNIT 12 FUNDAMENTALS IN INFERENTIAL RESEARCH
Research Hypothesis- Meaning, types and characteristics
Formulation of hypothesis
Concept of hypothesis testing

Measuring the power of hypothesis testing
Types of errors in hypothesis testing

UNIT 13: ICT APPLICATION IN RESEARCH
Role of computer in knowledge management
Open Education Resource and Research
Using word processing software- MS Word/Latex/others, data analysis, drawing graphs
and diagrams through computer
Know how of power point presentation and MS-Excel

Unit 14 PHILOSOPHY AND ETHICS

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

Unit15 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

Unit 16 PUBLICATION ETHICS
Publication ethics: definition, introduction and importance
Best practices / standards setting initiatives and guidelines. COPE, WAME, etc.
Conflicts of interest
Publication misconduct: definition, concept. problems that lead to unethical behaviour
and vice versa, types
Violation of publication ethics, authorship and contributor ship
Identification of publication misconduct, complaints and appeals
Predatory publishers and journals

Course: PRACTICUM (Related with PCWRM-01)   **Non Credit**
              (Common Syllabus for all Ph.D. Schaller's)

Unit 1 OPEN ACCESS PUBLISHING

Open access publications and initiatives.
SHERPA ROMEO online resource to check publisher copyright & self-archiving
Policies.
Software tool to identify predatory publications developed by SPPU
Journal finder/journal suggestion tools viz JANE, Elsevier Journal Finder, Springer
Journal Suggester, etc.

Unit 2: PUBLICATION MISCONDUCT

A Group Discussions- Subject specific ethical issues. FFP, authorship, Conflicts of
interest. Complaints and appeals: examples and fruud from India and abrond
B. Software tools-Use of plagiarism software like Turnitin, Urkund and other open
source software tools

Unit 3 DATABASES AND RESEARCH METRICS

A. Databases -Indexing databases, Citation databases Web of Science, Scopus, etc.
B. Research Metrics- Impact Factor of journals per Journal Citation Report, SNIP SJR,
IPP. Cite
Score, Metrics: h-index, g index, i10 index, altmetrics

Instruction and Assessment

i. The Pre- Ph.D. Course work will have above structure. The course work will consist of Two Theory Papers, Practicum and a field/Lab/Library work. The course work shall be of total 16 credits while Paper-I shall be of 08 credits, Paper-II 08 credits respectively with Practicum and field/Lab/Library work shall be of non credit. Each theory Paper will be of 70 marks & field/Lab/Library work shall be assessed by three grades i.e. A for Excellent, B for Good and C for Satisfactory. As such the entire Pre- Ph.D. course work shall comprise 16 credits of 200 marks in total with grade awarded for fieldwork.

ii. The calendar of events of the Pre- Ph.D. Course work programme shall be prepared by the concerned school of studies of the University each year.

iii. The information and communication technology will be extensively used as a mode of delivery system in the Pre- Ph.D. Course work programme. The concerned school of studies of the University will develop appropriate mechanism for curriculum transaction, Necessary facilities i.e. faculty, Guest faculty, Physical infrastructure, library and e-library facilities etc. shall be made available.

iv. No candidate shall be allowed to appear in the terminal examination of the Pre- Ph.D. Course work programme unless he/she puts in 80% attendance in the theory classes and submits all the assignments and field/Lab/Library work report.

v. **Assessment**

    (I)   **Internal Assessment** : 30% Weightage

         (a) Mid Term Test/Assignment (subject wise):   **15 Marks**

         (b) Evaluation on the basis of Practicum/Quiz/GD/Seminar/Conference/Discipline etc (subject wise):   **15 Marks**

    (II)   **Terminal Exam (External Assessment)**: 70% Weightage

         The candidate has to secure at least 50% marks in each internal and external assessment separately and 55% marks in aggregate in order to be eligible to continue in the Ph.D. programme.

    (III)   **Field/Lab/Library Work (Non-Credit) – Grade Based**

Grade	Performance
A	Excellent
B	Good
C	Satisfactory

The sessional / term-end examination marks and grade for field work have to be mentioned separately on the marks sheet.

vi. Every candidate shall be declared successful in Pre- Ph.D. Course work if he/she passed in every theory paper, internal assessment, practicum and field/Lab/Library work.

vii. If a candidate of the Pre- Ph.D. Course work programme failed or failed to appear in any one or more papers of the term-end examination / internal assessment or in field/Lab/Library work, he/she may appear in the subsequent term-end examination* / internal assessment of the concerned semester for that paper/ those papers/ field/Lab/Library work. This facility shall be available up to a maximum period of two semesters (01 year) from the date of admission in the Pre- Ph.D. Course Work.

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* After fulfilling the required procedure laid down by the university.