Indian Institute of Teacher Education, Gandhinagar
PhD Course Work syllabus and scheme of evaluation

Course work for students pursuing Ph.D. at Indian Institute of Teacher Education will be of 10+2 credits. 10 credits for two papers as described below and 2 credit for course on research and publication ethics which is prescribed by UGC. The detail description in the form of structure, scheme of teaching and assessment and scheme of evaluation for university level examination is presented here under.

Structure of Course Work

5 credit (75 hour) of Research Skills which includes research methodology, quantitative methods, computer application, tools and techniques for research and experimentation, instrumentation, communication skills, review of published research, report writing, seminar presentation

4 credit (60 hour) for subject specific work

25 hour shall be devoted to review of subject/laboratory exercise

25 hour for seminar/teaching in different contemporary and development issues in subject/laboratory

10 hour for review of research papers in subject

1 credit (15 hour) for field work, seminar/laboratory work and other academic activities including conducting classes in center of education

Ph.D. Course Work: Teaching & Assessment Scheme

Sr. No.	Content	Credit	Hours	Continuous Evaluation at CoE	Course work end Exam by University	Total
1	Paper 1: Research Skills Assignments, submissions, seminars, presentations (CCE)	5.5	83	50	100	150
2	Paper 2: Subject specific work (Education) (Area specific review of related literature) Field work, seminar work, assignments and other academic activities: Submissions and Presentations (CCE)	4.5	67	50	100	150
	Total	10	150	100	200	300

Indian Institute of Teacher Education, Gandhinagar
PhD Course Work syllabus
Paper 1 Research Skills

Credit: 5 **Hours:75**

Objectives:
- To enable research scholars to develop research proposal
- To enable research scholar to understand various methods of research
- To enable research scholar to develop various tools of data collection
- To enable research scholar to use computer for data analysis
- To enable research scholar to analyze data collected using various parametric and non-parametric techniques of data analysis

Unit 1 Research Methodology: Retrospection

1.1 Overview of the Research Process & Types of Research

1.2 Stating Research Objectives and Research Questions-Concept and Way of writing

1.3 Operationalization and Explanation of Terms –Concept and Way of Writing

1.4 Research Hypothesis and Variables: Concept, types and way of writing with Example

1.5 Limitations and Delimitations of the study –Concept With Examples

Unit 2 Methods of Research in Education

2.1 Experimental Research Design: Pre, Quasi and True Experimental-Concept and Procedural Aspects

2.2 Empirical Research: Concept, Need, and Importance

2.3 Survey Method: Meaning, Types and Steps

2.4 Historical, Anthropological, Phenomenological and Ethnographical Research in Education: Concept and Procedural Aspect

2.5 Mixed Method Research: Concept and Procedural Aspects

2.6 Inter relationship studies: case study, causal comparative study correlation study

Unit 3 Population, Sample, Sampling Techniques and Tools

3.1 Concept of Universe, Population and Sample

3.2 Sampling Techniques I Focusing Quantitative Research- Probability Sampling Techniques

3.3 Sampling Techniques II Focusing on Qualitative Research-Non Probability Sampling Techniques and Special Techniques

3.4 Tools and Techniques in Research- Concept, Steps to Development of Questionnaire, Interview Schedule, Rubrics, Inventory, Schedule , Field Dairy and FGD [Focused Group Discussion]

3.5 Tools and Techniques in Research: Concept, Need and Steps for construction-Steps for Development of Likert Scale and Rating Scale

Unit 4 Analysis Techniques in Qualitative and Quantitative Research

4.1 Calculation of t test and Man Whitney u test and Intensity Index

4.2 Contingency Table and its Interpretation

4.3 Concept, Calculation and Interpretation of Bivariate, Multi Variate and Regression

4.4 Qualitative Techniques for Data Analysis: Content Analysis- Latent and Manifest level

4.5 Concept and Process of Triangulation

Unit 5 Computer Application for Research in Social Science

5.1 Excel -Using Data Analysis Tool Pak for descriptive statistics and t (various t test calculations)

5.2 Computer Applications -SPSS (Statistical Package for the Social Sciences) Software training Talking of Basics and Advance knowledge

5.3 DBMS in Educational Research with special focus on Access

5.4 Calculation and Interpretation of Descriptive Statistics, One way & Two way ANOVA, Chi Square and Coefficient of Correlation

5.5 Data Analysis through Open Source Software with Special Reference of JASP

Indian Institute of Teacher Education, Gandhinagar
PhD Course Work syllabus
Paper II Subject Specific Work- Area Specific Review of Related literature
4 Credit   **60 Hours**

Objectives
- To enable the research scholars to review the related literature and come out with research matrix and identify research gaps
- To enable the research scholars to come out with research trends in various area of study
- To develop among the research scholars the essence of academic integrity
- To enable research scholars to cite sources of review of literature
- To enable the researcher to develop conceptual and or theoretical framework

Unit 1 Concept, Need and Sources of Review of Related Literature
1.1 Identification of Area of Study-Research Problem and Criteria for Selecting Research Problem
1.2 Review of Related Literature: Meaning, Need and Sources: Primary, Secondary and Tertiary: Biographies, Dictionaries, Electronic Sources. Original Documents, Autobiographies, Debris, Manuscripts and so on
1.3 Conceptual Framework and Theoretical Framework: Concept, Need and Process
1.4 Rationale-Concept, Need and Process leading to research gaps
1.5 Analysis of Review: Meta-Analysis-Concept and Process

Unit 2 Review of Subject Specific Literature and Academic Writing
2.1 Prospects of Research in Education
2.2 Review of Theme paper and Research Paper or Research Article with special reference to social science
2.3 Concept of Academic writing and Do's And Don'ts of Academic Writing
2.4 Language Aspect- Do's And Don'ts While Writing Thesis: Preliminary Part, Main Body and Supplementary Part following APA style
2.5 Academic Integrity and Research Ethics in Social Sciences

Unit 3 Online/web resources for Literature Review and Reference Management
3.1 Use of Web as Tool for Educational literature Survey
3.2 Online Journals for Literature Review for Research in Education
3.3 Library Orientation and Information literacy in Educational Research-INFLIBNET, ERIC, JSTOR, Springer
3.4 Archives Browsing
3.5 APA Style of Referencing and citation with special reference to 7th edition, Mendeley and Zotero -Reference Management Tool

Unit 4 Matrix and Trend Analysis
4.1 Review of Related Literature -Matrix and Trend Analysis-Concept
4.2 Area Specific Review of Related literature and preparing research matrix and coming out with research gaps
4.3 Review of Related Literature- Latent and Manifest level
4.4 Critical Analysis and Document Analysis
4.5 Trend Analysis with reference to selected area/research problem

Continuous Comprehensive Evaluation in the form of Submission, presentation , field work, library work, seminar and other academic activities in paper I and Paper II
          Paper I Research Skills

Sr. No.	Task	Marks
1	Develop a conceptual paper on NEP 2020/any policy documents following the format as : Times New Roman Font size 12 Margin Left 1.5 inches rest top bottom and right 1 Keywords at least 5 and abstract of 300 words	30
2	Develop a research proposal and submit it as per the format specified follow APA 7th edition for writing research proposal.	50
3	Content analysis of last slide of power point Presentation shared in google classroom/hardcopy of any of the expert during the course work	20
TOTAL		100*

*This will then be converted to 50 marks
Paper II Subject Specific Work- Review of Related Literature

Sr. No.	Task	Marks
1	Decide a topic of research and review literature related to that topic during the last decade. Prepare a literature matrix based on that and write research gaps emerging out of it	30
2	Review of Literature by reviewing any Two Experimental Research, Two Case Study, Two Survey Research, Two Historical Research, Two Correlational study from shodhganga/ERIC as instructed.	50
3	Follow guidelines as per APA 7th edition and to come out with research trends in teacher education in the last decade based on review of literature and past studies	20
TOTAL		100*

*This will then be converted to 50 marks

- Paper-1 will be of two hours duration in University examination . Out of total 100 marks, there will be multiple choice questions of 60 marks and descriptive questions of 40 marks. The descriptive questions of 40 marks will have 4 questions of 10-10 marks in which one or more Short Notes can also be asked.
- Paper-2 will be of three hours duration in University examination. Out of total 100 marks, there will be 5 descriptive questions of 20 marks. This exam can be taken in the form of open book and open end type questions.
- After admission in Ph.D. course, each student has to complete the course work in the first term/semester at the Centre of Education. If the student cannot participate in the course work in the first term, he/she will have to complete the course work in the second term/semester (if no course work is organized in any term then in the course work next organized by the university). If the student does not complete the course work in one year, his/her admission will be liable to be cancelled.
- Continuous Evaluation during and at the end of the course work of the student will be done at the Centre or Education (CoE). Student who get 50% marks in each paper in this assessment and has achieved the prescribed attendance, will be recommended by the Centre of Education to the University for course work examination. Only those who have completed the prescribed attendance, submission and evaluation work satisfactorily in the course work will be able to give the final examination of the course work.
- Each paper of the coursework will have a passing of 50% and the coursework will be declared completed only if the aggregate is 55%. The student must pass the university examination of course work in a maximum of two attempts.
- There will be no gracing in Course Work Assessment for Ph.D. Course.

Indian Institute of Teacher Education, Gandhinagar
PhD Course Work Research and Publication Ethics

As recommended by UGC all the students pursuing Ph.D. will have to undergo a 2 credit course work on Research and Publication Ethics. Syllabus for this course will be as prescribed by the University Grants Commission.

Syllabus and scheme of evaluation

THEORY

RPE 01: PHILOSOPHY AND ETHICS   (3 hrs.)

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

RPE 02: SCIENTIFIC CONDUCT   (5hrs.)

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

RPE 03: PUBLICATION ETHICS   (7 hrs.)

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

RPE 04: OPEN ACCESS PUBLISHING   (4 hrs.)

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.

RPE 05: PUBLICATION MISCONDUCT   **(4hrs.)**

    A. Group Discussions   **(2 hrs.)**

       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   **(2 hrs.)**

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

RPE 06: DATABASES AND RESEARCH METRICS (7hrs.)

    A. Databases   **(4 hrs.)**
       1. Indexing databases
       2. Citation databases: Web of Science, Scopus, etc.

    B. Research Metrics   **(3 hrs.)**
       1. Impact Factor of journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score
       2. Metrics: h-index, g index, i10 index, altmetrics

Research and Publication Ethics Course Teaching and Assessment Scheme

Sr. No.	Content	Credit	Hours	Continuous Evaluation at CoE	Course end Exam By University	Total
1	Paper 1: Research and Publication Ethics	2	30	50	100	150

Continuous Comprehensive Evaluation (CCE in the form of Assignment, Submission, presentation, fieldwork, library work, seminar and other academic activities)

CCE for Paper Research and Publication Ethics

Sr. No.	Task	Marks
1	Group Discussion on Publication Misconduct	10
2	Exploring Open Access Publications in Education and submissionin form of assignment	10
3	Exploring library resources in Education and submission in subject specific ethical issues/software tools to identify predatory publications	10
4	Presentation on Research Metrics	10
5	Case Study on Publication Misconduct	10
	TOTAL	50

- At the end of the assessment, Certificate should be issued for this course by the University.
- This course will be completed on daily 2 hours basis in 2/3 weeks (15 academic days).
- There will be passing of 50% in each section and overall for this course.
- Continuous Evaluation during the course and at the end of the course will be done at the Centre of Education . The student who gets 50% marks in this assessment and if s/he has achieved/maintained regular attendance, s/he will be recommended to the University for examination of this course by the Centre of Education. Only the student who has fulfilled the prescribed attendance, completed submission and evaluation work in the course satisfactorily can give the final examination .
- A maximum of two attempts can be given to a student to pass the exam in this course. There will be no gracing in this Course.
- For the purpose of registration in the Ph.D. Course, it will be mandatory to complete and pass this course during the course work of Ph.D. course.

NOTE:

In case of theory part 80 percent attendance will be mandatory and in case of practical/practicum part 90 percent attendance which includes hours of self-study/assignment/engagement with the field and/or any other practical work performed by students within and outside the classes.
Above said attendance will be mandatory failing which student will not be allowed to appear in the course work examination.

The vice-chancellor has discretionary powers to condone attendance if he feels that such absence was due to unavoidable circumstances and students may make up the study with the help of writing assignments and other curricular activities during holidays or weekends of the semester. But in no case such absence would be more than 65 % during each semester.

Grading

90 and above Percent	O Grade
80 to 89 Percent	A Grade
70 to 79 Percent	B Grade
60 to 69 Percent	C Grade
Above 55 and below 60 Percent	D Grade
Below 55 Percent	E Grade

Candidates who score Grade O, A, B, C and Grade D shall be deemed to have successfully completed course work and those who secure Grade E shall be treated as unsuccessful in completing coursework.