

# **Curriculum and Credit Framework**

**For**

**Ph.D. (EDUCATION)**

**(To be effective from the Academic Session 2024-25)**



**Department of Education**

**Gurugram University, Gurugram**

**(A State Govt. University Established Under Haryana Act 17  
Of 2017)**

**Scheme of Programme  
Ph.D. EDUCATION**

**Course Work Structure for Ph.D. Degree in Education**

| Course Code                     | Course Title   | Course ID |                  | Teaching Hours per week | Credits   | Marks (T.I. + T.E.)                |
|---------------------------------|--|-----------|------------------|-------------------------|-----------|------------------------------------|
| <b>Core Course(s)</b>           |  |           |                  |                         |           |                                    |
| Ph.D. EDU - 01                  | Research Methodology                                     |           |                  | 4                       | 04        | 30 + 70                            |
| Ph.D. EDU - 02                  | Research Publication and Ethics                          |           |                  | 2                       | 02        | 15 + 35                            |
| <b>Specific Elective Course</b> |  |           |                  |                         |           |                                    |
| Ph.D. EDU - 03                  | Recent Trends in Education                               |           |                  | 4                       | 04        | 30 + 70                            |
| <b>Term paper Course</b>        |  |           |                  |                         |           |                                    |
| Ph.D. EDU - 04                  | Meaning And Significance Of Reviewing related literature |           | Assignment Based | 2                       | 2         | Review of Literature               |
| Ph.D. EDU- 05                   | Seminar in thrust area of research and data applications |           | Seminar Based    | 2                       | 2         | Seminar in Thrust Area of Research |
| <b>Total Credits</b>            |  |           |                  |                         | <b>14</b> | <b>400</b>                         |

Marks will be converted into letter grade and grade point as per following table:

| Marks        | Letter Grade   | Grade Point |
|--------------|----------------|-------------|
| 85-100       | O              | 10          |
| 75-84        | A <sup>+</sup> | 9           |
| 65-74        | A              | 8           |
| 55-64        | B <sup>+</sup> | 7           |
| 50-54        | B              | 6           |
| 41-49        | C              | 5           |
| 40           | P              | 4           |
| Less than 40 | F              | 0           |

Example to calculate the Grade Point Average (GPA)

| Course   | Credit | Letter Grade   | Grade Point | Credit Point      |
|--|--------|----------------|-------------|-------------------|
| Research Methodology                                     | 4      | A              | 8           | $4 \times 8 = 32$ |
| Research Publication and Ethics                          | 2      | A <sup>+</sup> | 9           | $2 \times 9 = 18$ |
| Recent Trends in Education<br>(Specific Elective Course) | 4      | A              | 8           | $4 \times 8 = 32$ |
| Seminar in Thrust Area of Research                       | 2      | B              | 6           | $2 \times 6 = 12$ |
| Review of Literature                                     | 2      | A              | 8           | $2 \times 8 = 16$ |
| Total  | 14     |                |             | 110               |

A candidate is required to obtain a minimum grade point of 7 in each paper and minimum GPA of 7 to qualify the course work.

## RESEARCH METHODOLOGY

**COURSE CODE: Ph.D. EDU -01**

**Marks (Theory): 70**

**Time: 3 Hours**

**Marks (Internal Assessment): 30**

**Credit: 04**

### Course objectives:

- To widen the understanding of basic concepts of Research.
- To develop the ability to plan and report quantitative research using t-test (independent & correlated), correlation, partial correlation, Multiple Correlation, ANOVA, ANCOVA.
- To develop the ability to write objectives, select appropriate methods and statistics, write results, and infer results using t-test (independent & correlated), correlation, partial correlation, Multiple Correlation, ANOVA, ANCOVA.
- To develop competency in the use of SPSS to analyze data and correct interpretation of output of SPSS.

### UNIT-1

- Concept, characteristics, types, and steps of research; variables and their classification; sources, title, and objective writing.
- Hypothesis: Meaning, basis and types (research, statistical, operational), forms (null and alternative), testing (degree of freedom, level of significance), one-tailed and two-tailed tests, Type I and Type II errors.
- Review of literature: Purpose, sources, procedures, and integration of findings.
- Selection, characteristics, sources of Problem and formulation of a good research problem.

### UNIT-II

- **Sampling:** Concepts of population, sample, and sampling techniques, including probability methods (random, systematic, stratified, cluster, multistage) and non-probability methods (purposive, quota, snowball). Includes determining sample size and understanding sampling errors.
- **Research Tools:** Characteristics and types, including questionnaires, rating scales (Thurstone and Likert), attitude scales, observation schedules, interviews, sociometry, inventories, psychological tests, and document analysis. steps for tool development, standardization, and establishing reliability, validity, and norms.

### UNIT-III



## Quantitative Methods

- Historical, Descriptive, and Experimental Research: Need, importance, steps, and characteristics.
- Experimental Designs: Pretest-Posttest Pre-Experimental Design, Pretest-Posttest Control Group True Experimental Design, Posttest Only Control Group True Experimental Design, Internal and external validity, variable control, and statistical techniques for analysis.

## Qualitative Methods

- Ethnographic studies, biographical research, grounded theory, discourse analysis, case studies, and thematic analysis.

## Mixed Methods

- Integration of qualitative and quantitative approaches: Explanatory, Exploratory, and Convergent Designs.
- Recent Developments: Internet-based research, policy research, and GIS applications in education.

## UNIT-IV

- Basic concepts of statistics, including parameter and statistics, parametric and non-parametric statistics, and scales of measurement. Statistical techniques such as t-test, ANOVA (One-Way, Two-Way, Three-Way), ANCOVA, Trend Analysis, Regression Analysis, Factor Analysis, and various correlation methods (Simple, Partial, Multiple, Canonical, Biserial, Point-Biserial, Tetrachoric). Non-parametric tests include Chi-Square, Mann-Whitney U, Wilcoxon Signed Rank, Sign Test, Friedman ANOVA, Kendall's Coefficient, Contingency Coefficient, Phi Coefficient, and McNemar Test. Each technique involves assumptions, hypothesis formulation, data analysis using SPSS, and interpretation.
- Qualitative analysis focuses on tabulating, validating, and interpreting data through content analysis, discourse analysis, documentary analysis, and interview-based data. Quantitative analysis covers parametric and non-parametric tests, levels of significance, ANOVA, ANCOVA, and advanced correlation and regression techniques. Proposal and thesis writing involve report preparation, data validation, and APA-style referencing.

## References:

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**Instructions for External Examiner:** The question paper shall be divided in two sections. Section 'A' shall comprise of seven short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 100 words normally. Section 'B' shall comprise 8 questions (2 questions from each unit). The Scholars will be required to attempt four questions selecting one question of 14 marks from each unit. All questions will carry equal marks.

**Instructions for Internal Examiner:** The internal assessment should be spread evenly throughout the course work. Below are the suggestive components for 30 marks. A teacher has a choice to change these components as per the need.

| S.No. | Course Assessment Components     | Marks/<br>Weightage (%) |
|-------|----------------------------------|-------------------------|
| 1     | Assessment 1: Assignment 1       | 10                      |
| 2     | Assessment 2: Assignment 1       | 10                      |
| 3     | Assessment 3: Presentations (P)  | 10                      |
|       | Internal Assessment (IA) (1+2+3) | 30 (30%)                |
|       | End -Term Examination (EE)       | 70 (70%)                |
|       | <b>Total Marks (IA+EE)</b>       | <b>100</b>              |

## RESEARCH PUBLICATION AND ETHICS

**COURSE CODE: Ph.D. EDU -02**

**Marks (Theory): 35**

**Time: 3 Hours**

**Marks (Internal Assessment): 15**

**Credit: 02**

### Course Objectives:

1. To understand the importance of being ethical in carrying out research and publication activities.
2. To differentiate the quality publication practices and how to be cognisant about dubious publishing practices/ publishers
3. To have an increased awareness about 'open access' and contribution of research output to open access publishing platforms



4. To get acquainted with the software/ databases which are necessary for carrying out research work.

### **Unit-1**

**Philosophy and Ethics:** Introduction to Philosophy: definition, nature and scope, concept, branches, Ethics: Definition, moral philosophy, nature of moral judgments and reactions.

### **Unit-II**

**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-III**

**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 behavior and vice versa, types, Violation of publication ethics, authorship and contributorship, Identification of publication misconduct, complaints and appeal, Predatory publishers and journals.

### **Unit-IV**

**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: UGC-CARE list of journals, Journal finder/journal suggestion tools viz. JANE, Elsevier Journal Finder, Springer Journal Suggester, etc.

### **Unit-V**

**Publication Misconduct:** Group discussions, Subject specific ethical issues, FFP, authorship, Conflicts of interest, Complaints and appeals: examples and fraud from India and abroad, **Software tools:** Use of reference management software like Mendeley, Zotero etc. and anti-plagiarism software like Turnitin, Urkund

### **Unit-VI**

**Databases and research metrics:**

**Databases:**

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



## Research Metrics:

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

## References:

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## RECENT TRENDS IN EDUCATION

**Course Code: Ph.D. EDU -03**

**Course Credit-4**

**Maximum Marks:100**

**Theory:70**

**Internal Assessment: 30**

**Exam Time: 3hrs**

### **Course Objectives:**

1. To understand contemporary educational paradigms, their philosophical and sociological foundations, and their impact on education as a discipline.
2. To explore paradigm shifts in teaching and learning, emphasizing learner-centered, self-directed, and collaborative approaches.
3. To analyze the evolving roles of educators as facilitators, mentors, and co-learners in the context of constructivist and critical learning theories.
4. To gain expertise in instructional design models and frameworks, integrating innovative educational technologies to enhance teaching and learning.
5. To examine the applications of AI and ICT in education, focusing on e-learning trends, quality measures, and their use in evaluation, administration, and research.
6. To foster a critical understanding of key issues in education, including equity, inclusion, leadership, and social justice, in global and local contexts.

## Unit I

### **Contemporary Educational Paradigms**

- **Educational Paradigms:** Empirical, Interpretive and Critical perspectives; critical appraisal of education as a discipline.
- **Philosophical Ideas and Sociological Dimensions in Education:** Epistemological, metaphysical, axiological issues and critical theory in education.
- **Key Issues and Trends:** Educational leadership, social inclusion, classroom realities in global education systems, higher education as a common good, issues of equity, equality and social justice in education

## Unit II

### Multiple Learning Approaches in Education

- **Shifting Learning Approaches:** Pedagogy, andragogy, heutagogy, and peeragogy; transitions from teacher-led to learner-centered, self-directed, and collaborative learning.
- **Learner Engagement:** Active participation of learners in knowledge construction through critical thinking, lived experiences and exploration.
- **Changing Roles of Educators:** Transition of teachers'/teacher educators from content delivery to facilitation, mentoring, and co-learning; application of constructivism and critical discourse in teaching and learning.

## Unit III

### Instructional Design and Educational Technology

- **Educational Technology as a Discipline:** Concepts of IT, CT, ICT, AI and instructional technology; applications in formal, non-formal, informal, and inclusive education.
- **Instructional Design Models:** ADDIE, ASSURE, TPACK, SAMR, RAT, PIC-RAT, Dick and Carey Model, Mason's Model; Gagne's Nine Events of Instruction; Five E's of Constructivism; Nine Elements of Constructivist Instructional Design.
- **Applications of Technology in Education:** Computer-Assisted Instruction (CAI), Computer-Assisted Learning (CAL), Computer-Based Training (CBT), Computer-Managed Learning (CML), Open Distance Learning Modules (ODLM); e-learning concepts and approaches (online, offline, synchronous, asynchronous, mobile learning, and blended learning).

## Unit IV

### AI and ICT in Education

- **Emerging Trends in E-Learning:** Social learning through Web 2.0 tools (blogs, chats, forums, video conferencing); Open Educational Resources (OERs) such as Creative Commons and MOOCs; e-inclusion using assistive technology.
- **Quality of E-Learning:** Measuring quality using the D&M IS Success Model (2003) – dimensions of information, system, service, user satisfaction, and net benefits; addressing ethical issues for e-learners and e-teachers.
- **ICT in Education:** Applications in evaluation, administration, and research, including e-portfolios, online repositories, online/offline assessment tools (test generators, survey tools); ICT applications in research and educational administration.



## References:

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**Instructions for Internal Examiner:** The internal assessment should be spread evenly throughout the course work. Below are the suggestive components for 30 marks. A teacher has a choice to change these components as per the need.

| S.No. | Course Assessment Components           | Marks/<br>Weightage (%) |
|-------|--|-------------------------|
| 1     | Assessment 1: Assignment 1/ Class Test | 10                      |
| 2     | Assessment 2: Assignment 2/ Class Test | 10                      |
| 3     | Assessment 3: Presentations (P)        | 10                      |
|       | Internal Assessment (IA) (1+2+3)       | 30 (30%)                |
|       | End -Term Examination (EE)             | 70 (70%)                |
|       | <b>Total Marks (IA+EE)</b>             | 100                     |

## MEANING AND SIGNIFICANCE OF REVIEWING RELATED LITERATURE

**Course Code: Ph.D. EDU -04**

**Course Credits: 2**

**Total Marks: 50**

**Duration: 30 hours**

### **Course Objectives:**

- To understand the concept, purpose, and process of reviewing related literature.
- To identify and utilize diverse sources effectively; to organize, synthesize, and critique literature systematically.
- To develop skills in writing summaries, annotated bibliographies, and research articles using citation tools.
- To present findings clearly and confidently in seminars.
- To engage in discussions and evaluations, fostering academic integrity and collaboration.

### **Unit I: Review of Related Literature in Education**

- Concept, purpose, and process of literature review in education.
- Sources for literature review: Journals, books, databases, and online repositories.
- Steps in organizing and synthesizing literature.

### **Unit II: Writing and Presentation of Literature Review**

- Writing summaries of reviewed literature.
- Preparing research articles and annotated bibliographies using citation tools
- Presentation of literature review summaries in a seminar:
- Evaluation based on content, clarity, and delivery
- Responding to questions during presentations.

### **Evaluation**

- **Internal Assessment (Continuous Evaluation): 20 Marks**
  - Literature review assignments (research papers and book review): 10 Marks.
  - Participation in discussions: 10 Marks.
- **Final Practical Examination: 30 Marks**
  - Submission of a comprehensive literature review report: 20 Marks.
  - Viva-voce: 10 Marks.



## SEMINAR IN THRUST AREA OF RESEARCH AND DATA APPLICATIONS

Course Code: Ph.D. EDU -05

Course Credits: 2

Total Marks: 50

Duration: 30 hours

### Course Objectives:

- To understand key thrust areas in educational research and identify research problems.
- To apply data collection tools and perform quantitative (SPSS, R) and qualitative (NVivo, MAXQDA) analyses.
- To develop skills in writing, organizing, and presenting research content; to integrate data effectively with visual aids.
- To deliver engaging presentations while incorporating feedback to enhance research quality.

### Unit I

#### Thrust Areas of Educational Research and Data Tools

- Identification and selection of key thrust areas in educational research.
- Identifying research problems, Selection of a research theme, framing objectives under supervisor's guidance.
- Practical application of data collection tools such as Google Forms and Survey Monkey, etc
- Data Analysis Tools: **Quantitative Analysis:** Basics of SPSS and R software for hypothesis testing, correlation, regression, and ANOVA, ANCOVA  
**Qualitative Analysis:** Use of software like Pigeon, NVivo, and MAXQDA for thematic analysis and content coding.

### Unit II

#### Research Presentation and Evaluation

- Writing and organizing research content for seminars, including the structure of seminar papers, referencing (APA/MLA), and crafting effective abstracts.
- Ensuring logical content flow, seamless integration of quantitative and qualitative data, and the use of effective visual aids.
- Delivering presentations with engaging communication, utilizing charts and themes to present mixed-method results, and fostering audience interaction.
- Establishing criteria for assessing presentations and incorporating feedback to enhance the quality of integrated research outputs.

#### First Presentation

- **Duration:** 30-45 minutes
- **Evaluation Criteria:**
  - Content quality
  - Relevance to the topic
  - Delivery and presentation skills

## **Second Presentation**

- **Evaluation Criteria:**
  - Content quality
  - Relevance to the topic
  - Delivery and presentation skills
  - Viva-voce and response to questions from examiners

## **Evaluation Scheme**

### **Internal Assessment (Continuous Evaluation): 20 Marks**

1. **Research Theme Presentation and Assignments: 20 Marks**

### **Final Practical Examination: 30 Marks**

1. **Presentation Evaluation: 20 Marks**
  - Assessment of content, relevance, and delivery skills.
2. **Viva-Voce: 10 Marks**
  - Examiner questions and responses.