



IES UNIVERSITY, BHOPAL

IES Campus Kalkheda, Ratibad Main Road, Bhopal (M.P.) –

PHD COURSE WORK GUIDELINES & SYLLABUS

Ph.D. COURSE WORK GUIDELINES AND SCHEME

(As per UGC (Minimum Standards and Procedures for Award of Ph.D. Degree) Regulations, 2022)

1. Preamble

In accordance with the UGC Ph.D. Regulations, 2022, IES University mandates that every research scholar admitted to the Ph.D. programme must undergo and successfully complete the prescribed Course Work as an essential pre-research training requirement.

The Course Work aims to strengthen the scholar's research capabilities, ethical awareness, analytical and communication skills to ensure high-quality, impactful, and globally competitive research outcomes.

2. Objectives of the Ph.D. Coursework

The objectives of the Ph.D. coursework are:

1. To build a strong foundation in research design, methodology, and data analysis.
2. To develop subject-specific depth and interdisciplinary understanding.
3. To inculcate ethical and responsible research practices.
4. To enhance presentation, writing, and academic communication skills.
5. To prepare scholars for research proposal defense and thesis development.

3. Duration of the Coursework

- The coursework shall be completed within the first two semesters of admission to the Ph.D. programme.
- The minimum duration shall be one semester and the maximum duration shall not exceed two semesters.
- In exceptional cases, on the recommendation of the Research Advisory Committee (RAC) and approval by the Vice-Chancellor, an additional one semester extension may be granted.
- 75% attendance in each paper is compulsory to appear for evaluation.

4. Applicability and Exemption

- Coursework is mandatory for all Ph.D. scholars irrespective of discipline.



IES UNIVERSITY, BHOPAL

IES Campus Kalkheda, Ratibad Main Road, Bhopal (M.P.) –

PHD COURSE WORK GUIDELINES & SYLLABUS

- Candidates who have already completed an M.Phil. programme with coursework (as per UGC norms) may be exempted from coursework upon recommendation of the RAC and approval of the Dean (Research).
- However, departments may prescribe additional modules for alignment with recent advances or university norms.

5. Structure and Scheme of Ph.D. Coursework

Course Code	Course Title	Credits	Marks	Nature of evaluation	Evaluation Authority
PHD 101	Research Methodology (Common for all faculties)	4	100	Written	University Examination Cell
PHD 102	Subject-Specific Course (Advanced Concepts in Area of Research)	4	100	Written	Department / Guide
PHD 103	Research and Publication Ethics (RPE) (Mandatory as per UGC 2022)	2	100	Written	University Examination Cell
PHD 104	Research Presentation	2	100	Practical / Viva	Department + External Examiner
Total		12 Credits	400 Marks		



IES UNIVERSITY, BHOPAL

IES Campus Kalkheda, Ratibad Main Road, Bhopal (M.P.) –

PHD COURSE WORK GUIDELINES & SYLLABUS

Program	Faculty	Name of Subject	Credit Assigned	Subject Code
Ph.D	Common for All Faculties	Research Methodology	4	PHD-101

Course Objectives:

- To provide a foundational understanding of research principles, methods, and ethics applicable to all disciplines.
- To develop the ability to design, conduct, and analyze research systematically.
- To familiarize scholars with quantitative, qualitative, and mixed-method approaches.
- To promote the use of ICT tools, data analysis software, and research databases.
- To enable scholars to prepare research proposals, reports, and publications as per global academic standards.

Course Outcomes (COs):

- Demonstrate understanding of research concepts and methodologies applicable to their discipline.
- Design and plan research systematically using appropriate methods and tools.
- Apply statistical and computational techniques for data analysis and interpretation.
- Prepare research proposals, dissertations, and papers following ethical standards.
- Utilize ICT and AI-based research tools for scholarly communication and innovation.

Unit-wise Syllabus

Unit	Contents
Unit I: Fundamentals of Research इकाई I: अनुसंधान के मूल सिद्धांत	- Research: Meaning, objectives, and significance. - Types of research – basic, applied, analytical, descriptive, and experimental. - Research process and steps involved. - Identification and formulation of research problems. - Criteria for selecting a research topic and feasibility analysis. - अनुसंधान: अर्थ, उद्देश्य और महत्व। - अनुसंधान के प्रकार - आधारभूत, अनुप्रयुक्त, विश्लेषणात्मक, वर्णनात्मक और प्रायोगिक। - अनुसंधान प्रक्रिया और इसमें शामिल चरण। - अनुसंधान समस्याओं की पहचान और सूत्रीकरण। - अनुसंधान विषय के चयन के मानदंड और व्यवहार्यता विश्लेषण।
Unit II: Research Design and Hypothesis Formulation	- Concept and types of research design. - Variables, sampling techniques, and sample size



IES UNIVERSITY, BHOPAL

IES Campus Kalkheda, Ratibad Main Road, Bhopal (M.P.) –

PHD COURSE WORK GUIDELINES & SYLLABUS

इकाई II: अनुसंधान डिजाइन और परिकल्पना निर्माण	determination. • Hypothesis: meaning, formulation, and testing. • Tools and techniques for data collection – questionnaire, interview, observation, and experiment. • Scaling, measurement, and reliability/validity in research. • Purpose and importance of literature review in research • Types of literature reviews (systematic, narrative, integrative, meta-analysis, scoping) • Sources of literature: primary, secondary, tertiary • Search strategies and use of databases (Scopus, Web of Science, Google Scholar) • Screening, inclusion–exclusion criteria, and data extraction • शोध डिजाइन की अवधारणा और प्रकार। • चर, नमूनाकरण तकनीकें और नमूना आकार निर्धारण। • परिकल्पना: अर्थ, सूत्रीकरण और परीक्षण। • डेटा संग्रह के लिए उपकरण और तकनीकें - प्रश्नावली, साक्षात्कार, अवलोकन और प्रयोग। • शोध में मापन, मापन और विश्वसनीयता/वैधता। • शोध में साहित्य समीक्षा का उद्देश्य और महत्व • साहित्य समीक्षा के प्रकार (व्यवस्थित, वर्णनात्मक, एकीकृत, मेटा-विश्लेषण, स्कोपिंग) • साहित्य के स्रोत: प्राथमिक, द्वितीयक, तृतीयक • खोज रणनीतियाँ और डेटाबेस का उपयोग (स्कोपस, वेब ऑफ साइंस, गूगल स्कॉलर) • स्क्रीनिंग, समावेशन-बहिष्करण मानदंड, और डेटा निष्कर्षण
Unit III: Data Analysis and Interpretation इकाई III: डेटा विश्लेषण और व्याख्या	• Types of data: quantitative and qualitative. • Data classification, tabulation, and graphical representation. • Descriptive and inferential statistics: mean, median, mode, SD, correlation, regression, chi-square test, ANOVA. • Use of software tools – Excel, SPSS, R, MATLAB (as applicable). • Qualitative data analysis using NVivo/Atlas.ti. • डेटा के प्रकार: मात्रात्मक और गुणात्मक। • डेटा वर्गीकरण, सारणीकरण और ग्राफिकल निरूपण। • वर्णनात्मक और अनुमानात्मक सांख्यिकी: माध्य, माधिका, बहुलक, मानक विचलन (SD), सहसंबंध, समाश्रयण, काई-स्कायर परीक्षण, एनोवा। • सॉफ्टवेयर उपकरणों का उपयोग - एक्सेल, एसपीएसएस, आर, मैटलैब (जैसा लागू हो)। • एनवीवो/एटलस.टीआई का उपयोग करके गुणात्मक डेटा विश्लेषण।
Unit IV: Research Writing and Documentation	• Structure and components of a thesis/dissertation/report. • Research proposal writing: format and key elements.



IES UNIVERSITY, BHOPAL

IES Campus Kalkheda, Ratibad Main Road, Bhopal (M.P.) –

PHD COURSE WORK GUIDELINES & SYLLABUS

इकाई IV: शोध लेखन और प्रलेखन	• Referencing styles: APA, MLA, Chicago, IEEE. • Use of reference management tools (Mendeley, Zotero, EndNote). • Plagiarism, paraphrasing, and use of anti-plagiarism software. • थीसिस/शोध प्रबंध/रिपोर्ट की संरचना और घटक। • शोध प्रस्ताव लेखन: प्रारूप और प्रमुख तत्व। • संदर्भ शैलियाँ: एपीए, एमएलए, शिकागो, आईईईई। • संदर्भ प्रबंधन उपकरणों का उपयोग (मैंडेली, ज़ोटेरो, एंडनोट)। • साहित्यिक चोरी, पैराफ्रेज़िंग, और साहित्यिक चोरी-रोधी सॉफ़्टवेयर का उपयोग।
Unit V: ICT Applications and Emerging Research Trends इकाई V: आईसीटी अनुप्रयोग और उभरते अनुसंधान रुझान	• Use of ICT in research: e-resources, databases (Scopus, Web of Science, PubMed, Shodhganga). • Artificial Intelligence in research (ChatGPT, Scite.ai, Research Rabbit). • Data visualization tools and dashboards. • Interdisciplinary research, translational research, and innovation ecosystem. • Research outcome metrics: citation, impact factor, h-index, and patenting basics. • अनुसंधान में आईसीटी का उपयोग: ई-संसाधन, डेटाबेस (स्कोपस, वेब ऑफ साइंस, पबमेड, शोधगंगा)। • अनुसंधान में कृत्रिम बुद्धिमत्ता (चैटजीपीटी, साइट.एआई, रिसर्च रैबिट)। • डेटा विज़ुअलाइज़ेशन उपकरण और डैशबोर्ड। • अंतःविषय अनुसंधान, अनुवादात्मक अनुसंधान और नवाचार पारिस्थितिकी तंत्र। • अनुसंधान परिणाम मीट्रिक: उद्धरण, प्रभाव कारक, एच-इंडेक्स और पेटेंटिंग मूल बातें।

Suggested Reference Books (For English Medium Scholars):

1. Kothari, C. R. & Garg, G. (2019). *Research Methodology: Methods and Techniques*. New Age International Publishers.
2. Creswell, J. W. & Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Sage Publications
3. Best, J. W. & Kahn, J. V. (2016). *Research in Education*. Pearson.
4. Chawla, D. & Sondhi, N. (2018). *Research Methodology: Concepts and Cases*. Vikas Publishing House.
5. Gupta, S. P. (2014). *Statistical Methods*. Sultan Chand & Sons.

Hindi References (For Hindi Medium Scholars)

1. डॉ. सी. आर. कोठारी एवं जी. गर्ग – *अनुसंधान पद्धति : विधियाँ और तकनीकें* (New Age International, हिन्दी संस्करण).



IES UNIVERSITY, BHOPAL

IES Campus Kalkheda, Ratibad Main Road, Bhopal (M.P.) –

PHD COURSE WORK GUIDELINES & SYLLABUS

2. डॉ. एन. के. शर्मा – शैक्षिक अनुसंधान विधियाँ (Vinod Pustak Mandir, आगरा).
3. डॉ. रामनाथ शर्मा एवं डॉ. राजेन्द्र शर्मा – अनुसंधान विधियाँ (Research Methodology) (Atlantic Publishers).
4. डॉ. बालगोविंद शर्मा – समाज विज्ञानों में अनुसंधान की पद्धति (RBD Publications, जयपुर).
5. डॉ. श्यामसुंदर शुक्ल – शोध पद्धति और प्रतिवेदन लेखन (Kitab Mahal, इलाहाबाद).





IES UNIVERSITY, BHOPAL

IES Campus Kalkheda, Ratibad Main Road, Bhopal (M.P.) –

PHD COURSE WORK GUIDELINES & SYLLABUS

Program	Faculty	Name of Subject	Credit Assigned	Subject Code
Ph.D	Common for All Faculties	Research and Publication Ethics (RPE)	2	PHD-103

1. Course Objectives

This course aims to:

1. Inculcate research integrity, ethical values, and academic honesty among research scholars and faculty.
2. Develop awareness about publication ethics, plagiarism, and responsible authorship.
3. Provide knowledge of open access, indexing, and predatory publishing.
4. Train scholars to handle research data, intellectual property, and citation management ethically.
5. Encourage interdisciplinary and sustainable research aligned with national priorities and SDGs.

2. Course Outcomes (COs)

After successful completion of this course, the scholar will be able to:

CO Code	Course Outcome	Bloom's Level
CO1	Explain the fundamental concepts of research integrity, ethics, and publication standards.	Understanding
CO2	Identify ethical issues in research design, data collection, and authorship.	Analyzing
CO3	Apply tools and software for plagiarism detection and citation management.	Applying
CO4	Evaluate the authenticity of journals, publishers, and conferences.	Evaluating
CO5	Demonstrate ethical behavior in research dissemination and collaboration.	Creating

3. Course Structure and Modules

Module 1: Philosophy and Ethics (3 Hours)

- Definition, nature, and need of research ethics
- Moral philosophy and ethical theories (Deontology, Consequentialism, Virtue Ethics)
- Scientific temper, research integrity, and honesty in academia
- Values for responsible research and innovation



IES UNIVERSITY, BHOPAL

IES Campus Kalkheda, Ratibad Main Road, Bhopal (M.P.) –

PHD COURSE WORK GUIDELINES & SYLLABUS

Learning Outcome: Learners will understand the foundations of ethics and the moral dimensions of research.

Module 2: Scientific Conduct (3 Hours)

- Ethical practices in data collection, storage, analysis, and reporting
- Lab safety, human and animal research ethics
- Fabrication, falsification, plagiarism (FFP)
- Conflict of interest and dual-use research concerns

Learning Outcome: Learners will identify types of research misconduct and apply ethical standards in their own work.

Module 3: Publication Ethics (3 Hours)

- Publication process and ethics of authorship
- Responsibilities of authors, reviewers, editors, and publishers
- Citation ethics and avoidance of plagiarism
- Journal selection: Predatory journals, impact factor, indexing (Scopus, Web of Science, UGC-CARE)
- Ethical considerations in conference publications

Learning Outcome: Learners will evaluate the credibility of journals and apply ethical authorship principles.

Module 4: Open Access Publishing and Intellectual Property Rights (3 Hours)

- Concept of open access and Creative Commons licensing
- Open data, open-source software, and open review
- Intellectual Property Rights (IPR): Patents, copyrights, trademarks, and designs
- Institutional repositories and digital archiving

Learning Outcome: Learners will understand intellectual property concepts and use open access responsibly.

Module 5: Research Metrics and Quality Indicators (2 Hours)

- Citation metrics: h-index, i10 index, impact factor
- Altmetrics and academic visibility
- Reference management tools: Mendeley, Zotero, EndNote
- Plagiarism detection tools: Turnitin, Urkund, iThenticate

Learning Outcome: Learners will analyze journal and researcher performance using standard academic metrics.



IES UNIVERSITY, BHOPAL

IES Campus Kalkheda, Ratibad Main Road, Bhopal (M.P.) –

PHD COURSE WORK GUIDELINES & SYLLABUS

Module 6: Best Practices and Case Studies (1 Hour)

- Case studies of ethical breaches and lessons learned
- Institutional ethics committees and review processes
- IES University Research Integrity Charter
- Sustainable and socially responsible research practices

Learning Outcome: Learners will apply ethical principles in real-life research situations and institutional contexts.

4. Practical Components (15 Hours)

Session	Activity	Learning Outcome
1	Workshop on plagiarism detection (Turnitin demo)	Learn to check similarity index
2	Workshop on citation management tools (Mendeley/Zotero)	Manage references ethically
3	Analysis of predatory vs. indexed journals	Identify unethical publishing
4	Case study discussion on research misconduct	Apply ethics to real scenarios
5	Drafting ethical statements for thesis/research proposals	Develop responsible research plans
6	Preparing author contribution statements	Understand authorship roles
7	Mock peer review exercise	Gain insight into review ethics
8	Group presentation on research integrity and sustainability	Collaborate ethically in teams

5. Recommended Reference Books and Resources

1. ICMR (2017) – *National Ethical Guidelines for Biomedical and Health Research involving Human Participants*, New Delhi.
2. Beauchamp, T.L. & Childress, J.F. (2019) – *Principles of Biomedical Ethics*, Oxford University Press.
3. Resnik, D.B. (2018) – *The Ethics of Science: An Introduction*, Routledge.



IES UNIVERSITY, BHOPAL

IES Campus Kalkheda, Ratibad Main Road, Bhopal (M.P.) –

PHD COURSE WORK GUIDELINES & SYLLABUS

4. Shamoo, A.E. & Resnik, D.B. (2015) – *Responsible Conduct of Research*, Oxford University Press.
5. Kumar, R. (2021) – *Research Methodology: A Step-by-Step Guide for Beginners*, SAGE Publications.
6. UGC CARE (2023) – *Guidelines on Academic Integrity and Publication Ethics*.
7. Committee on Publication Ethics (COPE) – *Core Practices and Guidelines* (www.publicationethics.org).
8. Elsevier Researcher Academy – *Modules on Ethics in Research and Publication*.
9. Wiley & Springer Nature Author Services – *Publication Ethics Guidelines*.
10. Online Resource: www.turnitin.com / www.ugc.ac.in / www.icmr.nic.in

6. Suggested Reading and E-Learning Resources

- SWAYAM / NPTEL Course: *Research Ethics and Integrity*
- UNESCO (2021): *Recommendation on Open Science*
- World Association of Medical Editors (WAME): *Editorial Ethics Toolkit*
- INFLIBNET Shodhganga / ShodhShuddhi Portal
- IES University LMS Repository of Research Guidelines



IES UNIVERSITY, BHOPAL

IES Campus Kalkheda, Ratibad Main Road, Bhopal (M.P.) –

PHD COURSE WORK GUIDELINES & SYLLABUS

Program	Faculty	Name of Subject	Credit Assigned	Subject Code
Ph.D	Common for All Faculties	Research Presentation	2	PHD-104

Course Objectives

- To enable research scholars to identify their **core research interests** and potential areas of investigation.
- To develop the ability to **analyze existing literature**, understand research gaps, and justify area selection.
- To train scholars in preparing a **concept-level proposal** that reflects their academic orientation and understanding of research feasibility.
- To strengthen communication and defense skills through academic presentation before experts.

Course Philosophy

- This course is designed to help scholars **explore and define their research inclination** rather than to finalize a thesis topic.
- The preliminary proposal prepared and presented under this paper serves as an **orientation exercise** to identify the scholar's potential research domain, rationale, and feasibility. The topic finalized during this course **may or may not be the same** as the final topic approved by the **Research Degree Committee (RDC)**.

Course Outcomes (COs)

After successful completion of this course, the scholar will be able to:

- Identify a core research area aligned with academic interest and societal relevance.
- Demonstrate understanding of the existing body of knowledge within that area.
- Justify the rationale for selecting a specific domain of study.
- Formulate preliminary objectives and outline feasible research approaches.
- Communicate and defend research ideas confidently in an academic forum.
- Incorporate expert feedback to refine research direction for future RDC presentation.

Course Guidelines

This paper integrates two major components:

Part A – Preliminary Research Proposal (~3000–5000 words)

Each scholar shall prepare a **concept note or preliminary proposal** under the guidance of the Research Guide, covering:

- Title (Tentative):** A working title representing the intended research area.



IES UNIVERSITY, BHOPAL

IES Campus Kalkheda, Ratibad Main Road, Bhopal (M.P.) –

PHD COURSE WORK GUIDELINES & SYLLABUS

2. **Introduction and Background:** Overview of the broader field and relevance.
3. **Core Research Area:** Identification of the field/subfield and justification for its selection.
4. **Review of Key Literature:** Summary of key theoretical and empirical works in the area.
5. **Identified Gap / Need for Research:** What is lacking or underexplored.
6. **Tentative Objectives or Research Questions:** Broad direction, not final hypotheses.
7. **Possible Methodological Approach:** Data type, tools, or design (illustrative).
8. **Expected Contribution:** How the study could add value theoretically or practically.
9. **References / Bibliography:** Proper referencing using APA/MLA/IEEE format.

Note: The proposal is exploratory and formative. It is intended to showcase understanding, feasibility, and motivation, not commitment to a fixed topic.

Part B – Research Seminar / Area Presentation

1. Each scholar shall make an oral presentation (8–10 minutes) before a panel consisting of the PhD Cell & Departmental Research Committee or departmental experts.
2. The presentation should cover:
 - Broad research area and its relevance.
 - Justification for area selection and potential research gap.
 - Preliminary research questions or objectives.
 - Brief overview of potential methodology.
 - Anticipated challenges or opportunities in the area.
3. Interaction and Q&A will follow, focusing on the scholar's conceptual clarity and motivation for pursuing research in that domain.

Evaluation Scheme

Component	Description	Marks	Evaluator
Written Preliminary Proposal / Concept Note	3000–5000 words structured document highlighting research area, rationale, and potential direction	20	PhD Cell & Departmental Committee
Oral Presentation Before RAC / Expert Panel	8–10 minutes presentation with interactive discussion	20	PhD Cell & Departmental Committee



IES UNIVERSITY, BHOPAL

IES Campus Kalkheda, Ratibad Main Road, Bhopal (M.P.) –

PHD COURSE WORK GUIDELINES & SYLLABUS

Component	Description	Marks	Evaluator
Seminar / Oral Presentation	Presentation on research plan or preliminary findings	10	PhD Cell & Departmental Committee
Total Marks		50	

Course Requirements

- Minimum 60% marks or Grade “B” (as per UGC 7-point scale) is mandatory for passing.
- Submission of both soft and hard copies of the proposal and presentation slides.
- Attendance in all peer seminar sessions is compulsory.
- Scholars must complete this course before appearing for the RDC/Research Proposal finalization stage.

Recommended Resources

1. Kothari, C.R. & Garg, G. (2019). *Research Methodology: Methods and Techniques*. New Age International.
2. Creswell, J.W. & Creswell, J.D. (2018). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*. Sage Publications.
3. Day, R.A. & Gastel, B. (2012). *How to Write and Publish a Scientific Paper*. Cambridge University Press.
4. Booth, W.C., Colomb, G.G., & Williams, J.M. (2016). *The Craft of Research*. University of Chicago Press.
5. Gibaldi, J. (MLA). *Handbook for Writers of Research Papers*. Modern Language Association.