Syllabus

PhD Course Work

2025

as per the Revised Ph.D. Ordinance – 9 (IX), 2025

Department of Architecture
Faculty of Architecture & Ekistics
Jamia Millia Islamia, New Delhi

Ph.D. in Architecture

The Ph.D. programme in Architecture provides scholars with the opportunity to engage in interdisciplinary research on topics critical to society, profession, and education in Architecture. The objective is to foster scientific thinking and innovation for advancing architectural discourse. The programme encourages critical thinking skills, evidence-based investigations, advanced research methodologies and data analysis techniques.

Research areas span diverse disciplines within architecture and ekistics, including building technology, conservation, design, architectural education, energy efficiency, healthcare, architectural history, housing, landscape architecture, recreation, urban design, urban and regional planning, transportation, and related fields.

SCHEME OF EXAMINATION *2025*

CODE	SUBJECT	CLASSES		MARKS				EXAM HOURS	CREDIT
		L	T/ST	IA	WR	VV	TOT		
PAR-2501	Research Methodology	2	2	80	120	-	200	3	4
PAR-2502	Elective-I*	4	0	80	120	-	200	3	4
PAR-2503	Research and Publication Ethics	2	0	40	60	-	100	3	2
PAR-2504	Term Paper	2	0	40	-	60	100	-	2
TOTAL		**10**	**2**	**-**	**-**	**-**	**600**	**-**	**12**
PAR-2505	Elective-II**	2	2	80	120	-	200	3	4
PAR-2506	Elective-III**	2	2	80	120	-	200	3	4
PAR-2507	Elective-IV**	2	2	80	120	-	200	3	4

** Electives relevant to Broad Area of Research*
*** Electives to be pursued only by scholars who are interested to apply for Prime Minister's Research Fellowship (PMRF).*

List of Electives

CODE	SUBJECT	CLASSES		MARKS				EXAM HOURS	CREDIT
		L	T/ST	IA	WR	VV	TOT		
PAR-2502 (A)	Advanced Architectural Theory	4	0	80	120	-	200	3	4

NOTATIONS:

L Lectures **T** Tutorials **ST** Studio
IA Internal Assessment **WR** Written Exam **VV** Viva Voce

PAR - 2501: Research Methodology

CLASSES/ WEEK		MARKS				EXAM HOURS	CREDITS
L	*ST*	*IA*	*WR*	*VV*	***TOT***		
2	2	80	120	-	**200**	3	4

Objectives:

- To introduce the students with research methods and inculcate the critical thinking ability.
- To acquaint the students in detail about quantitative and qualitative research methods, tools and analysis.

Method:

- Lectures, presentations, tutorials to introduce and inform the theories of topics contained in the syllabus.
- Students to augment the understanding by undertaking various reading and writing assignments based on the topics in the syllabus. The same shall be evaluated for Internal Assessment.

Course Content:

1. **Introduction to Research (12 hrs)**
    - Definition of Research
    - Objective and Purpose of Research
    - Research Enquiry, Research Question, Problem, Knowledge gap
    - Selection Bias, Confirmation Bias
    - Hypothesis, Thesis, Anti-Thesis, Null-Hypothesis.
    - Difference between Dissertation and Ph.D.
    - Classification of Research: Pure, Applied; Exploratory, Descriptive, Explanatory; Quantitative, Qualitative, Mixed.
    - Primary and Secondary Data
    - Variations in research in diverse disciplines e.g. Sciences, Social Sciences, History, Economics, Management, Engineering etc.
2. **Quantitative Methods (16 hrs)**
    - Sampling: Sample Size and Method; Population. Probabilistic and Non Probabilistic Sampling. Random Sampling, Stratified Sampling, Systematic Sampling, Cluster Sampling, Multistage Sampling, Snowball Sampling, Judgemental Sampling, Convenience Sampling, Voluntary Sampling etc.
    - Surveys: Type of Surveys; Polls, Simple, Cross-Sectional, Longitudinal.
    - Questionnaire: Type of Questions; Open Ended, Close Ended, Yes-No type, True-False, Multiple-Choice Questions, Rating Scales, Ranking Questions.
    - Tests and Experiments: Field Experiments, Laboratory Experiments, Natural Experiments. Control Group, Control Environment.
    - Quantitative Analysis: Variables- Dependent and Independent; Mean, Mode, Median, Average; Correlation; Regression, Causal-Comparative Research.
    - Softwares and Tools: Google Form, Excel, SPSS etc

3. **Qualitative Methods (16 hrs)**
    - Type of Qualitative Research Design: Phenomenology, Case Studies, Grounded Theory, Ethnography, General Qualitative Enquiry.
    - Interviews: One on One, Focussed Group, Group Discussions.
    - Field Study: Observation, Photo-Documentation, Drawing and Mapping, Delphi Study, Social Experiments, Behavioural Study, Case Study, Cognitive Mapping etc.
    - Qualitative Analysis: Content Analysis, Conversation Analysis, Structural Analysis, Phenomenography, Repertory Grid, Critical Timeline - Cause & Effect, Comparative Analysis
    - Discourse Analysis: Analogy, Argumentation, Reasoning-Inductive & Deductive, Rhetoric, Dialectics.

4. **Research in Architecture (08 hrs)**
    - Variation of scale and range of research in Architecture. Multi-Disciplinarity of Research in Architecture.
    - Architecture Appreciation and Analysis: Spatial, Plan, Form, Elevation, Characteristic Elements, Material, Technology, Function, Performance and Efficiency.
    - Urban Scale Research: Cities, Life, Society, Environment and Culture.
    - Traditional, Vernacular and Informal Practices in Architecture.

5. **Research Writing Methods (12 hrs)**
    - Type of research writings. Synopsis, Research Proposal, Article, Research paper, Essay, Chapter, Book etc.
    - Structure of a Synopsis and Research paper.
    - Citations: Inline, Footnotes, Endnotes.
    - Graphs, Pictures, Tables and Other illustrations.
    - Quotations
    - References: Styles-APA, Harvard, Chicago etc.
    - Bibliography
    - Plagiarism: Similarity Index
    - Softwares and Tools: EndNote, Mendley, RefMe etc
    - Publishing the research: Refereed and Indexed Journals, Research Databases; Jstor, Academia, Research Gate etc.

Suggested Readings:

1. The Craft of Research by Booth, W., Colomb, G., & Williams, J.
2. Case Study Research Methods by Bill Gillham
3. DOING URBAN RESEARCH by G D ANDRANOVICH & GERRY RIPOSA
4. Architectural Research methods by Linda N. Groat and David Wang
5. Analysing Architecture by Simon Unwin

PAR - 2502: Advanced Architectural Theory

CLASSES/ WEEK		MARKS				EXAM HOURS	CREDITS
L	*ST*	*IA*	*WR*	*VV*	***TOT***		
4	0	80	120	-	**200**	3	4

Intent:

The intent of this subject is to initiate a dialogue about the different facets of architecture especially relevant to the Indian society. Following are the broad headings for discussions and may include relevant topics for holistic understanding of the discipline.

Course Content:

1. Urban Planning through Five Year Plans in the Post Independent India
2. Post Independent India and the Evolving Architecture Vocabulary
3. Architecture Pedagogy – Perception to Precipitation
4. National Education Policy 2020 and Architecture Education
5. Sustainability in Architecture – Brand Marketing Vs Inherent Nature of Sustainability in Architecture
6. Climate Change and Challenges to Societies and Human Settlements
7. Housing Scenario in India – Phases, Policies, Challenges and Possibilities
8. Islamic Architecture – Philosophy, Perception and Paradox
9. Vernacular Architecture – Importance, Relevance and Application in the Contemporary Indian Buildings/Society
10. Poetry and Architecture: Sensitivity and Humanitarian Aspects of the Creative Process

PAR - 2503: Research and Publication Ethics

CLASSES/ WEEK		MARKS				EXAM HOURS	CREDITS
L	*ST*	*IA*	*WR*	*VV*	***TOT***		
2	0	40	60	-	**100**	3	2

Intent

- To develop insights towards philosophical and ethical aspects of research
- To understand the process of publication, indexing and referencing
- To be aware of issues relating to ethics and misconduct in publication

Course Content:

THEORY

Unit 1: Philosophy & Ethics

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

Unit 2: Research Ethics

1. Ethics with respect to science and research
2. Intellectual honesty & research integrity
3. Scientific misconducts: Falsification, Fabrication & Plagiarism (FFP)
4. Redundant Publications: duplicate & overlapping publications, salami slicing
5. Selective reporting and misrepresentation of data
6. Use of AI in research and publication

Unit 3: Publication Ethics

1. Publication ethics: definition, introduction and importance
2. Best practices/standards setting initiatives and guidelines: COPE, WAME
3. Conflict of interests
4. Publication misconduct: definition, concept, & kinds of problems that lead to unethical behaviour and vice versa, types
5. Violation of publication ethics, authorship and contributorship
6. Identification of publication misconduct, complaints & appeal provisions
7. Predatory publishers & journals

PRACTICE

Unit 4: Open Access Publishing

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 suggestions tools viz., JANE, Elsevier Journal Finder, Springer Journal Suggester etc.

…contd.

Unit 5: Publication Misconduct

A. Group Discussions

1. Subject specific ethical issues, FFP, authorship
2. Conflict of interests,
3. Complaints & appeals: examples and frauds from India & abroad

B. Software tools

1. Use of plagiarism software like Turnitin, DrillBit & other open source software tools

Unit 6: Databases and Research Metrics

A. Databases

1. Indexing database
2. Citation database: Web of Science, Scopus, etc.

B. Research Metrics

1. Impact factor of journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score
2. Metrics: h-index, g index, i10 index, altmetrics

Suggested Readings

- MacIntyre, A. (2003). *A short history of ethics: A history of moral philosophy from the Homeric age to the twentieth century*. Routledge.
- Oliver, P. (2010). *The student's guide to research ethics*. McGraw-Hill Education.
- Resnik, D. B. (2015). *What is ethics in research and why is it important*.
- Shamoo, A. E., & Resnik, D. B. (2009). *Responsible conduct of research*. Oxford University Press.
- Bird, A. (2006). *Philosophy of science*. Routledge.
- Praveen, C. (2018). *Ethics in competitive research*. Pothi.
- Muralidhar, K., Ghosh, A., & Singhvi, A. K. (2021). *Ethics in science education, research and governance*. Indian National Science Academy.
- Groat, L., & Wang, D. (2013). *Does design equal research?* In *Architectural research methods*.
- Sattrup, P. A. (2012). *Architectural research paradigms: An overview and a research example*.
- Das, A. K., & Mishra, S. (2014). *Genesis of altmetrics or article-level metrics for measuring efficacy of scholarly communications: Current perspectives*. arXiv:1408.0090.
- Das, A. K. (2015). *Research evaluation metrics*. UNESCO Publishing.
- Madalli, D. P. (2015). *Concepts of openness and open access*. UNESCO Publishing.
- National Academy of Sciences. (1989). *On being a scientist*. National Academy Press.
- Chaudhari, N., & Baliga, V. (2015). *Intellectual property rights*. UNESCO Publishing
- Patwardhan, B., Desai, A., Chourasia, A., Nag, S., & Bhatnagar, R. (2020). *Guidance document: Good academic research practices*. University Grants Commission, New Delhi.
- University Grants Commission. (2021). *Academic integrity and research quality*. Ministry of Education, Government of India, New Delhi.

PAR -2504: Term Paper

CLASSES/ WEEK		MARKS				EXAM HOURS	CREDITS
L	*ST*	*IA*	*WR*	*VV*	***TOT***		
2	0	40	-	60	**100**	-	2

Intent:

• To systematically identify, analyse, and synthesise existing scholarly literature relevant to the research area.
• To map the intellectual landscape of the field by examining key theories, methods, and debates.
• To identify research gaps, inconsistencies, and emerging themes that warrant further investigation.
• To establish a conceptual and methodological foundation for the proposed research.

Course Content

• Preparation of a term paper related to the area of research is mandatory. The topic shall be coherent with the topic of research. A rigorous literature review shall be undertaken by conducting extensive study of research papers, refereed journals, and scholarly books.

• The term paper shall be structured with the objective of developing it, fully or partially, into a manuscript suitable for submission to a peer-reviewed journal.

Guidance:

- Based on the broad research area, the candidate shall undertake a comprehensive literature review to identify gaps that the proposed research work can address.
- Focus should be on reviewing published works with a higher h-index (25 or more).
- Referring unpublished work or work intended for non-scientific audience should be avoided.

Submission:

The submission of the Term Paper would include the following:

1. Mid semester presentation in the RAC
2. Final presentation in the RAC
3. Submission of final report