



RESEARCH METHODOLOGY FOR PLANNING AND ARCHITECTURAL STUDIES

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INTENDED AUDIENCE : Students pursuing Undergraduate and Postgraduate in Planning, Architecture, Master's in any Planning discipline (MCP, MURP, Transportation Planning, Infrastructure Planning, etc.), and PhD Scholars pursuing research in planning and architectural domains

COURSE OUTLINE :

Research in planning and architecture is pivotal to understand the knowledge gaps, analyse the need of the study, and subsequently come up with relevant findings to solve the current issues in the built environment at local, regional, national, and global levels. The timely scientific study helps to develop strategies for improvement in the planning process, implementation, and mitigation of planning challenges. The field of research in planning is vast and comprises of multi-dimensional understanding of the process and development phenomenon. To conduct excellent and meaningful research in planning and architecture, it is imperative to understand and opt for an appropriate research methodology that helps to understand the chosen problem better. A thorough understanding of research methods, their applications, and their limitations would help the researcher to carry out the research systematically, and the outcome of such organized research is more acceptable in the scientific society. In the absence of a suitable methodology and selection of the correct methods, many innovative ideas fail to convey their potential, as observed in several cases. The present course aims to develop a basic understanding of the research methodology for planning and architectural studies, which will undoubtedly impart knowledge about research design, methods, and techniques. This course will stimulate the students, learners, and researchers to develop a basic understanding of research methodology and its role in conducting quantitative and qualitative research. It will also motivate them to learn more about advanced research tools and techniques for planning and architectural studies. This course will be suitable for students pursuing undergraduate, postgraduate, PhD scholars and any researchers interested in planning and architectural research; and research methods in general.

ABOUT INSTRUCTOR :

Prof. Shubhajit Sadhukhan is presently an Assistant Professor in the Department of Architecture & Planning at the Indian Institute of Technology Roorkee. He is also a Joint Faculty in CTRANS at IIT Roorkee. Prior to joining IIT Roorkee, he served the National Institute of Technology Patna as an Assistant Professor in the Department of Architecture. Prof. Sadhukhan received his PhD from the Indian Institute of Technology Kharagpur. Prof. Sadhukhan obtained his Master of Technology (M. Tech) Degree in Infrastructure Design and Management from the Indian Institute of Technology Kharagpur and was awarded with the Institute Silver Medal. He completed his Bachelor in Architecture (B. Arch) with Honours from Jadavpur University, Kolkata. He has exposure in both the fields of Architecture and Transport Infrastructure Planning. He has publications in several international journals of high repute and presented his work at many international conferences. His current research includes and is not limited to urban mobility, sustainable transportation, behavioural study, tourism planning, and urban utility management.

COURSE PLAN :

Week 1: Introduction to the Research in Planning and Architecture; Areas of Research and Types of Research in Planning and Architecture; Research Methods vs. Methodology; Qualitative vs. Quantitative Research

Week 2: Research Process; Literature Review; Need and Process of Literature Review; Style of Referencing; Referencing Manager

Week 3: Bibliometric Analysis; Systematic Literature Review; Meta-Analysis; Text Mining; Research Problems; Research Design; Hypothesis

Week 4: Types of Data; Measurement and Scaling Techniques; Types of Surveys; Experimental and Simulation Research Methods

Week 5: Sampling Techniques; Advantages and disadvantages of various sampling techniques; Sample Size Calculation; Case Studies

Week 6: Survey Methods; Online and Offline Surveys and their advantages and disadvantages; Survey Tools; Database Management

Week 7: Processing of Data; Descriptive Statistics; Inferences; Hypothesis Testing

Week 8: Quantitative Research -I: Methods, Tools and Techniques; Case Studies

Week 9: Quantitative Research-II: Methods, Tools and Techniques; Case Studies

Week 10: Qualitative Research: Methods, Tools and Techniques; Case Studies

Week 11: Spatial Methods in Planning Research; GIS-based Application; Case Studies

Week 12: Emerging Tools and Techniques for performing research in Planning and Architectural domains; Case Studies