

Indian Institute of Technology Kanpur
Industrial and Management Engineering

Course Name and Code: Research Methodology (IME 700A)

Credit: 3-0-0-0-9

Pre-requisites: None

Objective of the Course

Introduction to Social Science Research Perspective, Different Approaches to Social Science Research, Approaches to Theory Building, Sampling, Measurement Issues & Scale construction, Research Design, Qualitative Research, Experimental Research, Survey Research, Quantitative Data Analysis Techniques, Research Writing and Presentation, Research Evaluation and Critique, Issues in Current Research Practice.

Course Contents

Research (Definition, Types-Descriptive/Exploratory)

Research (Rigour and Relevance)

Research Elements (Epistemology, Ontology, Methodology)

Research Paradigms (Interpretivist/Positivist/Realist/Idealist)

Theory (Nature, Types - Grand, Mid-Range, Grounded)

Theory Building Process

Hypothesis Testing (Concept of Falsifiability)

Quantitative Methods of Research

Formulation of Research Question

Identifying Data

Data Collection (Primary, Secondary)

Understanding Data

Quantitative methods in Practice (Parametric/Non-Parametric Methods)

Operations Research in Practice

Converting Research Question into a Model

Data Envelopment Analysis in Practice

Developing a Research Plan

Research (Practical Aspects; Publication Related Issues)

Instructor(s): Dr. Anoop Singh (anoops@iitk.ac.in); Dr. Amit Shukla (skamit@iitk.ac.in)

Office Hours: Wed (1630-1730 Hours)

Lecture Venue: C4 (IME)

Lecture Schedule: Tue Wed (1200-1315 Hours)

Course Organization: All notices for the course will be sent by email to the course email list

Evaluation Criteria

Class Attendance & Participation - 30 %

Term Paper - 15 %

Mid Term Exam - 15 %

Mini-Project 1 - 20 %

Mini-Project 2 - 20 %

Note: Students are expected to attend all the sessions. Any student who is granted leave by the Convener, DPGC also must inform the instructor regarding his/her absence.

Recommended Text books

1. Social Research Methods: Qualitative and Quantitative Approaches (**W. L. Neuman**)
 2. Research Methods for Business Students (**M. Saunders, P. Lewis & A. Thornhill**)
 3. Theory Building: For Hypothesis Specification in Organizational Studies (**B. S. Pawar**)
 4. Quantitative Methods: An Introduction for Business Management (**P. Brandimarte**)
 5. An Introduction to Efficiency and Productivity Analysis (**T. J. Coelli, D. S. P. Rao, C. J. O'Donnell, G. E. Battese**)
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