

# Methodology for Design Research - Web course

## COURSE OUTLINE

Currently there are very few courses on the methodology of carrying out research into design. This course provides a broad overview of the generic concepts of design research and design research methodology, and introduces DRM – a highly popular methodology for doing design research. It then takes the student through each step of the methodology, from understanding design as a phenomenon, to improving any of its facets in a systematic way, and validating the improvements in a methodical manner. The course should be particularly useful for research students of all areas of design.

## COURSE DETAIL

Sl. No	Topic	Lecture
1.	Introduction to design research: What and Why; Current issues with design research and the need for a design research methodology; Major facets of design and design research	2
2.	Introduction to DRM - a design research methodology - its main components, and examples to explain the components	4
3.	Types of design research, determining type of research to be persuaded	2
4.	Starting design research: Clarification of requirements: Identifying research topics, carrying out literature search, consolidating the topic into research questions and hypotheses, and developing a research plan	6
5.	Types of descriptive study; Processes for carrying out descriptive studies for developing an understanding a facet of design and its influences; Introduction to associated descriptive study real-time and retrospective research methods for data collection such as protocol analysis, questionnaire surveys, interviews etc; Introduction to quantitative and qualitative data analysis methods	8
6.	Types of prescriptive study; Processes for developing design support and associated prescriptive study research methods	8
7.	Types of support evaluation; Processes for evaluating a design support, and associated Evaluation study research methods	6



NP-TEL

# NPTEL

<http://nptel.iitm.ac.in>

## Engineering Design

### Pre-requisites:

- Basic courses in engineering design or industrial design.

### Additional Reading:

1. Chakrabarti, A. A Course of Teaching DRM - a Methodology for Design Research, Special Issue on Design Pedagogy, Dan Frey, Bill Binmingham and Clive Dym (Eds.), AI EDAM, 2009
2. Blessing, L.T.M, Chakrabarti, A., and Wallace, K.M. A Design Research Methodology, Proceedings of the International Conf. in Engineering Design, Prague, Vol.1, pp50-55, 1995..

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8.	Types and structures of research documentation; Approaches and guidelines for documenting and reporting research process and outcomes	4
	<b>TOTAL</b>	40

**References:**

1. Blessing, L.T.M., and Chakrabarti, A. DRM, a Design Research Methodology, Springer, 2009.
2. Blessing, L.T.M., and Chakrabarti, A. DRM: A Design Research Methodology, in International Conference on The Science of Design - The Scientific Challenge for the 21st Century, INSA, Lyon, France, 15-16, 2002.
3. Blessing, L.T.M., Chakrabarti A. and Wallace, K.M. An Overview of Design Studies in Relation to a Design Research Methodology, Designers: the Key to Successful Product Development, Frankenberger & Badke-Schaub (Eds.), Springer-Verlag, 1998.