

MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH & STUDIES
(Deemed to be University under section 3 of the UGC Act 1956)

Ph.D ADMISSION TEST (MR-PAT)

Ph.D. in Design

Module 1: Design Methods and Processes

- 1.1 Fundamentals of Design Thinking
- 1.2 Human-Centered and Participatory Design Approaches
- 1.3 Systematic Design Process Models
- 1.4 Ideation Techniques and Creative Problem Solving
- 1.5 Prototyping, Testing, and Evaluation

Module 2: Research Methods in Design

- 2.1 Design as Inquiry: Practice-Led, Research-Led, and Research Through Design
- 2.2 Qualitative and Quantitative Research Methods
- 2.3 Tools for Data Collection: Surveys, Interviews, Observations
- 2.4 Case Study and Ethnographic Approaches
- 2.5 Data Analysis and Visualization in Design Research

Module 3: Design and Innovation

- 3.1 Innovation in Design: Types and Strategies
- 3.2 Technology Integration and Emerging Trends (AI, XR, Smart Materials)
- 3.3 Design for Sustainability and Circular Economy
- 3.4 Design Entrepreneurship and Business Model Innovation
- 3.5 Interdisciplinary and Transdisciplinary Design Innovation
- 3.6 Measuring Impact of Design Interventions

Module 4: Universal Design and Inclusive Practices

- 4.1 Principles of Universal Design
- 4.2 Accessibility and Usability in Product and Service Design
- 4.3 Design for Differently-Abled and Marginalized Communities
- 4.4 Inclusive UX and Interaction Design
- 4.5 Assistive Technologies and Design Ethics

Module 5: Design Management and Strategy

- 5.1 Fundamentals of Design Management
- 5.2 Strategic Role of Design in Organizations
- 5.3 Project Planning and Lifecycle Management
- 5.4 Intellectual Property Rights and Design Regulations
- 5.5 Communication and Stakeholder Management in Design Projects

Suggested Readings:

- 1. The Design of Everyday Things – Don Norman.
- 2. Design Thinking: Understand – Improve – Apply – Peter G. Rowe.
- 3. Research Methods for Product Design – Alex Milton and Paul Rodgers.
- 4. Design Management: Managing Design Strategy, Process and Implementation – Kathryn Best.
- 5. Universal Design Handbook – Wolfgang F.E. Preiser and Korydon H. Smith.
- 6. "Change by Design: How Design Thinking Creates New Alternatives for Business and Society" - Tim Brown.
- 7. "Design Thinking: Understanding How Designers Think and Work" - Nigel Cross.

8. "Product Design and Development" - Karl T. Ulrich and Steven D. Eppinger.
9. "The Psychology of Design" - Rajesh V.

Weblinks:

- Design Council (UK) – Resources on Design Thinking, Innovation, and Policy
<https://www.designcouncil.org.uk>
- Interaction Design Foundation (IDF) – Comprehensive articles on UX, Design Process, and Research Methods
<https://www.interaction-design.org>
- IDEO U – Courses and toolkits on Human-Centered Design and Innovation
<https://www.ideo.com>
- Nielsen Norman Group (NNG) – UX research, usability testing, and inclusive design practices
<https://www.nngroup.com>
- Design Research Society (DRS) – Scholarly articles, case studies, and academic conferences
<https://www.designresearchsociety.org>
- W3C Web Accessibility Initiative (WAI) – Guidelines and tools for Universal Design and Accessibility
<https://www.w3.org/WAI/>
- Inclusive Design Research Centre (OCAD University) – Research on inclusive and adaptive design
<https://idrc.ocadu.ca>
- MIT Design Lab – Interdisciplinary design and innovation projects
<https://design.mit.edu>
- Core77 Design Magazine – Contemporary practices in product design, innovation, and critique
<https://www.core77.com>
- Design Management Institute (DMI) – Strategic design and leadership in innovation
<https://www.dmi.org>