NIRMA UNIVERSITY
INSTITUTE OF DESIGN
PRODUCT AND INTERACTION DESIGN
Semester III

Institute:	**INSTITUTE OF DESIGN**
Name of Programme:	**BACHELOR OF DESIGN**
Course Code:	2DD302CC25
Course Title:	**Design Project I (Simple Utility Products)**
Course Type:	(**Core**/ Value Added Course/ Departmental Elective/ Institute Elective/University Elective/(Open Elective/ Any other)
Year of introduction:	**Academic Year 2025-26**

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Course Learning Outcomes (CLO):
At the end of the course, the student will be able to:

1. **Define and analyze** a design brief for a simple utility product, identifying user needs and defining design requirements. (BL2, BL4)
2. **Apply and analyze** research methodologies to understand the context of use, user behavior, and existing product solutions. (BL3. BL4)
3. **Generate and evaluate** diverse product concepts through ideation and sketching techniques, considering functionality, usability, and aesthetics. (BL5, BL6)
4. **Create, test, and refine** functional prototypes using appropriate materials and techniques, incorporating user feedback to improve the product design. (BL5, BL6)

Content: **Total Teaching hours: 90**

Unit	**Syllabus**	**Teaching hours**
Unit 1	**Defining the Design Brief** • Introduction to design briefs and their importance. • Identifying user needs and defining the problem statement. • Setting design goals and objectives. • Defining target users and their needs. • Establishing design constraints (materials, manufacturing, cost). • Practical exercises: Students will work in groups or individually to define a design brief for a chosen simple utility product.	6

Unit 2	**Research and Analysis** • User research methods: Observation, interviews, surveys, contextual inquiry. • Product analysis: Analyzing existing products in the market, identifying their strengths and weaknesses. • Ergonomics and human factors considerations. • Material research and selection.	24
Unit 3	**Ideation and Concept Development** • Ideation techniques: Brainstorming, sketching, mind mapping, SCAMPER. • Concept generation and development. • Concept sketching and visualization. • Concept evaluation and selection based on predefined criteria.	30
Unit 4	**Prototyping and Testing** • Prototyping methodologies: Low-fidelity and high-fidelity prototyping. • Material selection and fabrication techniques. • Usability testing and user feedback collection. • Prototype iteration and refinement based on testing results.	30

Self-Study	
Suggested Readings/ References	• Norman, D. A. (2013). *The design of everyday things: Revised and expanded edition*. Basic Books. • Ulrich, K. T., & Eppinger, S. D. (2015). *Product design and development*. McGraw-Hill Education. • Relevant resources from Semester 1 courses (e.g., design principles, sketching techniques, material studies). • Online resources and tutorials on prototyping techniques and user testing.

w.e.f. Academic Year 2025-26 and onwards