

NIRMA UNIVERSITY
INDUSTRIAL DESIGN PROGRAMME
Bachelor of Design, Department of Design
Year III, Semester V

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Course Code	IDPR 313E
Course Title	UI - UX Design

Course Learning Outcomes (CLO):

At the end of the course the students will:

1. Design a smart product using the relevant electronic tool kit
2. Build an application to support the smart product using principles of User Experience Design. Information architecture and Usability Engineering
3. Apply the finer nuances of User Interface, User Interaction and User Experience design based on User research
4. Design skills to design graphic interface using appropriate software
5. Gain technical skills and knowhow of electronic components and programming of sensors

Syllabus:

Teaching hours: 127.5

Unit 1: Introduction to UI- UX

Teaching hours: 30

- 1.1 What is UI-UX Design
- 1.2 The necessity and function of UI-UX Design; programs and languages that drive the functions
- 1.3 User Interaction with products, applications and services
- 1.4 Role of a UI- UX Designer; case studies of various types of Information architecture and its connectivity to Supply chain

Unit 2: Understanding the backend of the Smart devices:

Teaching hours: 30

- 2.1 Introduction to Arduino
- 2.2 Sensors: Functions and programming
- 2.3 Introduction to Adobe UX for Interface design
- 2.4 The working of the elements together

Unit 3: UI-UX Design Process: Initial Research

Teaching hours: 30

- 3.1 Identification of a product category for intervention
- 3.2 Research on the Smart product domain
- 3.3 Understanding User Needs and Goals; Understanding cognitive processes
- 3.4 Study and analysis of relevant technology for application to the product
- 3.5 Insights and concept development of Product architecture using physical and digital components

Unit 4: UX/UI Minor Design Project

Teaching hours: 37.5

- 4.1 Design Development
- 4.2 User Testing and Impact study
- 4.3 Refinement of solution

Suggested Readings:

1. *The Elements of User Experience: User-Centered Design for the Web* by Jesse James, Publishers: New Riders, 2010
2. *Observing the User Experience: A Practitioner's Guide to User Research* by Mike Kuniavsky, Andrea Moed, Publishers: Morgan Kaufmann, 2012
3. *Sketching User Experiences: Getting the Design Right and the Right Design Book* by Bill Buxton, Publishers: Focal Press, 2010
4. *Handbook of Usability Testing: How to Plan, Design, and Conduct Effective Tests* (Paperback) by Jeffrey Rubin, Dana Chisnell, Publisher: Wiley, 2008
5. *Arduino Programming in 24 Hours, Sams Teach Yourself*, by Richard Blum, Publisher: Pearson Education, 2015