

NIRMA UNIVERSITY

Institute:	Institute of Technology
Name of Programme:	BTech CSE, Integrated BTech (CSE)-MBA, BTech CSE (Artificial Intelligence & Machine Learning)
Course Code:	XXXX
Course Title:	UI-UX Design
Course Type:	Department Elective-I
Year of Introduction:	2024-25

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Course Learning Outcomes (CLO):

At the end of the course, the students will be able to –

1. explain the iterative user-centered design of graphical user interfaces (BL2)
2. apply the user Interfaces to different devices and requirements (BL3)
3. evaluate UX design, including information modelling, requirement gathering, and content management (BL5)
4. create high-fidelity visual designs by converting wireframes, incorporating principles of Gestalt Theory, and considering various screen types. (BL6)

Unit	Contents	Teaching Hours (Total 45)
Unit-I	Introduction to UI/UX: What is User Interface Design (UI) -The Relationship Between UI and UX, Roles in UI/UX, A Brief Historical Overview of Interface Design, Interface Conventions, Approaches to Screen Based UI, Template vs Content, Formal Elements of Interface Design, Active Elements of Interface Design, Composing the Elements of Interface Design, UI Design Process, Visual Communication design component in Interface Design The foundation of UX design: Good and poor design, Understanding Your Users, Designing the Experience, Elements of User Experience, Visual Design Principles, Functional Layout, Interaction design, Introduction to the Interface, Navigation Design, User Testing, Developing and Releasing Your Design, Information architecture and sitemaps, User journey maps, Interaction design: task flows, Overview of grids & page types, Developing low/high fidelity wireframes	12
Unit-II	User Research: Role of research in the UX design process, Overview of research methods, Introduction to heuristic testing, Reading user personas and empathy maps.	08
Unit-III	Visual Design and UI: Principles of visual design, including Gestalt Theory, Colour & typography for UI, Interactions and micro-interactions, understanding various sections of a screen (Web, iOS and Android), Converting wireframes into high fidelity visual design, Design for devices: understanding web & mobile	07
Unit-IV	UX Strategy: Information modelling: hierarchies and relationship Gathering requirements, working with content: inventory, sorting, schema, labelling, way-finding, Overview of e-commerce platforms,	08

Understanding mobile apps, Design process, Introduction to project management

Unit-V **Brand Experience Design: Brand strategy:** business goal, purpose, values, audience, persona and positioning, **Elements of visual identity:** typography, colour, iconography, patterns, Visual design for various page types 10

Introduction to design system: elements, components, patterns, pages and assets, and portfolio development.

Self-Study:

The self-study contents will be declared at the commencement of the semester. Around 10% of the questions will be asked from self-study contents

Suggested Readings/ References:

1. Russ Unger and Carolyn Chandler, A Project Guide to UX Design: For user experience designers in the field or in the making, New Riders Publishing.
2. Jesse James Garrett, The Elements of User Experience: User-Centred Design for the Web and Beyond, Second Edition, Pearson Education.
3. Wilbert O. Galitz, The Essential Guide to User Interface Design: An Introduction to GUI Design Principles and Techniques, Wiley.

Laboratory Work:

Laboratory work will be based on the above syllabus with a minimum of 10 experiments to be incorporated. The students in a suitable group size will design and perform one experiment as a part of Laboratory work.

Sr. No.	List of Experiments/Exercises	Hours
1	Working on a visual design that includes lines, spaces, textures, negative spaces, spacing, Font properties, Colors, and filling empty parts with visuals.	02
2	Identify some key UX influencers and try to categorize them into one or two of the quadrants.	04
3	Recreating an excellent existing design pixel-for-pixel, Filters, Sort UI	02
4	Identify and implement Content Strategy-related concepts	02
5	To implement a personal learning project.	02
6	To design a portfolio project using UI-UX	04
7	A real app or site. - design 1-3 screens of an app/website.	02
8	To design a Product Page for an e-commerce website	04
9	To design a Portfolio Site Splash Page	04
10	To design a Pricing Page for a SaaS Startup	04

