

UI & UX Design

Course Learning Objectives	<ul style="list-style-type: none">• Understand the principles and processes of UI/UX design.• Differentiate between UI and UX design and their respective roles in the design process.• Develop skills in divergent and convergent thinking, brainstorming, and observational empathy.• Gain proficiency in creating wireframes, and prototypes, and conducting usability tests.• Apply design thinking methodologies to solve user-centric problems.
Course Outcomes	<ul style="list-style-type: none">• Demonstrate a solid understanding of the foundations of UI/UX design.• Apply design principles to create visually appealing and user-friendly interfaces.• Utilize wireframing, prototyping, and testing techniques in the design process.• Analyze and address user needs, business goals, and the relationship between UI and UX.• Create and present a UI/UX design project.

Course Duration: 45 Hours

UNIT I FOUNDATIONS OF DESIGN

UI vs. UX Design - Core Stages of Design Thinking - Divergent and Convergent Thinking - Brainstorming and Game storming - Observational Empathy.

UNIT II FOUNDATIONS OF UI DESIGN

Visual and UI Principles - UI Elements and Patterns - Interaction Behaviors and Principles – Branding - Style Guides.

UNIT III FOUNDATIONS OF UX DESIGN

Introduction to User Experience - Why You Should Care about User Experience – Understanding User Experience - Defining the UX Design Process and its Methodology - Research in User Experience Design - Tools and Method Used for Research - User Needs and its Goals – Know about Business Goals

UNIT IV WIREFRAMING, PROTOTYPING AND TESTING

Sketching Principles - Sketching Red Routes - Responsive Design – Wireframing – Creating Wireflows - Building a Prototype - Building High-Fidelity Mockups - Designing Efficiently with Tools - Interaction Patterns - Conducting Usability Tests - Other Evaluative User Research Methods - Synthesizing Test Findings - Prototype Iteration

UNIT V RESEARCH, DESIGNING, IDEATING, & INFORMATION ARCHITECTURE

Identifying and Writing Problem Statements - Identifying Appropriate Research Methods - Creating Personas - Solution Ideation - Creating User Stories - Creating Scenarios – FloDiagrams - Flow Mapping - Information Architecture-Diagrams - Flow Mapping - Information Architecture

Test Projects:

Use Cases

1. **E-Commerce Redesign** - Enhancing the user experience of an existing e-commerce platform.
2. **Health and Wellness App** - Designing a user-friendly app for tracking and improving health and wellness.
3. **Travel Exploration App** - Creating an intuitive interface for a travel app that encourages exploration.
4. **Learning Management System (LMS)** - Redesigning the user interface of an online learning platform.
5. **Smart Home Control Center** - Designing a cohesive interface for controlling various smart home devices.
6. **Food Delivery Service** - Improving the user experience of a food delivery app, focusing on ease of use.
7. **Social Networking Platform** - Creating a more engaging and user-friendly interface for a social media platform.
8. **Finance Dashboard** - Designing an intuitive dashboard for personal finance management.
9. **Event Planning App** - Enhancing the user experience of an app for planning and managing events.

10. **Task Management Tool** - Redesigning the user interface of a task management application.
11. **Music Streaming App** - Improving the overall user experience of a music streaming platform.
12. **Job Search Platform** - Designing a user-friendly interface for a job search and application platform.
13. **Pet Care App** - Creating a delightful user experience for an app focused on pet care and management.
14. **Elderly Assistance App** - Designing an intuitive interface for an app catering to the elderly population.
15. **Fitness Tracking Wearable App** - Improving the user interface of an app connected to a fitness tracking wearable.
16. **Online Marketplace** - Redesigning the interface of an existing online marketplace for a better shopping experience.
17. **Weather Forecast App** - Creating a visually appealing and easy-to-use interface for a weather app.
18. **Charity Donation Platform** - Designing an intuitive interface for a platform that facilitates charitable donations.
19. **Language Learning App** - Improving the user experience of a language learning application.
20. **Virtual Reality Experience** - Designing a user-friendly interface for a virtual reality experience or application.

UI and UX Design Process for the above Use cases

Project Definition

- Understand the project goals and objectives.
- Define the target audience and user personas.
- Identify key features and functionalities.

Ideation and Sketching

- Brainstorm and generate multiple design concepts.
- Sketch rough wireframes and layouts to visualize ideas.

Wireframing

- Create low-fidelity wireframes to outline the basic structure and flow of the interface.
- Focus on information architecture and user flow.

Prototyping

- Develop interactive prototypes to simulate user interactions.
- Test and iterate on the prototype based on user feedback.

Visual Design

- Develop high-fidelity mockups with detailed visual elements.
- Choose color schemes, typography, and visual elements that align with the brand and user preferences.

Usability Testing

- Conduct usability testing with real users to identify any issues.
- Collect feedback on design, functionality, and overall user experience.

Refinement

- Incorporate feedback and make necessary adjustments to the design.
- Ensure consistency and coherence throughout the interface.

Design Handoff

- Prepare design assets for developers, including style guides, assets, and specifications.
- Collaborate with the development team to ensure a smooth handoff.

Development Support

- Provide ongoing support to developers during the implementation phase.
- Address any design-related issues that arise during development.

User Acceptance Testing (UAT)

- Conduct UAT to ensure that the final product meets user expectations and project requirements.

Launch and Deployment

- Coordinate with stakeholders for the official launch of the application.
- Monitor user feedback and address any post-launch issues.

Post-Launch Evaluation

- Collect and analyze user feedback after the application is live.
- Identify areas for future improvements and updates.

Documentation

- Document the design process, decisions, and any specific design guidelines.
- Create a comprehensive design documentation for future reference.