

As Per NEP 2020

University of Mumbai



Syllabus for Basket of OE Vertical 3

Faculty of Science and Technology

Board of Studies in Information Technology

Second Year Programme

Semester

III

Title of Paper

Credits

Introduction to UI/UX Design

2

From the Academic Year

2025-26

Name of the Course: Introduction to UI/UX Design

Sr.No	Heading	Particulars
1	Description the course : Including but Not limited to:	A UI/UX course typically covers the fundamentals of User Interface (UI) and User Experience (UX) design, equipping students with the skills and knowledge needed to create engaging and intuitive digital products. Skills Acquired: • Proficiency in design tools (e.g., Figma, Adobe XD, Sketch). • Ability to conduct user research and usability testing. • Strong understanding of design principles and best practices. • Experience in creating wireframes, prototypes, and high-fidelity designs. • Knowledge of responsive and accessible design. Career Opportunities: • UI/UX Designer • Interaction Designer • Product Designer • User Researcher • Information Architect A UI/UX course can be a great stepping stone for anyone looking to enter the field of digital design.
2	Vertical :	Open Elective
3	Type :	Practical
4	Credits :	2 credits (60 Hours of Practical work in a semester)
5	Hours Allotted :	60 hours
6	Marks Allotted:	50 Marks
7	Course Objectives(CO): CO 1. Develop Foundational Knowledge: Equip students with a thorough understanding of UI/UX principles, methodologies, and best practices. CO 2. Enhance Technical Skills: Provide hands-on experience with industry-standard design tools and techniques for creating userfriendly interfaces and experiences. CO 3. Foster Creativity and Innovation: Encourage students to develop innovative design solutions that address real-world problems and enhance user satisfaction. CO 4. Promote User-Centered Design: Instill the importance of user research and testing in the design process to create products that truly meet users' needs and preferences.	

8	Course Outcomes (OC): After completion of the course, the learners will be able to OC 1. Proficiency in Design Tools: Students will demonstrate the ability to use tools like Figma, Adobe XD, and Sketch to create wireframes, prototypes, and high-fidelity designs. OC 2. Effective User Research: Students will conduct user research, develop user personas, and apply research findings to inform design decisions. OC 3. Creation of Usable Interfaces: Students will design interfaces that are visually appealing, intuitive, and accessible across different devices and platforms. OC 4. Execution of Usability Testing: Students will plan, conduct, and analyze usability tests to evaluate and refine their designs based on user feedback.	
9	Module 1: 1. What is Product Design? What is wireframing? What is style guide? What is design thinking? What is human Computer Interaction? What is be design? What is lateral thinking? What is human centered Design? 2. What are the gestalt principles? What is color theory? What is RGB? What is graphic design? Design Ethics, Accessibility and inclusion, Design research, Content and research design, Storytelling, Reducing design complexity 3. Design brief and moodboard, Creating a storyboard, What is CYMK? What are primary colors? What are secondary colors? What are complementary colors? What are design aesthetics? What are monochromatic colors? What are complementary colors? What are triadic colors? Types of color palettes? Color combinations 4. Best fonts for websites, Static v/s dynamic websites, Fitt's Law, Graphic Design Principles, Color Symbolism, Shades of red in design, Shades of green in design, Shades of brown in design, Starting a presentation, Portfolio Website Design, How to design a logo? What is kerning? 5. "Imagine we are designing a mobile app for urban gardening. How would you plan and conduct a user research study to understand the needs of potential users?" (Focus: Defining research goals, selecting methods like interviews or surveys, creating user scenarios. Reference: "Observing the User Experience" by Goodman, Kuniavsky, and Moed.) 6. "Conduct a competitive analysis of two popular food delivery apps. What are their strengths and weaknesses in terms of usability and user experience?" (Focus: Heuristic evaluation, feature comparison, user flow analysis. Reference: Jakob Nielsen's 10 Usability Heuristics.) 7. "Create a low-fidelity wireframe for a mobile app screen that displays a list of search results." (Focus: Layout, information hierarchy, basic interactions. Reference:	30 Hrs

	"Wireframing Essentials" by UXPin.) 8. "Choose a color palette for a children's educational app, considering color psychology and accessibility guidelines." (Focus: Color harmony, contrast ratios, emotional impact. Reference: Web Content Accessibility Guidelines (WCAG).) 9. "Create a visual design for a landing page that promotes a new eco-friendly product." (Focus: Visual hierarchy, branding, emotional appeal. Reference: "Thinking with Type" by Ellen Lupton.) 10. "Design a user interface for a voice-controlled smart home device." (Focus: Conversational UI, error handling, personalization. Reference: "Designing Voice User Interfaces" by Cathy Pearl.)	
	Module 2: 11. "Design a data visualization dashboard for a financial analyst." (Focus: Chart selection, data storytelling, interactivity. Reference: "The Visual Display of Quantitative Information" by Edward Tufte.) 12. "Adapt a desktop application for mobile use." (Focus: Feature prioritization, touch interactions, context of use. Reference: "Mobile First" by Luke Wroblewski.) 13. "Design a UI for a VR experience to minimize motion sickness." (Focus: Comfort, visual cues, 3D interaction design. Reference: VR/AR UI/UX design principles.) 14. "Identify 2 usability problems on a website you frequently use. Suggest a simple redesign for each." (Focus: Usability evaluation, iterative design.) 15. "Design a simple voice command for a smart speaker to play music." (Focus: Voice UI, natural language.) 16. "Design a set of icons for a mobile app that represents different weather conditions." (Focus: Clarity, consistency, visual metaphor. Reference: "The Icon Handbook" by Jon Hicks.) 17. "Design a user interface for a mobile app that helps users manage their mental health, considering privacy and sensitive data." (Focus on security, confidentiality, and empathy. Reference: Designing for Digital Well-being by Microsoft) 18. "Conduct a heuristic evaluation of a mobile app and prioritize the identified usability issues." (Focus: Nielsen's heuristics, severity ratings, impact on user experience. Reference: Jakob Nielsen's 10 Usability Heuristics.) 19. "Design a system to allow user customization without overwhelming them." (Focus: Progressive disclosure, default settings, intuitive controls. Reference: UI design patterns.) 20. "Design a user interface for a multilingual and multicultural user base, considering localization and cultural sensitivity." (Reference: Global UX best practices)	30 Hrs

10 and 11	Text Books and Reference Books: 1. https://www.figma.com/resource-library/design-basics/ 2. The Elements of User Experience: User-Centered Design for the Web and Beyond, Jesse James Garrett, New Riders Publishing 3. Design Thinking: The Handbook, Falk Uebernickel, Li Jiang, Walter Brenner, Britta Pukall, Therese Naef, World Scientific Publishing Co Pte Ltd, Kilian Langenfeld, Personal Growth Hackers 4. Designing and Prototyping Interfaces with Figma, Fabio Staiano, Packt Publishing Ltd 5. Design Thinking for Beginners, Kilian Langenfeld	
12	Internal Continuous Assessment: 40%	Semester End Examination: 60%
13	Continuous Evaluation through: Students are expected to attend each practical and submit the written practical of the previous session. Performing Practical and writeup submission will be continuous internal evaluation. 2.5 marks can be awarded for each practical performance and writeup submission totaling to 50 marks and can be converted to 20 marks.	30 marks practical exam of 2 hours duration
14	Format of Question Paper: Duration 2 hours. Certified copy of Journal is compulsory to appear for the practical examination Practical Slip: Q1. From Module 1 13 marks Q2. From Module 2 12marks Q3. Journal and Viva 05 marks	

Sd/-
Sign of the BOS
Chairman
Dr. Srivaramangai R
BOS in Information
Technology

Sd/-
Sign of the
Offg. Associate Dean
Dr. Madhav R. Rajwade
Faculty of Science &
Technology

Sd/-
Sign of the Offg. Dean
Prof. Shivram S. Garje
Faculty of Science &
Technology