

Program	Bachelor of Technology (BTech)	Semester - 6
Type of Course	Professional Electives	
Prerequisite		
Course Objective	The UX & UI Design course aims to provide students with the knowledge of user-centered design, user-centered methods in design, graphics design on screens, simulation and prototyping techniques, usability testing methods, interface technologies, and user-centered design incorporate perspective. The students will get exposure to wireframing and prototyping software.	

Teaching Scheme (Contact Hours)				Examination Scheme				
Lecture	Tutorial	Practical	Credit	Theory Marks		Practical Marks		Total Marks
				SEE (T)	CIA (T)	SEE (P)	CIA (P)	
4	0	2	5	70	30	25	25	150

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Content		T - Teaching Hours W - Weightage	
Sr.	Topics	T	W
1	Introduction to the UI and UX Introduction to UI and UX, Fundamental Principles of Interaction, The Design Challenge, The Seven Stages of Action, Three Levels of Processing, Four Kinds of Constraints: Physical, Cultural, Semantic, and Logical, Design Framework: The Double-diamond Model of Design and Human-Centered Design Process, Laws of UX: Fitt's Law, Miller's Law, Hick's Law, Aesthetic-Usability Effect, Tesler's Law, Doherty Threshold.	12	20
2	The User Interface Defining the User Interface, The Importance and Benefits of Good Design, Characteristics of the Graphical User Interface, Characteristics of a Web Interface, General Principles of User Interface Design.	10	20
3	The User Interface Design Process – I Five Commandment in the design process, Important Human Characteristics in Design, Human Considerations in Design, Method for Gaining an Understanding of Users, Techniques for Determining Requirements, Design Standards and Style Guides, Understanding the process of good screen design, Menus and Navigation.	14	20
4	The User Interface Design Process – II Screen and Device based Controls, Effective Feedback and Assistance, Internationalization and Accessibility, <i>Usability Testing</i> : Purpose and Importance of Usability Testing, Scope of Testing, Prototypes, Kinds of Tests.	14	20
5	Practical Aspects of UI Design Empathy Mapping, Creating Personas, Creating Journey Map, Build Competitive Audits, Ideate Using Crazy-Eight Method, Create User Flows, Story Boarding, Wireframing: Lo-Fi and Hi-Fi Designs.	10	20
Total		60	100

Suggested Distribution Of Theory Marks Using Bloom's Taxonomy						
Level	Remembrance	Understanding	Application	Analyze	Evaluate	Create
Weightage	20	50	30	0	0	0

NOTE : This specification table shall be treated as a general guideline for the students and the teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Course Outcomes

At the end of this course, students will be able to:

C01	discuss the critical issues and theoretical underpinning of UI Design.
C02	describe useful characteristics for UX design.
C03	observe requirements for UX design concepts.
C04	use the UX design artifacts.
C05	apply UX design concepts for real-life problems.

Reference Books

1.	The Design of Everyday Things By Don Norman
2.	Laws of UX Design By Jon Yablonski
3.	The Essential Guide to User Interface Design: An Introduction to GUI Design Principles and Techniques By Wilbert O Galitz Wiley Publishing
4.	A Project Guide to UX Design By Russ Unger and Carolyn Chandler

List of Practical

1.	Study of various templates. and Installation of Figma 1. Study of various templates. E.g. Metronic, Unify, AdminLTE, etc. 2. Instal Figma on local machine and understand the Figma software IDE.
2.	Develop mobile and web screen using basic tools Develop 1 mobile and 1 web screen using the tools listed below: Basic Tools: Position, Size, Rotation, Color Styles, Masks, Dark Mode with Selection Colors, Gradients, Creating Backgrounds.
3.	Develop mobile and web screen using blend modes, and strokes Develop 1 mobile and 1 web screen using the tools listed below: Blending Modes, Alignment, & Distribution, Union and Corner Radius, Shadow, Blur Effects, Using Images, Fill, & Stroke, Text Properties & Styles.
4.	Create prototype for developed mobile and web screen Develop 1 mobile and 1 web screen using the tools listed below: Google & Custom Fonts, Accessibility, Responsive Design, Constraints, Layout Grid, Auto Layout in Figma, Prototyping, Plugins in Figma.
5.	Create login, registration/signup, forgot/reset password screen for your project Create login, registration/signup, forgot/reset password screen for your project.
6.	Create dashboard for your project Create dashboard for your project.
7.	Create screens to edit/view user profile - account information Create screens to edit/view user profile - account information.
8.	Create screens to add/edit/view product information Create screens to add/edit/view product information.
9.	Create screens for adding a product to cart Create screens for adding a product to cart.
10.	Create screens to add/edit cart screen Create screens to add/edit cart screen.
11.	Create screens to handle payment for the products in cart Create screens to handle payment for the products in cart.
12.	Create screen to manage user address information Create screen to manage user address information.
13.	Create screen to track records of the product purchased Create screen to track records of the product purchased.