



**Gyanmanjari**  
Innovative University

Syllabus  
Gyanmanjari Diploma Engineering College  
Semester-2 (Diploma)

**Subject:** User Interface Design and Prototyping– DET1XX10108.

**Type of course:** Skill Enhancement Courses (SEC).

**Prerequisite:** Basic computer literacy, creativity, and logical thinking. Students should be comfortable using digital tools and have a basic understanding of colors, layout, and visual communication. No prior UI/UX or design experience is required.

**Rationale:**

This course introduces students to the fundamentals of User Interface (UI) and User Experience (UX) design, enabling them to create intuitive, user-centered digital products. Basic creativity and visual communication skills help learners understand layout, typography, color, and design patterns, while logical thinking supports problem-solving, prototyping, and structuring user flows. Familiarity with digital tools allows students to quickly adopt Figma for professional-grade interface design and interactive prototyping. These prerequisites ensure that learners can focus on applying UI/UX principles, conducting user research, and building functional prototypes rather than revisiting foundational computer skills. The course provides a practical pathway for students to become industry-ready UI/UX designers capable of solving real-world design problems.

**Teaching and Examination Scheme:**

| Teaching Scheme |   |   | Credits | Examination Marks |     | Total Marks |
|-----------------|---|---|---------|-------------------|-----|-------------|
| CI              | T | P | C       | SEE               | CCE |             |
| 0               | 0 | 4 | 2       | 50                | 50  | 100         |

*Legends: CI-Class Room Instructions; T - Tutorial; P - Practical; C - Credit; SEE – Semester End Evaluation; LWA - Lah Work Assessment; V - Viva voce; CCE-Continuous and Comprehensive Evaluation; ALA- Active Learning Activities.*



**Course Content:**

| Sr. No | Course Content  | Hrs. | % Weightage |
|--------|---|------|-------------|
| 1      | <p><b>Theory Topics</b> – Introduction to UI/UX and its relevance in digital products, fundamentals of user-centered design, understanding users through needs, goals, and contexts, requirement gathering and problem definition, design thinking stages (empathize, define, ideate, prototype, test), user research basics and interpretation of insights, UX process lifecycle and key deliverables, UI design foundations (layout, spacing, alignment, hierarchy), visual design principles (color theory, typography, contrast, balance), introduction to UI components and design patterns for web and mobile, awareness of responsive design and platform-specific guidelines, overview of accessibility principles for inclusive design, introduction to Figma workspace and interface, understanding frames, layers, groups, and grids, organizing design files through naming conventions and project structure, and best practices for creating clean, consistent, and scalable UI designs.</p> <p><b>Practical:</b></p> <ul style="list-style-type: none"> <li>• Set up a complete Figma design environment, including team libraries, file templates, grids, and typography scales.</li> <li>• Conduct a mini user research exercise by identifying user goals, frustrations, and constraints for a given scenario (e.g., food delivery app).</li> <li>• Create personas and problem statements based on research insights and justify design priorities.</li> <li>• Develop task flows for a selected use case (e.g., “Search → Add to Cart → Checkout”) demonstrating clarity of user actions.</li> <li>• Build low-fidelity wireframe sketches (paper or digital) and convert them into structured Figma frames using layout grids and spacing systems.</li> <li>• Design a component library foundation including buttons, inputs, icons, app bars, cards, and color styles following atomic design awareness.</li> <li>• Apply visual design rules by creating typography hierarchy, scaling, spacing tokens, and color palette assets.</li> <li>• Demonstrate file organization using multi-page structures, proper naming conventions, and reusable components.</li> <li>• Explore auto-layout and constraints to create responsive UI blocks for mobile and web variants.</li> <li>• Prepare a mini design documentation sheet summarizing user needs, chosen design principles, and wireframe decisions.</li> </ul> | P:12 | 20%         |





| Sr. No. | Evolution Method                    | SEE | CCE |
|---------|-------------------------------------|-----|-----|
| 1       | ALA :- Kickstart Your UX Journey    | 00  | 10  |
| 2       | UX Discovery & Requirement Brief    | 05  | 00  |
| 3       | Task Flow & IA Justification – Case | 05  | 00  |
| Total   |                                     | 10  | 10  |

**1. ALA: Kickstart Your UX Journey – UX Discovery Blueprint & Figma Structure Mapping (10 Marks):**

- Students will prepare a structured **Product Discovery Document** for a selected digital product domain (e.g., Personal Finance Manager, Travel Planner, Learning App, Fitness Tracker). The document must include a clearly defined **problem context**, preliminary user insights, and a detailed **primary persona** outlining user background, goals, expectations, and constraints. Students must map a **task flow** for one key user activity and draft an initial **Information Architecture (IA)** showing screen hierarchy and navigation structure. They will then create **low-fidelity wireframes** for 3–4 core screens using layout grids, spacing rules, and visual hierarchy principles, along with a **UI Starter System** containing essential color styles, typography scales, spacing rules, and 2–3 base UI components. Deliverables include a **PDF/slide deck** summarizing discovery, IA, and wireframe decisions, plus a **Figma link** with organized pages, naming conventions, and component structure. This activity is designed to evaluate students' ability to conduct UX discovery and translate insights into structured screen layouts and design foundations.

**2. UX Discovery & Requirement Brief (05 Marks):**

- Students will be provided with a short product scenario. They must outline the primary user needs, define core user goals, identify key usability challenges, and summarize initial assumptions for design. A brief 1–2 page requirement note describing the problem context, target user, and expected outcomes must be submitted. This task assesses the student's ability to gather requirements, think analytically, and prepare the foundational scope of a UI/UX project.

**3. Task Flow & IA Justification – Case (05 Marks):**

- Given a specific user activity (e.g., onboarding, product search, checkout), students must prepare a task flow and justify the Information Architecture (IA) decisions behind screen hierarchy, navigation choices, and content grouping. A short written explanation or viva demonstration is required,



|   |  |      |     |
|---|--|------|-----|
|   | highlighting clarity of structure and reasoning behind the design. This task evaluates the student's understanding of user flow planning, decision-making, and early information architecture development.   |      |     |
| 2 | <p><b>Theory Topics –</b> Theory Topics – Understanding design systems and their role in scalable UI, components and variants for consistent interface design, principles of atomic design (atoms, molecules, organisms—awareness), structure and usage of style tokens (color, typography, spacing), planning layout grids and responsive breakpoints, applying constraints and auto-layout for adaptable designs, interaction design fundamentals and micro-interaction awareness, defining navigation structures for mobile vs web, introduction to Information Architecture (IA) patterns (hierarchical, sequential, matrix, hub-and-spoke), wireframing methodologies (low-fidelity vs mid-fidelity), transforming task flows into structured screens, usability heuristics and their application during design, accessibility considerations in UI elements, and best practices for maintaining clean, organized, and scalable Figma files during design system creation.</p> <p><b>Practical –</b></p> <ol style="list-style-type: none"> <li>4. Create a foundational mini design system in Figma including color styles, typography scales, and spacing tokens.</li> <li>5. Develop core components and variants (buttons, inputs, cards) using auto-layout, constraints, and structured naming.</li> <li>6. Build a navigation component (mobile and web) with variants for different states.</li> <li>7. Apply responsive layout rules by designing the same screen for mobile and desktop breakpoints.</li> <li>8. Convert a given task flow into mid-fidelity wireframes (4–6 screens) with consistent grids and hierarchy.</li> <li>9. Redesign an existing screen using usability heuristics and submit a brief justification for improvements.</li> <li>10. Perform accessibility refinements (contrast checks, font adjustments, touch target sizing) on selected UI elements.</li> <li>11. Document component usage guidelines (button sizes, spacing rules, typography hierarchy) within the Figma file.</li> <li>12. Structure the project using multi-page organization (Foundations, Components, Templates, Screens) with proper naming.</li> <li>13. Prepare a concise design system reference sheet summarizing rules for spacing, grids, components, and interaction states.</li> </ol> | P:12 | 20% |





| Sr. No. | Evolution Method   | SEE | CCE |
|---------|--|-----|-----|
| 1       | ALA :- Data in Motion  | 00  | 10  |
| 2       | Design System Foundations Task (Style Tokens, Components & Variants)           | 05  | 00  |
| 3       | Information Architecture (IA) Alignment & Mid-Fidelity Wireframe Demonstration | 05  | 00  |
| Total   |  | 10  | 10  |

**1. ALA: Data in Motion – Building End-to-End Power Query Pipelines (10 Marks):**

- Students will prepare a structured Design System Foundation Pack for a selected product theme (e.g., Travel, Fitness, E-Commerce, EdTech). The pack must include a clearly defined style foundation consisting of color tokens, typography scales, spacing rules, and grid settings, followed by a curated set of core components and variants (buttons, inputs, cards, navigation element) built using auto-layout, constraints, and naming conventions. Students must draft an accompanying Information Architecture (IA) outline identifying screen hierarchy and navigation flow for a given task. Based on the IA, they will create 4–6 mid-fidelity wireframes demonstrating layout consistency, spacing application, and component reuse. Deliverables include a PDF/slide deck summarizing the design system rationale, IA structure, and wireframe decisions, along with a Figma link showcasing organized pages, components, and variant structures. This activity evaluates students' ability to construct scalable design foundations, translate IA into screen layouts, and apply systematic UI rules within a professional workflow.

**2. Design System Foundations – Style & Component Setup (05 Marks):**

- Students will be given a predefined product theme. They must prepare a mini design system foundation by defining color styles, typography scales, spacing tokens, and grid rules. Students will then create 2–3 core components (such as buttons, input fields, cards) using auto-layout, constraints, and consistent naming. A short explanation (written or viva) must justify the choices made for styles and component structure. This task evaluates students' understanding of design system fundamentals and ability to build scalable UI components.

**3. Mid-Fidelity Wireframe & IA Alignment – Case (05 Marks):**

- Based on a provided task flow, students must create **mid-fidelity wireframes (2–3 screens)** aligned with an Information Architecture (IA) outline. They must demonstrate component



|   |   |      |     |
|---|---|------|-----|
|   | reuse, correct spacing, clear hierarchy, and grid alignment. A brief written justification or viva must explain how IA decisions guided the layout and structure of the screens. This task evaluates the student's competence in translating IA into organized, consistent mid-fidelity designs.  |      |     |
| 3 | <p><b>Theory Topics</b> – Advanced visual design principles for digital interfaces, applying hierarchy through typography, scale, weight, and spacing, understanding color psychology and creating accessible color systems, grid systems and layout structures for mobile and web, spacing matrices and rhythm for consistent UI, principles of clean and modern interface aesthetics, creating high-fidelity UI screens using component-driven design, interaction states (default, hover, active, disabled, error) and their role in UI clarity, introduction to micro-interaction awareness (feedback, transitions, affordance), crafting visual patterns for navigation, cards, lists, and form sections, platform-specific UI guidelines (Material Design, iOS Human Interface Guidelines—awareness), advanced use of auto-layout for dynamic resizing, refining pixel-perfect designs using alignment and density rules, preparing design tokens for consistency, and best practices for producing polished, scalable, and visually consistent high-fidelity designs in Figma.</p> <p><b>Practical –</b></p> <ol style="list-style-type: none"> <li>14. Create high-fidelity versions of 3–4 key screens using grid systems, spacing matrices, and type hierarchy.</li> <li>15. Apply color psychology to develop a polished color palette with primary, secondary, and neutral scales.</li> <li>16. Build advanced UI components (cards, dropdowns, tabs, modals) with variants and interaction states.</li> <li>17. Design two platform-specific screens following either Material Design or iOS guideline patterns.</li> <li>18. Convert mid-fi wireframes into pixel-perfect layouts using alignment, spacing tokens, and style rules.</li> <li>19. Create interaction states (hover, active, disabled, error) for core components using variants.</li> <li>20. Design a mobile and desktop version of the same screen following responsive layout guidelines.</li> <li>21. Apply micro-interaction awareness by designing screens that visually communicate feedback (loading, success, errors).</li> <li>22. Prepare a visual pattern library for lists, cards, buttons, and forms using consistent structure.</li> <li>23. Organize the Figma file with structured pages for Foundations → Components → Templates → Screens following professional workflow.</li> </ol> | P:12 | 20% |





| Sr. No. | Evolution Method                                   | SEE | CCE |
|---------|--|-----|-----|
| 1       | ALA :- High-Fidelity Visual UI                     | 00  | 10  |
| 2       | High-Fidelity Visual UI & Interaction State System | 05  | 00  |
| 3       | Interaction State System Demonstration             | 05  | 00  |
| Total   |  | 10  | 10  |

**1. ALA: High-Fidelity Visual UI & Interaction State System (10 Marks):**

- Students will prepare a three-stage fidelity transformation pack for a selected user task (e.g., Login, Product Listing, Course Dashboard). The pack must include: a Low-Fidelity wireframe created using simple grey placeholders and basic layout blocks; a Mid-Fidelity wireframe demonstrating structured grids, spacing rules, and component skeletons (without final color or styling); and a High-Fidelity UI screen showcasing complete visual styling including color palette, typography hierarchy, shadows, icons, and interaction-state awareness. Students must document how each fidelity level evolves in terms of structure, clarity, and detail, and justify the design decisions made during the transition. Deliverables include a PDF/slide deck showing all three fidelity stages with a short rationale and a Figma link containing organized pages for Low-Fi, Mid-Fi, and High-Fi screens. This activity evaluates the student's understanding of fidelity levels, ability to progressively refine a design, and skill in transforming structure into polished UI.

**2. High-Fidelity Screen Conversion & Visual Hierarchy Application (05 Marks):**

- Students will convert **one provided mid-fidelity screen** into a high-fidelity design by applying the finalized color palette, typography hierarchy, spacing system, and grid structure. They must submit the final screen along with a **3-5 sentence justification** explaining improvements in hierarchy, readability, and visual clarity. This task assesses the learner's ability to refine a single interface using advanced visual design principles.

**3. Interaction State System Demonstration (05 Marks):**

- Students will design interaction states (hover, active, disabled, error) for one key UI component such as a button or input field. States must be created as variants using auto-layout and Figma's variant features. Students must provide a 3-4 sentence explanation highlighting how each state communicates system feedback. This task evaluates understanding of interaction behavior, state clarity, and variant management.



| 4       | <p><b>Theory Topics</b> – Principles of interactive design and the role of feedback in digital interfaces, prototyping fundamentals and types of prototypes, understanding user flows and task pathways across screens, mapping transitions and interaction patterns in Figma, designing meaningful micro-interactions for clarity and feedback, navigation logic for multi-screen experiences, usability heuristics for evaluating UI behavior, designing usability test scenarios and defining success criteria, methods of conducting user-testing sessions, capturing and interpreting user feedback, identifying usability issues and prioritizing fixes, iteration cycles and design refinement based on test findings, documenting usability insights and improvement decisions, preparing prototypes for stakeholder walkthroughs, and best practices for creating clear, stable, and test-ready interactive prototypes in Figma.</p> <p><b>Practical –</b></p> <ol style="list-style-type: none"> <li>4. Create a complete user flow diagram for a selected task and map screen transitions clearly.</li> <li>5. Link high-fidelity screens into a fully interactive prototype using appropriate transitions and navigation behaviors in Figma.</li> <li>6. Apply Smart Animate and other Figma transitions to simulate meaningful micro-interactions such as toggles, modals, and tabs.</li> <li>7. Design and configure interactive states in prototype mode for at least two components.</li> <li>8. Prepare a usability test script including test objectives, tasks, prompts, and success metrics for a given flow.</li> <li>9. Conduct a small usability test using the prototype and record issues, confusion points, and breakpoints.</li> <li>10. Analyze usability feedback and produce a usability findings summary with priority levels (high, medium, low).</li> <li>11. Apply iterative improvements to refine 1–2 screens, showing before/after screens with justification of changes.</li> <li>12. Develop a micro-feedback pattern and apply it consistently across the prototype.</li> <li>13. Organize the Figma prototype file into dedicated pages (Flows, Screens, Components, Documentation) with clear naming and interaction mapping.</li> </ol> <table border="1" data-bbox="343 1579 1109 1859"> <thead> <tr> <th>Sr. No.</th><th>Evolution Method</th><th>SEE</th><th>CCE</th></tr> </thead> <tbody> <tr> <td>1</td><td>ALA :- Interactive Prototype Development</td><td>00</td><td>10</td></tr> <tr> <td>2</td><td>Interactive Prototype Construction &amp; Transition Logic Demonstration</td><td>05</td><td>00</td></tr> <tr> <td>3</td><td>Usability Testing Execution &amp; Iterative</td><td>05</td><td>00</td></tr> <tr> <td colspan="2">Total</td><td>10</td><td>10</td></tr> </tbody> </table> | Sr. No. | Evolution Method | SEE | CCE | 1 | ALA :- Interactive Prototype Development | 00 | 10 | 2 | Interactive Prototype Construction & Transition Logic Demonstration | 05 | 00 | 3 | Usability Testing Execution & Iterative | 05 | 00 | Total |  | 10 | 10 | P:12 | 20% |
|---------|--|---------|------------------|-----|-----|---|--|----|----|---|---|----|----|---|---|----|----|-------|--|----|----|------|-----|
| Sr. No. | Evolution Method   | SEE     | CCE              |     |     |   |  |    |    |   |   |    |    |   |   |    |    |       |  |    |    |      |     |
| 1       | ALA :- Interactive Prototype Development   | 00      | 10               |     |     |   |  |    |    |   |   |    |    |   |   |    |    |       |  |    |    |      |     |
| 2       | Interactive Prototype Construction & Transition Logic Demonstration  | 05      | 00               |     |     |   |  |    |    |   |   |    |    |   |   |    |    |       |  |    |    |      |     |
| 3       | Usability Testing Execution & Iterative  | 05      | 00               |     |     |   |  |    |    |   |   |    |    |   |   |    |    |       |  |    |    |      |     |
| Total   |  | 10      | 10               |     |     |   |  |    |    |   |   |    |    |   |   |    |    |       |  |    |    |      |     |





|   |   |      |     |
|---|---|------|-----|
|   | <p><b>1. ALA: Interactive Prototype Development &amp; Usability Feedback Integration (10 Marks):</b></p> <ul style="list-style-type: none"> <li>Students will prepare a complete interactive prototype for a selected user flow by linking high-fidelity screens using meaningful transitions and interaction patterns. The prototype must demonstrate clear navigation logic, appropriate feedback behaviors, and stable interaction mapping. Students will design a structured usability test plan that includes the test objective, user tasks, observation points, and success criteria. They will conduct a small usability test session, document key usability issues, and refine at least one or two screens based on user feedback. Deliverables include a PDF or slide deck summarizing the test plan, usability findings, and refinement decisions, along with a Figma link showing the updated interactive prototype and organized interaction structure. This activity evaluates the student's ability to build a functional prototype, test it with users, interpret feedback, and apply iterative improvements within a professional design workflow.</li> </ul> <p><b>2. Interactive Prototype Construction &amp; Transition Logic Demonstration (05 Marks):</b></p> <ul style="list-style-type: none"> <li>Students will develop a functional interactive prototype by linking high-fidelity screens using appropriate transitions, interaction behaviors, and navigation logic. They must demonstrate clear flow continuity, stable interaction mapping, and proper use of Figma's prototyping features. A short write-up of four to six sentences must explain the transition choices, interaction clarity, and how the flow supports the intended user task. This task evaluates the student's understanding of interaction sequencing, prototype stability, and user-flow visualization.</li> </ul> <p><b>3. Usability Testing Execution &amp; Iterative Improvement (05 Marks):</b></p> <ul style="list-style-type: none"> <li>Students will conduct a structured usability test for a selected flow using the interactive prototype and compile findings related to user confusion, navigation errors, or interaction delays. Based on the issues identified, they must refine at least one screen and provide a four to six sentence summary describing the key improvements and the reasoning behind them. Deliverables include the updated screen and the findings summary. This task evaluates student ability to conduct usability testing, interpret user feedback, and apply iterative refinement to enhance user experience..</li> </ul> |      |     |
| 5 | <p><b>Theory Topics</b> – Principles of design documentation and the importance of structured case study narratives, understanding the standard workflow for UI/UX case studies from problem framing to outcome presentation, defining project objectives and establishing</p>  | P:12 | 20% |



measurable design impact, documenting the design process through research insights, task flows, IA, wireframes, and high-fidelity screens, preparing annotated screens and developer-ready specifications, writing clear UX rationales for visual decisions, organizing design deliverables in a systematic manner, fundamentals of portfolio creation and layout structuring for digital platforms, storytelling techniques for communicating design decisions, preparing a professional design presentation deck, presenting work to stakeholders with clarity and confidence, version control and file management for long-term design maintenance, and best practices for showcasing UI/UX work in academic and industry settings.

#### Practical –

- Prepare a complete case study outline covering the problem context, user needs, design goals, and scope of the selected project.
- Document the entire design process by compiling research findings, task flows, information architecture, wireframes, and high-fidelity screens in a structured format.
- Create annotated high-fidelity screens with explanations of layout decisions, hierarchy, spacing, and interaction logic.
- Generate a developer handoff sheet using design specifications such as spacing, typography, color values, and component guidelines.
- Organize the Figma project using dedicated pages for research, foundations, components, templates, screens, prototypes, and documentation.
- Write a detailed design rationale explaining visual decisions, usability considerations, and improvements made during iterations.
- Develop a portfolio-ready version of the case study formatted for digital platforms such as Behance, Dribbble, or a personal website.
- Create a professional presentation deck summarizing problem definition, design process, key decisions, final screens, interactions, and expected impact.
- Practice a short verbal walkthrough demonstrating clarity, structure, and storytelling in communicating the design process.
- Prepare a final consolidated folder containing all deliverables including Figma file, PDF documentation, presentation slides, and exported visuals in an organized and accessible manner.



| Sr. No. | Evolution Method                               | SEE | CCE |
|---------|--|-----|-----|
| 1       | ALA :- Complete UI/UX Case Study Development   | 00  | 10  |
| 2       | Case Study Documentation & Process Structuring | 05  | 00  |
| 3       | Dashboard Design & Deployment Demonstration    | 05  | 00  |
| Total   |  | 10  | 10  |

**1. ALA: Complete UI/UX Case Study Development & Final Design Portfolio (10 Marks):**

- Students will prepare a full professional UI/UX case study demonstrating their complete design process from problem identification to final high-fidelity output. The case study must include a structured problem definition, user insights summary, task flow overview, information architecture outline, mid-fidelity screen progression, high-fidelity visual screens, prototype interactions, and documented usability improvements. Students must then convert this case study into a portfolio-ready layout, supported by a final presentation deck that clearly communicates the project narrative, decisions, and design impact. Deliverables include a PDF or slide deck of the case study, a polished portfolio version, and a Figma link containing all organized design files. This activity evaluates the student's ability to synthesize the entire design lifecycle and present their work using industry-standard communication and documentation practices.

**2. Case Study Documentation & Process Structuring (05 Marks):**

- Students will prepare a structured case study document that clearly outlines the problem context, user objectives, design goals, and the steps followed during the design process. The document must include research insights, task flows, information architecture summary, and a selection of mid-fidelity and high-fidelity screens arranged in sequential order. A short written explanation of four to six sentences must justify how the design process was organized and how clarity was maintained throughout documentation. This task evaluates the student's ability to structure, summarize, and communicate the overall design workflow in a professional manner.

**3. Dashboard Design & Deployment Demonstration (05 Marks)**

- Students will prepare a portfolio-ready version of their project by formatting their case study for digital presentation and organizing it for a platform-ready layout. They must design a concise presentation deck highlighting the project background, process, key decisions, final screens, and usability improvements. A four to six sentence description must explain





|  |   |  |  |
|--|---|--|--|
|  | how the presentation layout enhances understanding and supports storytelling. This task evaluates the student's ability to prepare professional-grade portfolio content and communicate their design decisions effectively. |  |  |
|--|---|--|--|

**Suggested Specification:**

| Distribution of Theory Marks<br>(Revised Bloom's Taxonomy) |                    |                      |                    |                |                 |               |
|--|--------------------|----------------------|--------------------|----------------|-----------------|---------------|
| Level  | Remembrance<br>(R) | Understanding<br>(U) | Application<br>(A) | Analyze<br>(N) | Evaluate<br>(E) | Create<br>(C) |
| Weightage<br>%   | 10%                | 15%                  | 30%                | 15%            | 10%             | 20%           |

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

**Course Outcome:**

| After learning the course the students should be able to: |  |
|---|--|
| CO1   | Understand core UI/UX principles by identifying user needs, defining design problems, and creating structured low-fidelity wireframes.               |
| CO2   | Develop mid-fidelity layouts by building design systems, reusable components, and clear Information Architecture using organized Figma workflows.    |
| CO3   | Apply visual design principles to produce refined high-fidelity interfaces with strong hierarchy, color systems, typography, and interaction states. |
| CO4   | Create interactive prototypes with meaningful transitions, conduct usability testing, analyze findings, and iteratively improve user experience.     |
| CO5   | Prepare complete case studies with end-to-end documentation, developer-ready specifications, and portfolio-quality presentations.                    |



**Instructional Method:**

The course delivery method will depend upon the requirement of content and need of students. The teacher in addition to conventional teaching method by black board, may also use any of tools such as demonstration, role play, Quiz, brainstorming, MOOCs etc.

From the content 10% topics are suggested for flipped mode instruction.

Students will use supplementary resources such as online videos, NPTEL/SWAYAM videos, e-courses, Virtual Laboratory.

The internal evaluation will be done on the basis of Active Learning Assignment.

Practical/Viva examination will be conducted at the end of semester for evaluation of performance of students in laboratory.

**Reference Books:**

- [1] Don Norman, *The Design of Everyday Things*, MIT Press, Revised Edition, 2013.
- [2] Steve Krug, *Don't Make Me Think, Revisited: A Common Sense Approach to Web Usability*, New Riders Publishing, 3rd Edition, 2014.
- [3] Alan Cooper, Robert Reimann, David Cronin, Christopher Noessel, *About Face: The Essentials of Interaction Design*, Wiley, 4th Edition, 2014.
- [4] Jesse James Garrett, *The Elements of User Experience: User-Centered Design for the Web and Beyond*, New Riders Publishing, 2nd Edition, 2010.
- [5] Jon Yablonski, *Laws of UX: Using Psychology to Design Better Products & Services*, O'Reilly Media, 2020.

**Suggested Rubrics:**

| Suggested Assessment Guidelines |   |
|---------------------------------|---|
| 1                               | <ul style="list-style-type: none"> <li>• <b>UX Discovery &amp; Requirement Understanding</b> <ul style="list-style-type: none"> <li>• <b>5 Marks:</b> Clear understanding of problem context, correctly identified user needs and goals, and well-structured explanation.</li> <li>• <b>4 Marks:</b> Mostly correct understanding with minor gaps.</li> <li>• <b>3 Marks:</b> Partially correct with average explanation.</li> <li>• <b>2 Marks:</b> Limited correctness with major gaps.</li> <li>• <b>1 Mark:</b> Minimal relevant content.</li> <li>• <b>0 Mark:</b> Incorrect / Empty.</li> </ul> </li> </ul> |
| 2                               | <ul style="list-style-type: none"> <li>• <b>User Persona Identification &amp; Clarity</b> <ul style="list-style-type: none"> <li>• <b>5 Marks:</b> Accurate and well-defined user persona covering background, goals, expectations, and constraints.</li> <li>• <b>4 Marks:</b> Mostly correct persona with minor missing details.</li> </ul> </li> </ul>   |





|   |  |
|---|--|
|   | <ul style="list-style-type: none"> <li>• <b>3 Marks:</b> Basic persona definition with average clarity.</li> <li>• <b>2 Marks:</b> Weak persona with major gaps.</li> <li>• <b>1 Mark:</b> Very minimal persona description.</li> <li>• <b>0 Mark:</b> Incorrect / Empty.</li> </ul>   |
| 3 | <ul style="list-style-type: none"> <li>• <b>Task Flow Understanding</b> <ul style="list-style-type: none"> <li>• <b>5 Marks:</b> Correct and complete task flow with logical sequence and clarity of steps.</li> <li>• <b>4 Marks:</b> Mostly correct flow with minor sequencing issues.</li> <li>• <b>3 Marks:</b> Partially correct flow with basic explanation.</li> <li>• <b>2 Marks:</b> Limited correctness and unclear steps.</li> <li>• <b>1 Mark:</b> Very poor attempt.</li> <li>• <b>0 Mark:</b> No attempt / irrelevant.</li> </ul> </li> </ul>  |
| 4 | <ul style="list-style-type: none"> <li>• <b>Information Architecture (IA) Reasoning</b> <ul style="list-style-type: none"> <li>• <b>5 Marks:</b> Clear explanation of screen hierarchy, navigation structure, and content grouping.</li> <li>• <b>4 Marks:</b> Mostly correct IA reasoning with small gaps.</li> <li>• <b>3 Marks:</b> Basic IA understanding.</li> <li>• <b>2 Marks:</b> Weak or incorrect IA explanation.</li> <li>• <b>1 Mark:</b> Very minimal understanding.</li> <li>• <b>0 Mark:</b> Incorrect / Empty.</li> </ul> </li> </ul>  |
| 5 | <ul style="list-style-type: none"> <li>• <b>Wireframe &amp; Layout Understanding</b> <ul style="list-style-type: none"> <li>• <b>5 Marks:</b> Correct identification of layout structure, spacing, alignment, and visual hierarchy.</li> <li>• <b>4 Marks:</b> Mostly correct layout understanding with minor issues.</li> <li>• <b>3 Marks:</b> Basic wireframe understanding.</li> <li>• <b>2 Marks:</b> Limited clarity and weak hierarchy.</li> <li>• <b>1 Mark:</b> Very poor attempt.</li> <li>• <b>0 Mark:</b> No attempt / irrelevant.</li> </ul> </li> </ul>  |
| 6 | <ul style="list-style-type: none"> <li>• <b>Design System Basics (Color &amp; Typography)</b> <ul style="list-style-type: none"> <li>• <b>5 Marks:</b> Correct explanation of color usage, typography hierarchy, and consistency principles.</li> <li>• <b>4 Marks:</b> Mostly correct explanation with minor conceptual gaps.</li> <li>• <b>3 Marks:</b> Basic understanding of color and typography.</li> <li>• <b>2 Marks:</b> Limited understanding with incorrect concepts.</li> <li>• <b>1 Mark:</b> Very poor conceptual clarity.</li> <li>• <b>0 Mark:</b> No attempt / irrelevant.</li> </ul> </li> </ul> |



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| 7  | <ul style="list-style-type: none"> <li>• <b>UI Components &amp; Reusability Concept</b> <ul style="list-style-type: none"> <li>• <b>5 Marks:</b> Clear understanding of UI components, reuse, consistency, and basic variant awareness.</li> <li>• <b>4 Marks:</b> Mostly correct explanation with small gaps.</li> <li>• <b>3 Marks:</b> Basic component understanding.</li> <li>• <b>2 Marks:</b> Limited knowledge of components and reuse.</li> <li>• <b>1 Mark:</b> Very poor attempt.</li> <li>• <b>0 Mark:</b> Incorrect / Empty.</li> </ul> </li> </ul>                                 |
| 8  | <ul style="list-style-type: none"> <li>• <b>Visual Hierarchy &amp; Readability</b> <ul style="list-style-type: none"> <li>• <b>5 Marks:</b> Strong understanding of visual hierarchy, readability, spacing, and alignment.</li> <li>• <b>4 Marks:</b> Mostly correct hierarchy explanation with minor issues.</li> <li>• <b>3 Marks:</b> Basic hierarchy understanding.</li> <li>• <b>2 Marks:</b> Limited clarity with major gaps.</li> <li>• <b>1 Mark:</b> Very weak attempt.</li> <li>• <b>0 Mark:</b> Incorrect / Empty.</li> </ul> </li> </ul>  |
| 9  | <ul style="list-style-type: none"> <li>• <b>Interaction &amp; Feedback Awareness</b> <ul style="list-style-type: none"> <li>• <b>5 Marks:</b> Correct understanding of basic interaction concepts such as navigation feedback, button states, and user response.</li> <li>• <b>4 Marks:</b> Mostly correct with small conceptual gaps.</li> <li>• <b>3 Marks:</b> Basic interaction understanding.</li> <li>• <b>2 Marks:</b> Limited or incorrect interaction concepts.</li> <li>• <b>1 Mark:</b> Very poor attempt.</li> <li>• <b>0 Mark:</b> No attempt / irrelevant.</li> </ul> </li> </ul> |
| 10 | <ul style="list-style-type: none"> <li>• <b>UI/UX Terminology &amp; Conceptual Accuracy</b> <ul style="list-style-type: none"> <li>• <b>5 Marks:</b> Accurate use of UI/UX terminology with clear conceptual understanding.</li> <li>• <b>4 Marks:</b> Mostly correct terminology with minor mistakes.</li> <li>• <b>3 Marks:</b> Basic terminology usage.</li> <li>• <b>2 Marks:</b> Limited or incorrect terminology.</li> <li>• <b>1 Mark:</b> Very weak conceptual clarity.</li> <li>• <b>0 Mark:</b> Incorrect / Empty.</li> </ul> </li> </ul>   |