



# Product Design Curriculum

**[Node Eight Digital Skills Desk](#)**

## **Understanding the Role of UI/UX in Product Development**

- Introduction to UI (User Interface) and UX (User Experience) design.
- Importance of UI/UX in modern product development.
- Differentiating between UI and UX.
- How UI/UX impacts user satisfaction and business success.
- Case studies highlighting the role of UI/UX in successful products.

## **History and Evolution of UI/UX Design**

- Historical perspective of design and its evolution.
- Milestones and key moments in the development of UI/UX design.
- Influential designers and their contributions to the field.
- The transition from traditional design to digital design.
- Emergence of human-centered design principles.

## Key Principles of User-Centered Design

- Principles of user-centered design (UCD) and its importance.
- Usability and accessibility as core principles of UCD.
- User research methods: Surveys, interviews, usability testing.
- Creating user personas and user journey mapping.
- Iterative design processes: Wireframing, prototyping, and testing.

## Conducting User Interviews and Surveys

- The importance of user interviews and surveys in UX research.
- Planning and designing effective interview and survey questions.
- Conducting user interviews: Techniques, tips, and best practices.
- Collecting and analyzing survey data.
- Ethical considerations in user research.

## Assessment

- A quiz to assess the understanding of UI/UX principles and the historical context of UI/UX design.

## Creating User Personas

- Definition and purpose of user personas.
- Gathering data for persona creation (from user interviews, surveys, etc.).
- Developing detailed user personas: Demographics, goals, pain points, and behaviors.
- Benefits of using user personas in design.
- Validating and iterating on personas.

## Analyzing User Behavior Using Analytics Tools

- Introduction to web and app analytics tools (e.g., Google Analytics, Mixpanel).
- Setting up tracking and monitoring user behavior.
- Interpreting analytics data to make informed design decisions.
- A/B testing and its role in UX improvement.
- Reporting and communicating findings to the design team.

## Assessment

- Students will be divided into groups and tasked with conducting mock user interviews and surveys.
- They will use the data gathered to create user personas for a hypothetical project.
- Each group will present their findings, including user personas and insights from analytics to the class.

## Creating Sitemaps and User Flow Diagrams

- Introduction to UI (User Interface) and UX (User Experience) design.
- Importance of UI/UX in modern product development.
- Differentiating between UI and UX.
- How UI/UX impacts user satisfaction and business success.
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## Introduction to Wireframing Tools (Figma)

- Introduction to Figma as a popular wireframing and design collaboration tool.
- Hands-on practice with Figma: Navigating the interface, creating artboards, and importing assets.
- Collaborative features in Figma for team design projects.
- Version control and design systems in Figma.
- Best practices for efficient wireframing and prototyping in Figma.

## Wireframing User Interfaces for Different Platforms

- Understanding platform-specific design guidelines (e.g., iOS, Android, web).
- Adapting wireframes for responsive web design.
- Mobile-first design principles and considerations.
- Creating wireframes for desktop and mobile applications.
- Testing wireframes with users for feedback.

## Understanding the Importance of Prototyping

- The role of prototyping in the design process.
- Benefits of prototyping for user feedback and stakeholder communication.
- Types of prototypes: Low-fidelity vs. high-fidelity, paper prototypes, digital prototypes.
- How prototyping fits into the overall design workflow.
- Importance of iterative prototyping.

## Assessment

- Students will be provided with a brief for a website or app project.
- They will be required to create a sitemap outlining the project's information architecture.
- Using Figma, students will then create a wireframe for a key page or screen of the project.
- Each student will present their wireframe and explain the design choices they made, highlighting how their design aligns with user-centered principles and platform-specific guidelines.

## Creating Interactive Prototypes Using Tools like Figma

- Overview of prototyping tools, with a focus on Figma.
- Navigating Figma's prototyping features.
- Creating interactive elements: Buttons, links, forms, and more.
- Building transitions between screens.
- Testing and iterating on interactive prototypes.

## Adding Animations and Transitions to Prototypes

- Importance of animations and transitions in enhancing user experience.
- Principles of animation in UI/UX design.
- Creating animations in Figma.
- Using micro-interactions to improve usability.
- Guidelines for using animations effectively.

## Assessment

- Students will be given a design brief for a simple app or website project.
- Using Figma or a similar prototyping tool, students will create an interactive prototype for a key aspect of the project.
- The prototype should demonstrate user interactions, transitions, and animations.
- Each student will present their interactive prototype, explaining their design decisions and showcasing how the interactions enhance the user experience.

## Color Theory and Color Psychology

- Introduction to color theory: Color models (RGB, CMYK, HSL), color wheel, primary, secondary, and tertiary colors.
- Understanding color psychology and its impact on user emotions and behavior.
- Color harmony and creating pleasing color palettes.
- Accessibility considerations in color selection.
- Practical exercises in applying color theory to design.

## Typography Principles and Font Selection

- Fundamentals of typography in UI/UX design.
- Anatomy of typefaces: Serif, sans-serif, script, and display fonts.
- Choosing appropriate fonts for different design contexts.
- Typography best practices: Font pairing, hierarchy, line spacing, and legibility.
- Hands-on practice in creating typographic styles.

## Creating a Visual Style Guide

- The importance of visual consistency in user interfaces.
- Components of a visual style guide: Color palette, typography, iconography, spacing, and layout.
- Building a style guide in design tools like Figma or Adobe XD.
- Practical exercises in creating and maintaining a style guide.
- Collaborative design workflows and style guide usage within a team.

## Grid Systems and Layout Design

- Understanding the role of grid systems in UI design.
- Types of grid layouts: Symmetrical, asymmetrical, modular, and responsive grids.
- Principles of visual hierarchy and grid-based design.
- Practical exercises in creating layouts using grids.
- Grid design tools and resources.

## Assessment

- Students will be assigned a fictitious product or brand.
- Using the knowledge gained in previously, they will design a comprehensive visual style guide for the assigned entity.
- The style guide should emphasise consistency in color, typography, and other design elements.
- Each student will present their style guide, highlighting their design choices and demonstrating how it ensures visual hierarchy and brand consistency.

## Designing for Different Screen Sizes (Responsive Design)

- The importance of responsive design in a multi-device world.
- Media queries and breakpoints for responsive layouts.
- Adapting typography and images for various screen sizes.
- Testing and optimizing designs for mobile, tablet, and desktop.
- Case studies of responsive design in real-world projects.

## Iconography and Visual Metaphors

- The role of icons in user interfaces.
- Designing effective icons: Clarity, consistency, and simplicity.
- Visual metaphors and their use in UI design.
- Iconography libraries and resources.
- Creating custom icons and illustrations.

## Assessment

- Students will select an existing app or website and redesign its user interface.
- The redesign should focus on improving layout, typography, and color schemes based on the principles learned.
- Each student will present their redesigned interface, explaining their design choices and how they have applied UI design principles to enhance the user experience.

## Understanding Mobile Design Patterns

- Introduction to mobile design and its unique challenges.
- Exploring common mobile design patterns: Navigation, gestures, tab bars, and more.
- User expectations in mobile app design.
- Case studies of successful mobile apps and their design patterns.
- How mobile design patterns differ from web design.

## Designing for iOS and Android Platforms

- Platform-specific design guidelines for iOS and Android.
- Adapting designs to follow Apple's Human Interface Guidelines (iOS) and Google's Material Design (Android).
- Considerations for cross-platform development.
- Practical exercises in creating mobile app designs for both platforms.
- Designing for various screen sizes and resolutions.

## Mobile Usability Testing

- The importance of usability testing in mobile app design.
- Planning and conducting mobile usability tests.
- Gathering user feedback and making design improvements.
- Usability testing tools and techniques.
- Iterative design based on usability test results.

## Designing Responsive Web Interfaces

- The importance of responsive web design in a mobile-first world.
- Media queries and responsive design frameworks.
- Creating flexible layouts and fluid grids.
- Optimising images and multimedia for the web.
- Techniques for handling responsive typography.

## Assessment

- Students will be given a specific use case or scenario for a mobile app.
- They will design the user interface for the mobile app, considering platform-specific guidelines (iOS or Android).
- Each student will present their mobile app design, explaining how they have adhered to platform guidelines, incorporated mobile design patterns, and considered user expectations.

## Navigation Patterns and Best Practices

- Exploring navigation design patterns for websites.
- User-friendly navigation menus and navigation bars.
- Breadcrumbs, pagination, and search functionality.
- Creating effective calls to action (CTAs).
- The role of microinteractions in web navigation.

## Web Accessibility and WCAG Guidelines

- Understanding web accessibility and its importance.
- Introduction to WCAG (Web Content Accessibility Guidelines).
- Designing for users with disabilities: Screen readers, keyboard navigation, and more.
- Testing websites for accessibility compliance.
- Implementing accessible design patterns.

## Assessment

- Students will be provided with a content structure or brief for a website project.
- They will design a responsive website layout that adapts to different screen sizes, adhering to the responsive web design principles learned earlier
- Each student will present their responsive design, demonstrating how it accommodates various screen sizes and resolutions and explaining their navigation choices and accessibility considerations.

## Planning and Conducting Usability Tests

- The importance of usability testing in the design process.
- Defining test objectives, scenarios, and tasks.
- Recruiting and selecting participants for usability tests.
- Conducting moderated and unmoderated usability tests.
- Recording and analysing usability test sessions.

## Analyzing User Feedback and Iterating Designs

- Methods for collecting and organising user feedback.
- Analysing qualitative and quantitative data from usability tests.
- Identifying usability issues and pain points.
- Prioritising and categorising feedback for design improvements.
- Iterative design processes based on user feedback.

## A/B Testing and Data-Driven Design Decisions

- Introduction to A/B testing and its role in UX improvement.
- Setting up A/B tests and defining success metrics.
- Interpreting A/B test results and making data-driven decisions.
- Case studies of A/B testing in real-world projects.
- Balancing qualitative insights from usability testing with quantitative data from A/B tests.

## Strategies for Improving E-Commerce User Experiences

- Introduction to UI (User Interface) and UX (User Experience) design.
- Importance of UI/UX in modern product development.
- Differentiating between UI and UX.
- How UI/UX impacts user satisfaction and business success.
- Case studies highlighting the role of UI/UX in successful products.

## Assessment

- Students will be given a specific app or website to evaluate.
- They will plan and conduct a usability test for the assigned project, defining test objectives, recruiting participants, and conducting the test.
- Each student will analyze the usability test findings and suggest design improvements based on the feedback received.
- Students will present their usability test process, findings, and how the feedback influenced their design decisions.

## Conversion Rate Optimization (CRO) Techniques

- Introduction to Conversion Rate Optimization (CRO).
- Identifying conversion goals and metrics.
- A/B testing and multivariate testing for CRO.
- User journey mapping for CRO.
- Analyzing user behavior using heatmaps and analytics.

## Implementing Persuasive Design Elements

- Principles of persuasive design and psychology.
- Techniques for influencing user decisions and actions.
- Creating effective calls to action (CTAs) and urgency signals.
- Social proof, testimonials, and trust-building elements.
- Ethical considerations in persuasive design.

## Assessment

- Students will be provided with an existing e-commerce website or a simulated e-commerce project.
- They will analyze the site's user experience, identify areas for improvement, and optimize the user interface to increase conversion rates.
- Each student will present both the original and optimized designs along with conversion rate data, demonstrating how their design changes have positively impacted the conversion rate.

## Advanced Interactions and Micro-Interactions

- Exploring advanced interactions and micro-interactions in UX design.
- Understanding the role of micro-interactions in enhancing user engagement.
- Designing complex user flows and transitions.
- Creating interactive elements with conditional logic.
- Case studies showcasing advanced interactions in successful products.

## Using Tools like Principle or Framer for Advanced Prototyping

- Introduction to advanced prototyping tools such as Principle, Framer, or similar software.
- Navigating the interface and features of advanced prototyping tools.
- Building complex interactive prototypes with conditional triggers and responses.
- Collaborative prototyping workflows.
- Testing and gathering feedback on advanced prototypes.

## Gamification in UX Design

- Understanding the concept of gamification in user experience design.
- Gamification elements: Points, badges, leaderboards, challenges, and rewards.
- Implementing gamification in various contexts, including apps and websites.
- Ethical considerations in gamification design.
- Case studies of successful gamification in UX.

## Designing for VR and AR Experiences

- Introduction to Virtual Reality (VR) and Augmented Reality (AR) technologies.
- Unique challenges and opportunities in VR and AR design.
- Best practices for creating immersive and user-friendly VR and AR experiences.
- Designing user interfaces for 3D environments.
- Case studies of successful VR and AR applications.

## Assessment

- Students will be given a design challenge or scenario that requires advanced interactions and animations.
- Using advanced prototyping tools like Principle or Framer, they will create an interactive prototype with complex interactions and animations.
- Each student will present their prototype, highlighting the advanced interactions they have implemented and explaining how these interactions enhance the user experience.

## Voice User Interfaces (VUI) Design

- Understanding Voice User Interfaces (VUI) and conversational design.
- Principles of designing for voice interactions.
- Creating natural and user-friendly voice-driven experiences.
- Voice interaction design tools and platforms.
- Usability testing and refining VUI designs.

## IoT and Wearable Device Interfaces

- Exploring the Internet of Things (IoT) and wearable technology.
- Designing interfaces for smart devices, wearables, and connected ecosystems.
- User-centred design considerations for IoT and wearables.
- Adapting interfaces to small screens and unique form factors.
- Ethical considerations in IoT and wearable device design.

## Assessment

- Students will choose one of the emerging technologies discussed VR/AR, VUI, or IoT/wearable devices.
- They will design a user interface for a hypothetical application or device in their chosen technology category.
- Each student will present their interface, explaining the specific considerations and design principles relevant to the chosen emerging technology.

## Creating a Professional Design Portfolio

- The purpose and significance of a design portfolio.
- Selecting and curating your best design projects.
- Creating an organized and visually appealing portfolio layout.
- Writing compelling project descriptions and captions.
- Showcasing diverse skills and specialties in your portfolio.

## Developing Case Studies for Portfolio Projects

- Writing effective case studies that tell a compelling design story.
- Structuring case studies with a problem-solution-results framework.
- Incorporating visuals, sketches, wireframes, and final designs into case studies.
- Highlighting the user-centred design process and your contributions.
- The importance of clear and concise writing in case studies.

## Preparing for Job Interviews and Client Presentations

- Strategies for preparing for job interviews and client meetings.
- Common interview questions and how to answer them effectively.
- Building a strong online presence and personal brand.
- Creating a presentation that effectively communicates your design process.
- Handling feedback and questions during presentations.

## Assessment

- Each student will present their design portfolio and selected case studies to the class.
- Peers and instructors will review and provide constructive feedback on the portfolio content, layout, case study structure, and presentation skills.
- Feedback will focus on improving the overall quality and professionalism of the portfolio and case studies.

## Capstone Project

- The capstone project is the culmination of the UI/UX design course and involves working on a real-world product design project.
- Students will have the opportunity to collaborate with a team or client to tackle a challenging design problem.
- The project will encompass the entire design process, from research and ideation to prototyping and testing.
- Students will be responsible for presenting the final product and their design process to the class.

## Assessment

- The capstone project will be evaluated based on the entire design process, from initial research and problem definition to the final presentation.
- Assessment criteria may include adherence to industry standards, user-centred design principles, collaboration and teamwork, creativity, problem-solving, and the quality of the final product.
- Students will be expected to demonstrate their ability to apply the knowledge and skills acquired throughout the course to a real-world design challenge.