

Syllabus

Course Title:	CMPA-3303 - MP01 Product Design in Computing Applications 1
Micro-Credential Name:	CMPA-3303 - MP01 Product Design in Computing Applications 1
Course Credit in B.S. in Computing Applications upon successful completion:	CMPA 3303 Product Design in Computing Applications I
Target Audience:	Undergraduate Students
Prerequisites:	None

Instructor Information:

- Instructor Name: Cheri Whalen, M.S.
- Email: Cheri.Whalen@ttu.edu
- Office Hours: TBD

Course Policies:

- **Late Submissions:** Late submissions will be penalized 10 points per 24 hours late. If the assignment is worth 10 points or less late work will earn zero (0) points. CANVAS will accept late work in the assignment portal and will flag it as late. Late submissions are time-stamped and turn in time is not open for discussion.
- **Academic Integrity:** Students are expected to adhere to the university's academic integrity policy included below.
- **Participation:** Active participation in online discussions and team projects is essential for success in this course. The rubric for each project includes earned points for a student's contribution to its overall success. Team members are required to score each team members' project participation. It is up to the instructor's discretion to award points using the team members' input regarding participation.
- **Accessibility:** Students with disabilities are encouraged to contact the instructor for accommodations.

Course Description: This 4-week micro-credential course provides a practical introduction to user-centered design (UCD) in computing applications, equipping students with foundational skills and thinking to build modern digital products. Students will work in teams, assuming design team roles, to create design applications, primarily using Figma. The course is 10% theory and 90% practical application. Students will use the Canvas Learning Management System (LMS) for weekly discussion posts, assignment submissions, and team interaction.

Course Format: Asynchronous Online

Technology and Required Materials:

- Access to a computer with internet capabilities
- Access to an AI Chat (e.g., Gemini or ChatGPT)
- Electronic Storage Media to hold copies of all work completed and submitted
- Microsoft Office Suite
- [Figma \(primary design tool\)](#)
- Xcode (optional MacOS Swift Development and Design Tool for exploring embedded design tools)
- Canvas LMS

Student Learning Outcomes:

Upon completion of this course, the student should be able to:

1. Analyze existing digital products to identify and evaluate key elements of effective product design in computing applications.
2. Apply fundamental design principles and elements to create layouts and views for digital products, considering accessibility requirements.
3. Develop component-based design systems for use in digital products.

4. Construct interactive prototypes of digital products using industry-standard tools and techniques.
5. Present and justify design decisions for digital products through clear communication and documentation.

Assessment:

The student learning outcomes of this course will be assessed through:

- Weekly Discussions: Prompts, Posts, Replies
- Project #1: Product Design Analysis with Presentation
- Project #2: Design Properties and Elements, Layouts, Views, and Accessibility and Components with Presentation
- Project #3: Design Components and Layouts with Presentation
- Project #4: Final Product Prototype with Presentation

- **Individual Assignments (40%):** Weekly discussions: Prompts, Posts, Replies and Quizzes
- **Team Projects (60%):** Multiple team-based projects, culminating in a final product design. Each project will involve a different facet of the design process (e.g., user research, ideation, prototyping, usability testing).

Point System and Grading:

- **Total Points:** 400 points
- **How Points are Divided:**
 - 4 Team Projects: 240 overall possible points
 - Individual Assignments (including discussions): 160 overall possible points
 - **Weekly Discussion** 10 points
 - **Weekly Quiz** 10 points
 - **Reading/Video Response** 20 points
- **Your Final Grade:** To pass this course and earn your micro-credential, you need to earn at least 280 points out of the 400 total points (which is 70%).

Example of How Your Grade is Calculated:

Imagine you earned the following points:

- Week 1: 80 points
- Week 2: 90 points
- Week 3: 75 points
- Week 4: 95 points

To find your total points, we add them up: $80 + 90 + 75 + 95 = 340$ points

Then we see if you passed: Since 340 is greater than 280, you would pass the course.

When you earn at least 280 points, you pass the class and **ACHIEVE your micro-credential!**

PROJECTS All projects are due by 11:59 p.m. on the DUE DATE		
Due Date	Project: All projects are due by 11:59 p.m.	Pts
Week 1	Project #1 Analysis of Existing Digital Product - Presentation	40
Week 2	Project #2 Accessible Layout & View Design	60
Week 3	Project #3 Team Component Library & Layout System	60
Week 4	Project #4 FINAL PROJECT - Final Product Self Critique and Presentation (Video/screenshots, slide deck, Figma file) (*Required to pass the course and earn digital badge)	80

COURSE SCHEDULE / CALENDAR		
All assignment/deliverables are due by 11:59 on the DUE DATE SUBMIT ALL ASSIGNMENTS IN CANVAS		
WEEK # and Dates	Review / Read / Discuss / Demonstrate	Deliverables / Assignments
Module 0 / Week 0 WELCOME!	1. View Module 0 Welcome Video 2. Read Course Introduction 3. Read Syllabus and Course Policies	1. Post Bio Discussion
Module 1 / Week 1 Introduction to User-Centered Design and Figma	1. View Module 1 Instructor Video 2. View Module 1 Objectives 3. Read "Understanding User-Centered Design" 4. View "Introduction to FigJam" 5. Discuss Week 1 Discussion Board 6. Demonstrate FigJam Tool Proficiency (Tutorial Hands-on)	1. Discussion Post and Response 2. Individual Assignment 1: FigJam Tool Proficiency Video 3. Project 1: Analysis of Existing Digital Product - Presentation 4. Quiz 1
Module 2 / Week 2 Design Principles and Accessibility	1. View Module 2 Instructor Video 2. View Module 2 Objectives 3. View Figma Basics Video 4. Skim for awareness WCAG Guidelines 5. Read "Understanding Web Accessibility and Principles of Accessible Design" 6. Discuss "The Imperative of Accessibility" 7. Demonstrate Figma Layout Tutorial (Accessible Layout & Views)	1. Discussion Post and Response 2. Individual Assignment 2: Accessible Layout in Figma 3. Team Project 2: Accessible Layout & View Design 4. Quiz 2
Module 3 / Week 3 Components and Layouts in Design Systems	1. View Module 3 Instructor Video 2. View Weekly Objectives 3. View "Atomic Design with Brad Frost" 4. Read Material Design Guidelines: Components 5. Discuss Design System Best Practices 6. Demonstrate Figma Component Creation (Individual) 7. Demonstrate Responsive Layout Challenge (Individual)	1. Discussion Post and Response 2. Individual Assignment: Component Creation in Figma 3. Project 3: Team Component Library & Layout System 4. Quiz 3
Module 4 / Week 4 Usability Testing and Final Project Presentation	1. View Module 4 Instructor Video 2. View Weekly Objectives 3. Read Design Principles Documentation 4. Read "Strategies for Presenting Design Work" 5. Read Intro to Prototyping in Figma 6. Skim "Presenting Remotely" (Optional) 7. Discuss Final Project Reflection 8. Demonstrate Presentation Strategy 9. Demonstrate Feedback Integration	1. Discussion Post and Final Reflection 2. Individual Assignment 4: Rapid Self-Critique 3. Project 4: Final Product Self Critique and Presentation (Video/screenshots, slide deck, Figma file) (*Required to pass the course and earn digital badge)

Weekly Schedule:

Module 1/Week 1: Introduction to User-Centered Design and Figma

- **Topics:**
 - Introduction to User-Centered Design (UCD) principles and philosophy
 - Overview of the product design PRINCIPLES. (THIS COURSE IS RE: PRINCIPLES NOT PROCESS!)
 - Introduction to Figma: interface, basic tools, and project setup
 - Team formation and project kickoff
- **Learning Activities:**
 - Readings on UCD
 - Figma tutorials and hands-on exercises
 - Team introductions and project brainstorming in Figma
 - Discussion: UCD principles and their importance in modern product design
- **Deliverables/Assignments:**
 1. Discussion Post and Response
 2. Individual Assignment 1: Figma Tool Proficiency Video Submission
 3. Project 1: Analysis of Existing Digital Product – Video Submission
 4. Quiz 1

Week 2: Design Principles and Accessibility

- **Topics:**
 - Fundamental design principles (layout, hierarchy, balance, contrast, etc.)
 - Design elements (lines, shapes, color, typography, texture, space)
 - Visual hierarchy and information architecture
 - Introduction to web accessibility (WCAG guidelines)
 - Designing for diverse users (cognitive, visual, motor, auditory)
 - Creating accessible layouts and views in Figma
 - Understanding Views: Definition, purpose, and types of views in digital product design (e.g., list view, grid view, card view, detail view).
- **Learning Activities:**
 - Readings and videos on design principles and accessibility
 - Individual exercises applying design principles in Figma
 - Individual exercises creating different types of views in Figma.
 - Team workshop: Analyzing and redesigning a layout for accessibility
 - Discussion: The importance of accessibility in product design
- **Deliverables/Assignments:**
 1. Discussion Post and Response
 2. Individual Assignment 2: Accessible Layout and Views Design in Figma
 3. Team Project 2: Layout and View Design with Accessibility Considerations
 4. Quiz 2

Week 3: Components and Layouts in Design Systems

- **Topics:**
 - Introduction to component-based design systems
 - Creating and managing component libraries in Figma
 - Style guides and design documentation
 - Design tokens and theming
 - Advanced component design (variants, properties)
 - Accessibility of components
 - Layout Systems:
 - Grid systems (principles, types, responsive grids)
 - Layout patterns (e.g., master/detail, split-screen, dashboard)
- **Learning Activities:**

- Readings and videos on component-based design systems
- Individual exercises creating components and applying layout principles in Figma
- Team workshop: Building a component library and layout system for a specific purpose
- Discussion: Best practices for design system implementation and governance, including layout considerations
- **Deliverables/Assignments:**
 - Individual Assignment 3: Component Library and Layout Design Tutorial
 - Team Project 3: Begin Part 1 of Final Project
 - Quiz 3

Week 4: Usability Testing and Final Project Presentation

- **Topics:**
 - Final project presentations
 - Documentation of design principles
 - Strategies for presenting design work
 - Gathering and incorporating feedback
- **Learning Activities:**
 - Team project work: Finalize prototype
 - Team project work: Create presentation
 - Final project presentations and peer feedback
 - Discussion: Reflecting on the design principles and justifying design decisions
- **Deliverables:**
 - Discussion Post: Final Project Reflection
 - Team Project 3: Final Prototype and Presentation (including design documentation)
 - Quiz 4

Course Access:

Class materials, information, assignments and course access will be delivered online via [RaiderCanvas Flexible Learning](#) by logging into your **CampuCE** account using the Username provided by your Online Recruiter. If it is your first time or you do not know your **CampusCE** password, you will need to reset your password using the link on the sign-in page.

Your specific **Raider Canvas Flexible Learning** course can be accessed by clicking the course name in the Account > My Canvas Classes section. If you have trouble gaining access to your account please email: microcredentials@ttu.edu. Students are expected to know how to use a computer, webcam, web browser, and navigate the Internet.

Technical Assistance:

For technical issue and assistance email microcredentials@ttu.edu.

Important:

This course is a 4-week online and asynchronous microcredential course. Students can log on anytime to complete the required coursework to meet instructor-established deadlines.

This is a non-credit microcredential course with the option to earn academic credit. Upon completion, you will receive a digital badge. If you are admitted to TTU, you may apply for course credit through a credit assessment process. This requires enrolling in a credit assessment section of the course in your next 8-week term, receiving continued instructor support to complete your final assignment, and paying the associated tuition and fees. If you choose not to pursue course credit, you may complete the microcredential at no cost.



Digital Badge: Students who successfully complete this microcredential course will earn a digital badge recognizing their achievement. This badge can be shared on professional platforms like LinkedIn, enhancing their online presence and showcasing their skills to potential employers and colleagues.

1. **In order to pass the course and receive the digital badge, the student must:**
2. **Earn a minimum of 280 points overall for the course. [400 possible points x 70% = 280 points to pass]**
3. **Submit the final project - Project 4: Final Product Prototype and Presentation to potentially earn credit for CMPA 3303 Product Design in Computing Applications I**

Required Syllabus Statements:

ADA Statement

Any student who, because of a disability, may require special arrangements in order to meet the course requirements should contact the instructor as soon as possible to make any necessary arrangements. Students should present appropriate verification from online.accessibility@ttu.edu during the instructor's office hours. Please note: instructors are not allowed to provide classroom accommodations to a student until appropriate verification from online.accessibility@ttu.edu has been provided. For additional information, please contact online.accessibility@ttu.edu. Any student who, because of a disability, may require special arrangements in order to meet the course requirements should contact the instructor and online.accessibility@ttu.edu as soon as possible to make any necessary arrangements. The request will be reviewed, and you will receive a response within five business days.

Academic Integrity Statement

Academic integrity is taking responsibility for one's own class and/or course work, being individually accountable, and demonstrating intellectual honesty and ethical behavior. Academic integrity is a personal choice to abide by the standards of intellectual honesty and responsibility. Because education is a shared effort to achieve learning through the exchange of ideas, students, faculty, and staff have the collective responsibility to build mutual trust and respect. Ethical behavior and independent thought are essential for the highest level

of academic achievement, which then must be measured. Academic achievement includes scholarship, teaching, and learning, all of which are shared endeavors. Grades are a device used to quantify the successful accumulation of knowledge through learning. Adhering to the standards of academic integrity ensures grades are earned honestly. Academic integrity is the foundation upon which students, faculty, and staff build their educational and professional careers. [Texas Tech University ("University") Quality Enhancement Plan, Academic Integrity Task Force, 2010].

Religious Holy Day Statement

"Religious holy day" means a holy day observed by a religion whose places of worship are exempt from property taxation under Texas Tax Code §11.20. A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. A student who is absent from classes for the observance of a religious holy day shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence. A student who is excused under section 2 may not be penalized for the absence; however, the instructor may respond appropriately if the student fails to complete the assignment satisfactorily.

Statement of Accommodation for Pregnant Students

To support the academic success of pregnant and parenting students and students with pregnancy related conditions, the University offers reasonable modifications based on the student's particular needs. Any student who is pregnant or parenting a child up to age 18 or has conditions related to pregnancy may contact their instructor or microcredential@ttu.edu, who will communicate with Alex Faris, the Texas Tech University designated Pregnancy and Parenting Liaison, to discuss support available through the University. Should a student communicate with the instructor that they are pregnant or have a pregnancy related condition or may need additional resources related to pregnancy or parenting, the instructor will communicate that student's information to the Title IX Coordinator, who will work with the student and others, as needed, to ensure equal access to the University's education program or activity.

For more information regarding supportive measures, please visit [Pregnancy & Parenting](#)

END OF SYLLABUS