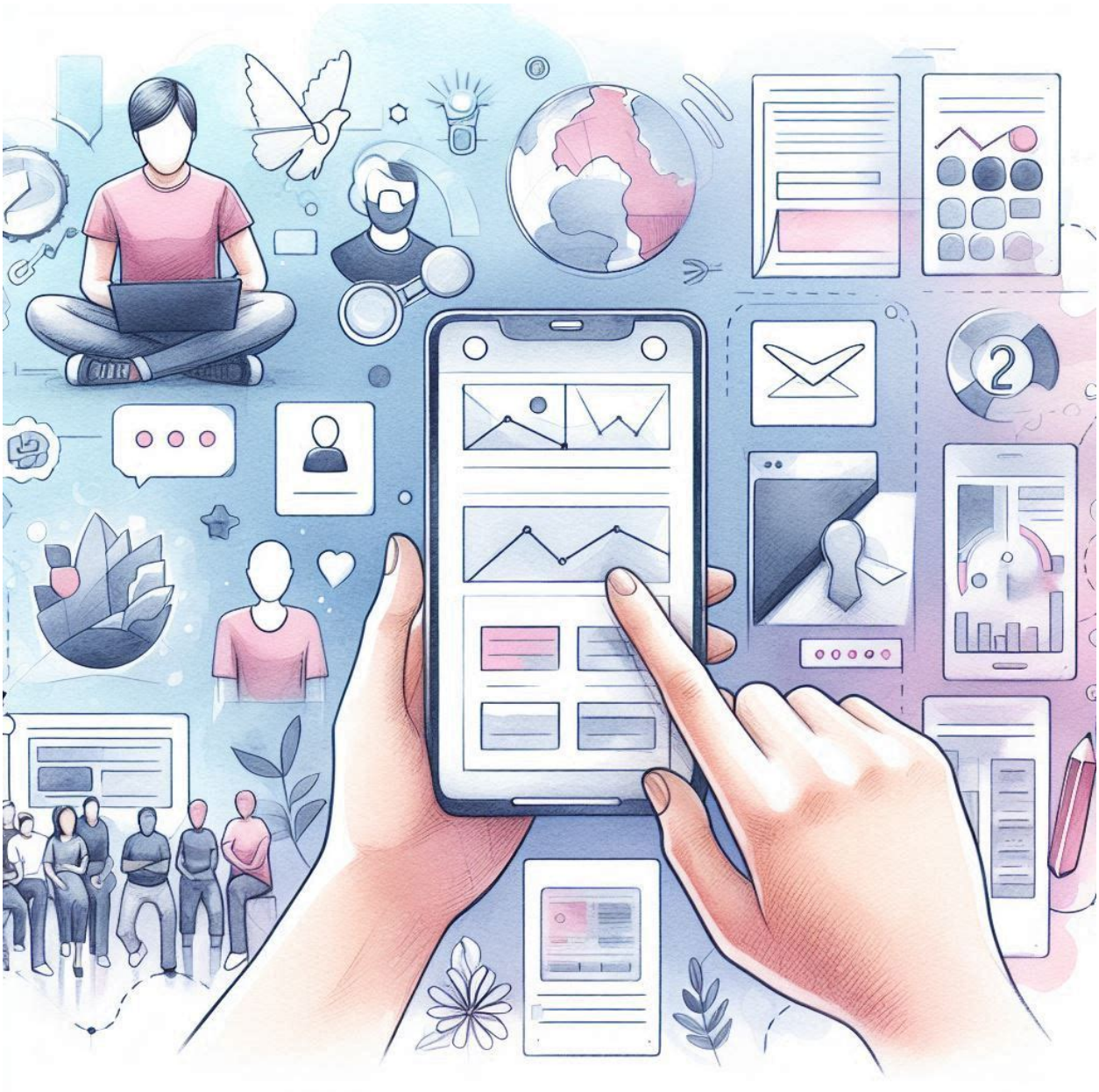
Fall 2025
IE 5390: User Experience Design



Course Details

Instructor: Dr. Priyadarshini Pennathur

Office Address: A241 Engineering Building

Telephone: 915-747-7956

Office Hours: Tuesdays 1 pm – 3 PM or by appointment. Email is the best way to reach me. My email is prpennathur2@utep.edu. I usually respond to emails within a day when I am in town, and during weekdays. It may take a bit longer when I am traveling, and during weekends.

Course Website: Blackboard

Meeting Times: Mondays 6:00 PM – 8:50 PM

Location: LART 206

Course Description

This graduate course will introduce you to user experience (UX) research and design fundamentals. User experience (UX) design is a critical first step in researching about users, designing products and services for users whether they be digital, physical or hybrid, and validating the products and services. The end goal of UX design is to achieve user engagement when using products and services. The demand for UX professionals has increased in recent times. The Bureau of Labor Statistics predicts this field to rapidly grow in the next few years. This course combines theory, methods, and design of UX through lectures and readings, and with hands-on UX design activities and a UX design project. This course will also examine user research techniques to facilitate UX design.

Course Goals

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

- Understand user experience, and the differences between user experience and usability
- Apply principles of user centered design to the design of products and services
- Conduct user research to produce user stories
- Create interactive, functional prototypes
- Conduct usability and user experience testing

Course Topics

- Overview of User Experience Design
- Good Design Principles
- User Experience Design Workflow
- User Research Basics and Methods
- UX Design Tools
- UX Design and Development
- UX and Usability Testing

Course Software

- Figma
- Mural
- Visio
- Miro
- MS Teams

Recommended Books

- The Art and Science of UX Design: A Step-by-Step Guide to Designing Amazing User Experiences by Anthony Conta, Pearson Education, Inc. 2024.
- The Elements of User Experience: User-Centered Design for the Web and Beyond, by Jesse James Garrett, Second Edition, New Riders, Pearson Education, 2011.
- User Experience Re-Mastered: Your Guide to Getting the Right Design, Educated by Chauncey Wilson, Morgan Kaufman Publishers, Elsevier, 2010.
- The UX Book: Agile UX Design for a Quality User Experience by Rex Hartson and Pariah Pyle, Second Edition, Morgan Kaufman Publishers, Elsevier, 2019.
- Don't Make Me Think Revisited: A Common Sense Approach to Web and Mobile Usability by Steve Krug, New Riders, Pearson Education, 2014.

There are tons of great books and resources on UX that will be used throughout the semester.

Course Expectations

1. Read, prepare and understand assignment materials for every class, critically and reflectively.
2. This will mostly be a flipped class - meaning you will review class material prior to class, and we will do class activities during class time. I will provide you audio-recorded class material slides on Blackboard before the class. You will need to review these slides to prepare for the class session. There will be assessments (quizzes) available to assess your understanding of the material prior to every class.

The class slide materials are based on several sources. Some recommended books are provided if you would like to refer to them.

3. Participate and contribute to class discussions, by including your thoughtful ideas and opinions, with due respect for your peers' ideas.
4. Bring additional insights and opinions by sharing other resources, articles or ideas that you are aware of.
5. Be punctual and courteous in attending the class sessions, and in submitting assignments on time.
6. Plan your time to work with your team on projects and team assignments.
7. Please be courteous to your peers and instructor. Talking to your friends, using the phone, and browsing on the computer disrupts the classroom environment and takes valuable time away from class activities.

Course Format and Technology Setup

We will meet in-person or via Zoom/MS Teams during prescribed class days and times. I will let you know in advance when we will meet in either mode. Additionally, almost every class, we will work on class activities that need to be turned in that day. For class activities, we will use MS Teams Word/PPT to complete your group activities unless otherwise stated.

I will have in-person office hours primarily and use zoom office hours as needed. If you are unable to make it to the Office Hours, you can always email me and we can find a good time to meet.

Blackboard. We will utilize Blackboard for all assignment submissions and announcements, except class activities.

Course Grade Assignments

- Class activities (25%)
- Participation in Lecture Review Activities/Quizzes (2%)
- Online Discussion (10%)
- Case Study Discussion (8%)
- Mini Projects (5* 10% each, 50% for mini project steps 2-6 and 3 points for problem statement)
- Individual Portfolios (mini project step 7) (2%)

Description of Assignments

Class Activities and Participation

You will be expected to attend classes regularly. We will have class activities every class. These class activities are designed to provide you hands-on training working through the different stages of design thinking and building in the components needed for an effective user experience. These class activities will be performed in small groups with your peers. These class exercises will range from creating surveys, engaging in labs to collect user data, developing personas, to working on sketching exercises as part of prototyping. We will also have sessions when you will converse with a AI persona on Blackboard and engage in a deep dive for a UX scenario. Class activities count towards your individual grade. You are required to write only the names of the team members who participated in that activity, not all of your team members. Class Activity submissions without attending and participating in class will not be considered for grading.

For class activities, we will use MS Teams version of Word/Powerpoint to complete your group activities.

Additionally, we will have guest lectures on UX topics throughout the semester. You are expected to participate in these guest lectures and are encouraged to ask questions.

If there is a genuine need for absence, please contact me well in advance, and please inform your team of your absence.

Lecture Review Activities/Quizzes

We will use a “flipped class” format for most of the content. This means that you will review the class lecture prior to coming class and we will do activities related to the lecture content during class time. To help you learn the material and to assess your understanding, at the end of each lecture material, there will be a quiz on that material that you can take with unlimited attempts. The grade for this is based on you completing these quizzes, and not on how many questions you got right. I will review the quiz related content at the beginning of every class. I will post the audio lecture a week prior to the class time [Example: For Sept 8, 2025 class, I will post the audio-recorded lecture material on Sept 1st]. You will need to review that material, and take the corresponding quiz before class time [Example: Sunday, Sept 8th, 9AM]. This counts towards your individual grade.

Online Discussion

Two discussion topics related to user experience will be posted online. All students will participate by responding to and engaging in the discussion. More details on the structure and requirements of the online discussion will be provided closer to the assigned date. This counts towards your individual grade.

Case Study Discussion

One case study on user experience related designs or products per team will be assigned. Teams will analyze, present, and facilitate discussion for a case [teams will be formed on the first day of class]. You can add questions that emerge during your reading and analysis of the case during the discussion.

Case analyses should include the following: (1) a brief presentation outlining the case and any background information; (2) key topics and problems addressed in the case; (3) strategies and methods used that the designers followed to address the problems or the topics/situation; (4) key insights and takeaways from the case; your insights on this case. Please upload your case presentation on Blackboard for the respective case assignment before the presentation. Plan for 15 minutes of presentation.

Your contribution to the case analyses presentation will be evaluated based on the following criteria: 1. Highlighting the problems and goals of the product/design 2. Understanding designer strategies, methods and providing your own insights on the design and 3. Key takeaways [5 points].

Projects

There will be 6 mini-projects that closely follow the design thinking process - empathize, define, ideate, prototype, test and implement. These 6 mini-projects are six stages of design that as a whole will lead you through the UX design experience for one product. You will deliver these mini-projects as presentations with mockups, design notes and other tangible elements as relevant. Your team will deliver the following presentations throughout the semester for these 6 mini projects.

1. **Problem Statement:** Present information on a problem you plan to work on. For example, we will use “solo travel” as a problem in our class examples. You will need to present a problem, for which you will later design a product or a service using UX design. Plan for 5 minutes of team presentation. *Please note that most of the class material will use examples from digital products, but all of these concepts are transferrable to physical products or services. This may involve additional steps; for example, when prototyping, additional software may be needed. (3 points)
2. **Empathize:** For the problem you are addressing, decide what user research methods are most useful, design the instruments, and use them to talk to real users. Present your detailed user research methods and the findings from this stage. Plan for 15 minutes of team presentation. (10 points)
3. **Define:** For the problem you are working on, based on the “empathize” stage findings, use personas and mapping methods to define the user’s problems. Based on this, develop a problem statement and perform competitive research and present these findings. Plan for 15 minutes of team presentation. (10 points)
4. **Ideate:** Based on the findings from the stages above, ideate for solutions and new product or service ideas. Use a combination of the ideation techniques learnt to conceptualize product ideas for the problem you are addressing. Present your

ideation methods and findings from these ideations. Plan for 15 minutes of team presentation. (10 points)

5. **Prototype:** Develop low-, mid- and high-fidelity prototypes as relevant for your product idea. Present your actual low-, mid- and high-fidelity prototypes as relevant. Highlight information on how you went from your low-fidelity prototype to click-through or high-fidelity prototypes. Plan for 15 minutes of team presentation. (10 points)
6. **Test and Implement:** Develop a usability testing protocol to test your high-fidelity prototypes, decide on relevant metrics such as task completion rates, time to completion etc. Use the developed usability testing protocol to test your prototype with real users. Analyze your results, and present these findings. Discuss how you will iteratively improve your design based on the feedback you received from your users. Include your user flows and design system you used for your implement step. Plan for 20-25 minutes of team presentation. (10 points)
7. **Implement:** Develop an individual portfolio based on the UX design you just did - highlight the completed portfolios in your final presentation (2 points)

Tentative Class Schedule

Week 1 August 25th

Introduction to Course
Human Centered Design and Design Thinking
Team Formation and other logistics

Week 2 September 1st (holiday) - No Class

Week 3 September 8th

Human Centered Design and Design Thinking
Overview of UX and UI
Perception and Psychology of Human Actions
Due: Problem Statement Presentation 1

Week 4 September 15th

Overview of UX and UI
Empathy as a Design Tool and User Research

Week 5 September 22nd

Empathy as a Design Tool and User Research
Defining the User's Problems: Personas and Mapping

Week 6 September 29th

Defining the User's Problems: Personas and Mapping
Other Mapping Methods
Due: Empathize: User Research Presentation 2

Week 7 October 6th

Overview of Visual Design, Information Architecture, Interaction Design and Card Sorting

Week 8 October 13th

Due: Online Discussions

Week 9 October 20th

Ideation Techniques
Due: Define User Problems Presentation 3

Week 10 October 27th

Ideation Techniques
Wireframes/Prototyping and Iterative Development

Week 11 November 3rd

User Testing and Evaluations
Due: Ideate Presentation 4

Week 12 November 10th

User Testing and Evaluations
Lecture: Implementation, Critiquing and Portfolios

Week 13 November 17th

Accessibility and Inclusive Design
Due: Prototype Presentation 5

Week 14 November 24th

Measuring UX Metrics

Week 15 December 1st

Due: Case Presentation

Week 16 December 8th

Due: Test and Implementation, Individual Portfolio Presentation 6 and 7 combined

Copyright Statement for Course Materials

All materials used in this course are protected by copyright law. The course materials are only for the use of students currently enrolled in this course and only for the purpose of this course. They may not be further disseminated.

Class Recordings

Lectures will be recorded. The use of recordings will give you access to lectures in the event you miss a synchronous or in-person meeting due to illness or other extenuating circumstances. Our use of such technology is governed by the Federal Educational Rights and Privacy Act (FERPA) and UTEP's acceptable-use policy. A recording of class sessions will be kept and stored by UTEP in accordance with FERPA and UTEP policies. I will not share the recordings of our class activities outside of course participants. You may not share recordings outside of this course. Doing so may result in disciplinary action.

Administrative Drops

I will not drop you from the course. However, if you feel that you are unable to complete the course successfully, please let me know and then contact the Registration and Records Office to initiate the drop process. If you do not, you are at risk of receiving an "F" for the course.

Class Attendance

The student is expected to attend all class sessions. It is the responsibility of the student to inform each instructor of extended absences. When, in the judgment of the instructor, a student has been absent to such a degree as to impair his or her status relative to credit for the course, a drop for not attending will count toward the State Allowed Six Drop Limit. If you are failing the class at the time of the drop you may also be given a WF designation. Be advised that a drop could adversely impact visa status, financial aid and other programs. As per UTEP rules, you may be asked to show a UTEP ID at any time during class.

Accommodations Policy

The University is committed to providing reasonable accommodations to students with documented disabilities. Students who become pregnant may also request reasonable accommodations, in accordance with state and federal laws and regulations and University policy. Accommodations that constitute undue hardship are not reasonable. To make a request, please register with the UTEP Center for Accommodations and Support Services (CASS). Contact CASS at 915-747-5148, email them at cass@utep.edu, or apply for accommodations online via the CASS portal.

Scholastic Integrity

Academic dishonesty is prohibited and is considered a violation of the UTEP Handbook of Operating Procedures. It includes, but is not limited to, cheating, plagiarism, and collusion. Cheating may involve copying from or providing information to another student, possessing unauthorized materials during a test, or falsifying research data on laboratory reports. Plagiarism occurs when someone intentionally or knowingly represents the words or ideas of another as ones' own. Collusion involves collaborating with another person to commit any academically dishonest act. Any act of academic dishonesty attempted by a UTEP student is unacceptable and will not be tolerated. All suspected violations of academic integrity at The University of Texas at El Paso must be reported to the Office of Community Standards for possible disciplinary action. To learn more, please visit HOOP: Student Conduct and Discipline.

Guidance on Artificial Intelligence

AI allowed only with prior permission from instructor

Use of AI technologies or automated tools, particularly generative AI such as ChatGPT or DALL-E, is ***only allowed with approval from the instructor BEFORE being used***. Without permission, you will be expected to think creatively and critically to complete assignments without assistance from these tools.

If given permission to use any of these tools, students must properly cite and give full credit to the program used upon submission of every relevant assignment. For example, text generated using ChatGPT must be cited:

Chat-GPT(version). Date of query (year/month/day). “Text of your query.” Generated using OpenAI. https://chat.openai.com/

A short paragraph describing how the tool(s) was/were used for the assignment must be included.

Plagiarism Detecting Software

Some of your course work and assessments may submitted to SafeAssign, a plagiarism detecting software. SafeAssign is used review assignment submissions for originality and will help you learn how to properly attribute sources rather than paraphrase.

Course Resources: Where you can go for assistance

UTEP provides a variety of student services and support. Please refer to the QR code below for a listing of campus resources or visit https://www.utep.edu/advising/student_resources/student-success-resource-hub.html.