

# GRADTDA 5141 UI/UX Design Syllabus 2021

## Instructor Contact Information

**Name:** Jeremy Patterson

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**Office Hours:** TBD

## Course Meeting Information

**Method:** Online Synchronous

**Credit Hours:** 3

**Meeting Days:** Synchronous online via Zoom W 5:30 - 7:30 PM, materials and class recordings available asynchronously via Carmen

**Course Hours:** 9 hours/week

## Course Prerequisites

Course enrollment restricted to graduate students enrolled in MTDA program.

## Course Description

Advanced study in the design of digital interactive experiences; application of digital user interface design and validation methodologies.

## Learning Objectives

**Upon successful completion of the course, students will be able to:**

- Understand the definition, difference, and similarities of user experience and usability and apply these to design, research, and testing practices in field of interaction design for digital interfaces.
- Apply behavioral economics principles to user-centered design and research.
- Analyze and evaluate the difference between qualitative and quantitative research methods as they relate to user experience and usability testing for concept validation.
- Conduct ethnographic research to produce user profiles.
- Create a functional, interactive prototype.
- Apply the basics of test design, including user consent, safety, ethics, and privacy concerns.
- Conduct effective usability and user experience test sessions.
- Generate usability and user experience assessment reports.

## Course Overview

**Usability** is the practice of design and validation toward affording a user's ability and efficiency when interacting with computing systems and their capacity to comprehend and react accordingly to the system's output. **User experience**, on the other hand, is the practice of design and validation to achieve satisfaction and appeal during a user's engagement with a computer interface, and thus facilitate a better quality to the engagement and its outcomes.

As an analogy, **usability** is placing appropriate labels on the doors to a hotel lobby such that a person can understand and effectively move in and out of the space, while user experience is the pleasant smell of flowers in the lobby that will motivate the person to come back to the hotel or coax them to stay a bit longer.

In this course, students will be tasked with foundational work and projects that are derived from the most common **user experience** design and testing strategies used in the industry. Students will gain exposure to the methods involved in designing and crafting a user interface that is both usable and also provides a cohesive, subjectively satisfying engagement that in turn motivates the user and promotes information comprehension. Knowing what users are looking for will allow you to determine the appropriate information hierarchy for your data visual.

Students are challenged in this course to combine logical thinking in tandem with design intuition and validate these design choices with data in order to craft user experiences which are simultaneously intuitive, informative, and satisfying with the goal to create a humanized interface to the rigid computing system that obscures complexity and distills information for consumption and affords the viewer a better understanding of conveyed information. To this end, students will learn the fundamentals of study design and validation, including qualitative data gathering and analysis techniques.

In this course, students will learn the principles of behavioral economics and their application to the experience design process. Students will be taught technical skills surrounding the software required for usability and user experience design and testing. Students will learn and demonstrate capabilities required to create wireframes which convey user interface design intent as well as conceived workflow. Additionally, developed wireframes will be utilized to create interactive prototypes for use with data, and initiate a user test with subjects utilizing the interactive prototype. The tests will culminate in a usability and user experience assessment report for the application prototype.

## Required Materials

[Adobe Experience Design \(XD\)](#) - \$19.99/month  
[Microsoft Office 365](#) - included w/ OSU affiliation

<https://info.flipgrid.com> - no cost  
[Google Chrome](#) - no cost

## Grading Information

### Course Projects (points/weight)

1. Problem Space Analysis – 10 points / 20 %
2. Proposal / Concept Development - 10 points / 10% of total
3. High-Definition Wireframes - 10 points / 15% of total
4. Click-Through Prototype - 10 points / 15% of total
5. User Test Protocol - 10 points / 10% of total
6. User Test Report - 10 points / 20% of total
7. Attendance – 10 points / 10%

### Grading Scale

- A = 100% - 94%
- A- = 93% - 91%
- B+ = 90% - 89%
- B = 88% - 83%
- B- = 82% - 80%
- C+ = 79% - 78%
- C = 77% - 73%
- C- = 72% - 71%
- D+ = 70% - 69%
- D = 68% - 64%
- E = 63% - 0%

### Grading Policy

Students will be graded on completion of assigned projects as well as participation.

Students are expected to produce professional level content that demonstrates a mastery of raw technique as well as an attention to aesthetic quality. In the case of interactive media, a professional level result is aesthetically pleasing while functionally sound. To assess technique, the source material will be evaluated to ensure that methodologies taught in class are utilized for the result for each assignment.

'A' level work is a well-designed piece which meets and exceeds all base requirements.'  
C' level work simply meets the base requirements set forth for each project. Work that is 'D' level and below fails to meet any or all of the project's base requirements.

Projects must be completed on time and submitted at the beginning of the class on the day they are due so that these projects can be part of the class critique. Projects

submitted after the due date will receive a half-point (.5) score reduction for each class session the project is late.

**Attendance:** Student's score will drop a third of a letter grade (ex. B+ becomes a B) per unexcused absence; more than 4 unexcused absences will result in a failing grade for the course.

Credit hours and work expectations:

According to Ohio State policy, for a 3 credit course students should expect around 3 hours per week of time spent on direct instruction (instructor content and Carmen activities, for example) in addition to 6 hours of homework (reading and assignment preparation, for example).

Attendance and participation requirements:

- **Live sessions:** Because this is a synchronous online course, your attendance is required for each course meeting time. All live, scheduled events for the course are required.
- **Participating in synchronous presentations and critiques:** As part of your participation, you can expect to both present your own work and critique the work of your peers for each assignment. Students are expected to participate in class critiques of projects, as well as discussion pertaining to example work.
- **Participating in online activities:** You are expected to log in to the course in Carmen every week. (During most weeks you will probably log in many times.)
- **Office hours:** Office hours are optional and will be held each week via Zoom or by appointment.

## Course Schedule

See auxiliary documents for detailed project description and weekly class schedule.

## Readings

### User Experience Re-Mastered

**Link:** <https://library.ohio-state.edu/record=b9180167>

**By:** Chauncey Wilson

**Publisher:** Morgan Kaufmann

**Release Date:** Sept. 11, 2009

**ISBN:** 9780123751140

### Measuring the User Experience, 2nd Edition

**Link:** <https://library.ohio-state.edu/record=b9163833>

**By:** William Albert; Thomas Tullis

**Publisher:** Morgan Kaufmann

**Pub. Date:** May 23, 2013

**Print ISBN-13:** 978-0-12-415781-1

**Web ISBN-13:** 978-0-12-415792-7

**Pages in Print Edition:** 320

## Humane Interface, The: New Directions for Designing Interactive Systems

**Link:** <https://library.ohio-state.edu/record=b9156513>

**By:** Jef Raskin

**Publisher:** Addison-Wesley Professional

**Pub. Date:** March 29, 2000

**Print ISBN-10:** 0-201-37937-6

**Print ISBN-13:** 978-0-201-37937-2

**Pages in Print Edition:** 256

## Behavioral Economics For Dummies®

**Link:** <https://library.ohio-state.edu/record=b9145184>

**By:** Morris Altman, PhD

**Publisher:** For Dummies

**Pub. Date:** February 2012

**Print ISBN-13:** 978-1-118-08969-9

**Pages in Print Edition:** 256

## Title IX and Sexual Misconduct:

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources <http://titleix.osu.edu> by contacting the Ohio State Title IX Coordinator, Kellie Brennan, [attitleix@osu.edu](mailto:attitleix@osu.edu)

## Diversity and Inclusion

The Ohio State University affirms the importance and value of diversity in the student body. Our programs and curricula reflect our multicultural society and global economy and seek to provide opportunities for students to learn more about persons who are different from them. We are committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding,

and mutual respect among each member of our community; and encourages each individual to strive to reach his or her own potential. Discrimination against any individual based upon protected status, which is defined as age, color, disability, gender identity or expression, national origin, race, religion, sex, sexual orientation, or veteran status, is prohibited.

## Mental Health

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting [ccs.osu.edu](http://ccs.osu.edu) or calling 614-292-5766. CCS is located on the 4th Floor of the Younklin Success Center and 10th Floor of Lincoln Tower. You can reach an on call counselor when CCS is closed at 614-292-5766 and 24 hour emergency help is also available through the 24/7 National Suicide Prevention Hotline at 1-800-273-TALK or [atsuidepreventionlifeline.org](http://atsuidepreventionlifeline.org).

## Academic Dishonesty

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>.

## Accommodations for Students with Disabilities

The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: [slds@osu.edu](mailto:slds@osu.edu); 614-292-3307; [slds.osu.edu](http://slds.osu.edu); 098 Baker Hall, 113 W. 12th Avenue.

## Personal Safety

The University Escort Service operates until 3am when classes are in session (i.e. not during quarter breaks and University holidays), and will assist OSU students who live off campus as well as on campus. The University Escort Service can be contacted at 614-292-3322, and scheduled pick-ups are taken in advance.

# Weekly Class Schedule

1 8/23

- Course Intro
- The Art and Science of User Experience and Usability Design

2 8/30

- Story Driven Design

3 9/6

- Usability Design

4 9/13

- Theme Development / Behavioral Economics

5 9/20

- **Problem Space Analysis** - due/presentation

6 9/27

- Concept design

7 10/4

- **Proposal / Concept Development** - due/presentation

8 10/11

- Wireframe Development
- Using Software to create wireframes

9 10/18

- **High-Definition Wireframes** - due
- Creating Click-Through Prototypes

10 10/25

- **Click-Through Prototypes** - due / presentation

11 11/1

- User Testing / Test Design / Protocol Design

12 11/8

- User Testing / Test Design / Protocol Design

13 11/15

- Documenting Tests and Creating Test Reports / Test Sessions

14 11/22 Thanksgiving



- **Test Plan** - due

15 11/29

- User Testing Sessions

16 12/6

- User Testing Sessions

17 12/10 - finals

- **User Test Report** - due / presentation

# Course Schedule

## Course Projects

1. Problem Space Analysis – 10 points / 20 %
2. Proposal / Concept Development - 10 points / 10% of total
3. High-Definition Wireframes - 10 points / 15% of total
4. Click-Through Prototype - 10 points / 15% of total
5. User Test Protocol - 10 points / 10% of total
6. User Test Report - 10 points / 20% of total
7. Attendance – 10 points / 10%

### Project 1: Problem Space Analysis

**Score weight :** 20%

**Due:** 9/22/21 5:00 PM EST

Create a analysis report of the chosen problem space containing three facets detailed below:

#### 1. Personas / User Profiles

Identify a data-driven application / interactive presentation for analysis for the two following projects. Conduct interview of viewers of the chosen data-driven application or interactive presentation in order to create persona documentation for use in subsequent projects.

Use an empathy map to guide and document the interviews. From the empathy map research, create a persona document which details, at minimum, 3 separate demographic breakdowns of prospective target users. The demographic entries must be derived from the application project proposal. Keep in mind that these personas will act as the basis of recruiting for the user test at the end of class. The breakdowns must include :

- User age
- User gender
- Common parallel experiences
- Income level
- Education level
- Ethnic information, if applicable
- A photograph of a prototypical person from this demographic
- A brief story profile which details the target user's motivations, hobbies, interesting aspects of their upbringing, etc

## 2. Usability Analysis

Write a usability analysis of an application interface from the perspective of a the chosen user group. Detail at least three positive design affordances, and why these design affordances will likely improve usability for the specific user group. Conversely, document three points of potential usability or comprehension failure. Categorize the potential failures as one or more of the following categories:

- Learnability
- Anticipation Ability / Predictability
- Efficiency
- Memorability
- Consistency
- Errors
- Appropriate and timely reaction to interactions

For any potential usability failures, describe a remedy. Remember, this exercise is based on intuition: it is impossible to identify usability issues by simply looking at the interface: only testing can identify usability issues. Therefore, for this project use the interface as much as possible to become acquainted with its affordances.

## 3. User Experience Analysis

Write a user experience analysis of an application from the perspective of a the chosen user group. Detail the overall theme or category for the application, and if the application presents an authentic theme experience versus emulates the experience of another theme or genre.

Identify at least three behavioral economic principals used in in the applications experience design. Additionally, identify the design principals are used to motivate or demotivate the user, and if the principals are used in a manner that would qualify as a “dark pattern”. Lastly, provide an assessment detailing if the applied principals will likely resonate with the user group, and what behavior they will likely illicit.

## Grading Criteria

### Grading Criteria - Personas:

- 2 points for 3 empathy maps
- 2 point for 3 persona which define user age, gender, parallel experiences, income, education, ethnic information, and a prototypical photograph, and a persona story.

## Grading Criteria - Usability Analysis :

- 1 point identifying successful affordances and why the affordance will benefit the user group
- 1 point identifying areas of failed usability and categorizing failures by type

## Grading Criteria - User Experience Analysis:

- 1 points definition of applied behavioral economic principals
- 1 points qualification of motivational intent for the current design

## Grading Criteria - General :

- 1 point quality of document submission
- 1 point presentation submission

## Project 2: Proposal / Concept Development

**Score weight :** 10%

**Due:** 10/06/21 5:00 PM EST

Define an improved data-driven application or interactive presentation based upon the findings of the two previous projects. In this project, we will provide the groundwork for testing the proposed changes in order to validate the improvements.

Create 3 concept proposals which describe, in broad strokes, a proposed application experience targeted at the demographics created in previous projects. Each separate theme should target one particular persona from the document produced for the previous projects. The goal of the concepts is to satisfy the needs conveyed in the project proposal, but to do so in such a way as to create an emotion response to the application; or create a motivating experience for a given persona. Themes should be conveyed by providing :

- A theme title
- A description of the theme and how it relates to the given persona
- Similar inspirational experiences
- "Napkin-sketch" wireframes to convey the interface aspects of the experience

## Grading Criteria:

- 3 points total (1 points per) theme titles and descriptions
- 6 points total (2 point per) napkin sketches
- 1 point presentation submission

## Project 3: High-Definition Wireframes

**Score weight :** 15%

**Due:** 10/20/21 5:00 PM EST

To begin this process, create high-definition wireframes that concisely convey every screen in the workflow for an improved data-driven application or interactive presentation. These wireframes must be thorough and encompass every element which the user will engage. The wireframes may begin to introduce color and visual elements that indicate the theme, but do not need to be fully rendered design compositions; the goal is to gauge the user interface's effectiveness and motivational appeal.

#### Grading Criteria:

- 4 points wireframes
- 3 points completeness of workflow documentation
- 2 points theme derived color and visual element definition
- 1 point quality of submission

### Project 4: Click-Through Prototype

**Score weight :** 15%

**Due:** 10/27/21 5:00 PM EST

Create a click-through prototype using the high-definition wireframes created for project 5. During the development of the click-through prototype, there may be gaps which are identified in the set of high definition wireframes created for project 5. When gaps are identified it is expected that new wireframes are produced to fill these discrepancies. The click-through prototype should, to the untrained eye, feel as if the user is actually using a fully functional version of the application. This click-through prototype will be utilized later in user testing sessions.

#### Grading Criteria:

- 6 points functional click-through prototype
- 2 points rectifying discrepancies from high-definition wireframes
- 1 points quality and completeness of work
- 1 point presentation submission

### Project 5: User Test Protocol

**Score weight :** 10%

**Due:** 11/23/21 5:00 PM EST

Create a plan to study and gauge success of the user experience crafted in the proceeding projects. The test plan should list all actions the user to accomplish in the application, as well as open ended questions which gauge how the user feels upon completion of each task. The test plan must also detail the metrics that will be captured for each task (time on task, able to complete, learnability). The test plan must also draw from the personas which drove the development of the user experience thus far, and details such as the context of where the test will be conducted and seem natural to the user, the user sample size, and the most likely way to find recruits should be detailed as well.

Included in this document should be a statement that is provided to the user test participant. The document should explain, to the participant, what the test is about and how the information will be used. It is also important tell the subject if they will be identified in the test report, and also reassure them that there are no right or wrong answers to this test. Participants will be asked to use the click-through prototype created for project 6 to participate in the test.

### Grading Criteria:

- 3 points test plan tasks
- 2 points metrics captured for each test (errors, efficiency, learnability, satisfaction)
- 2 points identification of test context
- 2 points subject participation statement
- 1 point quality of work

## Project 6: User Test Report

**Score weight :** 20%

**Due:** 12/14/21 6:00 PM EST

Conduct the test planned in project 7, and create the summary reports of findings based upon user observation. The test must be conducted with actual prospective users. Users must be identified and recruited based upon the persona to which the application experience was designed. While completing the tasks in the specified context, the user is to be observed and metrics such as errors, efficiency, learnability, and satisfaction must be recorded and tabulated in the report. In addition, users should be asked questions to qualify their emotion state after tasks are complete in order to determine effectiveness of the experience in eliciting emotion and motivation.

Tabular data should be represented in spreadsheet format with corresponding graphs and charts to illustrate results. The report should conclude by summarizing the results and specifying points at which the experience with either effective or not effective. Suggestions regarding how to improve the points of failure in the experience should be detailed as well.

The click-through prototype created for project 4 must be used to conduct the user test.

### Grading Criteria:

- 5 points conducting experiment with recruits
- 2 points recording of observations
- 2 points summary report and suggested improvements
- 1 point quality