

WD 302 – User Interface Design and Development (4 credits)

Section 1 – Spring 2023

Course description: Fundamentals of user interface design and development, including design principles and patterns, designing for different platforms, and use of frameworks and software architectures in user interface development.

Course information

Class meetings	Mondays and Wednesdays, 1:00-2:50 p.m., SCI A224
Final exam time	Final exam will be available in Canvas during the final exam period.
Instructor	Tomi Heimonen, PhD
Office location	B235, Science Building
Email	theimone@uwsp.edu
Telephone	(715) 346-4145
Communication	You are encouraged to contact me if you have any questions. When communicating via email, please add “WD 302” on the subject line.
Office hours	In-person: Mondays and Wednesdays, 9:00-11:00 a.m. Other times and online: By appointment Check Canvas for instructions on how to sign up for online office hours.
Class website	Canvas will be used to distribute course materials, assignments, and grades.
Prerequisites	WD 201 – Interaction Design
Textbooks	Jeff Gothelf & Josh Seiden: Lean UX, 3 rd Edition, 2021, O’Reilly. ISBN: 978-1098116309. Jenifer Tidwell, Charles Brewer & Aynne Valencia: Designing Interfaces, 3 rd Edition, 2020, O’Reilly. ISBN: 978-1492051961

This syllabus and course timetable are subject to change. It is your responsibility to check Canvas for corrections and updates. Any changes will be clearly noted in class, in a course announcement and/or through email.

Course learning outcomes

The goal of this course is to introduce and apply core concepts, techniques, and tools for designing and developing user interfaces for the Web and mobile using lean UX practices. After this course, you will be able to apply these technologies and skills to design and develop usable and accessible user interfaces.

Upon completing this course, students will:

- Be able to describe and apply fundamental concepts and techniques in designing user interfaces (UI), including design patterns, prototyping, functional animations, and design systems and frameworks.
- Be able to describe and apply key approaches to handling user inputs, error prevention, responsive screen layouts, and detailed design of UI controls and dialogs for Web and mobile interfaces.
- Demonstrate competency in analyzing, documenting, and communicating the design rationale of UI solutions.
- Demonstrate competency in applying lean UX methods in designing interactive products.

Course requirements

Completing coursework awards a maximum total of 100 points.

Assignments: 40 points (5 points per assignment)

- Assignments help you familiarize with and practice the concepts, methods and techniques introduced in the readings and other course materials.
- You must upload solutions to Canvas and be prepared to demonstrate them in class.

Course design projects: These small-scale projects award a total of 40 points (points per project vary).

- By completing the projects, you will demonstrate your competence in applying the knowledge and skills gained during class to design and implement usable and accessible user interface solutions.

Exams: Exams award a total of 20 points (10 points per exam).

- Periodic online exams assess your ability to describe, explain and apply the key topics and concepts discussed in course materials.
- Exams will cover the assigned readings, coursework, and content introduced in class.

All coursework is to be completed individually unless otherwise instructed in writing.

Submitting coursework

All coursework must be submitted **electronically through Canvas**, unless otherwise instructed. Email submissions are not accepted.

Points you receive for graded activities will be posted to Canvas. Online grades are updated once a grading session has been completed – typically within 4-5 business days following the completion of an activity.

Software and hardware requirements

Storage media (e.g., flash drive or external hard drive) or cloud-based storage (e.g., OneDrive) will be useful to store and transport the documents, files and/or projects created during this course.

We will explore a variety of prototyping tools – Adobe XD is supported by UWSP, but you can opt to use a different platform if you so choose.

Grading scale

Final grades will be determined as a percentage of points earned out of 100 points according to the following scale:

Grade	Percentage	Grade	Percentage	Grade	Percentage
A	93.00% or more	B-	82.99% – 80.00%	D+	69.99% – 65.00%
A-	92.99% – 90.00%	C+	79.99% – 77.00%	D	64.99% – 60.00%
B+	89.99% – 87.00%	C	76.99% – 73.00%	F	Less than 60.00%
B	86.99% – 83.00%	C-	72.99% – 70.00%		

The instructor reserves the right to revise the grade cutoffs to be more generous if necessary.

Course policies

Late policy

Coursework must be submitted by the given deadline, or an extension must be requested from the instructor **before the due date**. If you know ahead of time that you will have a legitimate reason for missing a due date, contact the instructor to discuss an extension.

Coursework that is turned in late will receive a 20% reduction in points awarded. **Submissions that are more than 3 days late will receive 0 points.**

The instructor reserves the right to adjust this policy to account for extraordinary situations, such as documented illness or medical emergencies. You are required to inform the instructor as soon as possible of such situations.

Attendance policy

Attending class will likely be the single most important factor in determining your performance and grade in the course, so plan to attend every class. The relationship between attendance and achievement in education has been extensively documented in peer-reviewed research. **I am not able to re-teach the material to you if you are absent, but I will do my best to provide alternative options for you to acquire the content.**

Excused absences: If you need to miss a class, notify the instructor via email no later than by the morning of the class meeting in question.

- The following is a non-exhaustive list of legitimate reasons to be absent from class: illness, COVID-19 isolation, religious observance, military service obligations, pregnancy, and medical appointments.

- Documentation is **not required** for absences for the above reasons unless you will end up missing more than two consecutive class meetings.

Making up missed in-class work, such as exams and assignments, is **allowed only for excused absences**. Coursework needs to be completed within 7 days of the original due date, unless otherwise agreed upon in writing with the instructor.

- In case of extenuating circumstances, such as personal or medical emergencies, you should contact the instructor as soon as possible discuss arrangements for making up missed coursework.

If you have any questions or concerns regarding this policy, your first point of contact should be the instructor. If you are unable to reach the instructor, or if you are experiencing a personal or medical crisis/emergency, contact the Office of the Dean of Students at dos@uwsp.edu or (715) 346-2611.

Absences due to military service

You will not be penalized for class absence due to unavoidable or legitimate required military obligations, or medical appointments at a VA facility, not to exceed two (2) weeks unless special permission is granted by the instructor. You are responsible for notifying faculty members of such circumstances as far in advance as possible and for providing documentation to the Office of the Dean of Students to verify the reason for the absence. The faculty member is responsible to provide reasonable accommodations or opportunities to make up exams or other course assignments that have an impact on the course grade. For absences due to being deployed for active duty, please refer to the [Military Call-Up Instructions for Students](#).

Teamwork

Some of the coursework activities may be completed in teams of 2-3 students. Each member of the group is responsible for completing their portion of the assigned work to the best of their ability. As a part of each coursework activity carried out as a group, the groups are required to submit a statement that describes how the group divided up the work. The statement may be used as the basis for grading and conflict resolution.

Dropping/withdrawing from the course

It is the student's responsibility to understand when they need to consider un-enrolling from a course. Refer to the [Academic Calendar](#) for dates and deadlines for registration. After this period, a serious and compelling reason is required to drop from the course. Serious and compelling reasons include, but are not limited to, the following: documented and severe physical/mental illness/injury to the student or student's family. Please consult the instructor at the earliest opportunity to discuss the need to drop the course after the mandated deadline.

Incomplete policy

Under emergency/special circumstances, you may petition for an incomplete grade. An incomplete will only be assigned if inability to complete the coursework was due to a documented illness/injury or other circumstance beyond your control. All incomplete course assignments must be completed by the end of the Fall 2023 semester.

Nondiscrimination

You may be asked to review and provide feedback on the work created by your peers. When doing so, please remember that the objective is to critique the work, not the person.

It is the policy of the University of Wisconsin-Stevens Point to:

Foster an environment of respect for the dignity and worth of all students, employees, and guests of the university; Provide an environment which is conducive to the free and open exchange of ideas; and Strive to eliminate bias, prejudice, discrimination, and harassment in all forms and manifestations.

Discrimination based on an individual's age, race, color, religion, sex, gender identity or expression, national origin, ancestry, marital status, pregnancy, parental status, sexual orientation, disability, political affiliation, arrest or conviction record, membership in the National Guard, state defense force or any other reserve component of the military forces of the United States or this state, or other protected class status is demeaning to all students, employees, and guests; impairs the process of education; and violates individual rights.

COVID-19 precautions

- If you test positive for COVID-19, **stay home at least 5 days**, and isolate from others in your home.
 - Communicate about your absence to the instructor as soon as possible.

- Wear a well-fitting mask when around others for an additional 5 days after isolation.
- If you are exposed to COVID-19
 - Watch for symptoms for 10 days
 - Wear a mask around others indoors for 10 days
 - Test 5 days after exposure (or sooner, if you have symptoms)
- The wearing of face coverings is recommended in all buildings, including classrooms, laboratories, studios, and other instructional spaces.
- Wash your hands or use appropriate hand sanitizer regularly and avoid touching your face.
- Please maintain these same healthy practices outside the classroom.
- If you have questions, contact the Student Health Service at (715) 346-4646.

Accommodations

UWSP is committed to providing reasonable and appropriate accommodations to students with disabilities and temporary impairments. If you have a disability or acquire a condition during the semester where you need assistance, please contact the Disability Resource Center (DRC) in CCC 108 as soon as possible. DATC can be reached at (715) 346-3365 or drc@uwsp.edu.

Academic honesty and integrity

As a student in this course and at this university, you are expected to maintain a high degree of professionalism, commitment to active learning and participation, and integrity in your behavior in and out of the classroom.

UWSP 14.01 Statement of principles

The board of regents, administrators, faculty, academic staff and students of the university of Wisconsin system believe that academic honesty and integrity are fundamental to the mission of higher education and of the university of Wisconsin system. The university has a responsibility to promote academic honesty and integrity and to develop procedures to deal effectively with instances of academic dishonesty. Students are responsible for the honest completion and representation of their work, for the appropriate citation of sources, and for respect of others' academic endeavors. Students who violate these standards must be confronted and must accept the consequences of their actions.

UWSP 14.03 Academic misconduct subject to disciplinary action

- (1) Academic misconduct is an act in which a student:
 - a. Seeks to claim credit for the work or efforts of another without authorization or citation;
 - b. Uses unauthorized materials or fabricated data in any academic exercise;
 - c. Forges or falsifies academic documents or records;
 - d. Intentionally impedes or damages the academic work of others;
 - e. Engages in conduct aimed at making false representation of a student's academic performance; or
 - f. Assists other students in any of these acts.
- (2) Examples of academic misconduct include, but are not limited to:
 - a. cheating on an examination;
 - b. collaborating with others in work to be presented, contrary to the stated rules of the course;
 - c. submitting a paper or assignment as one's own work when a part or all of the paper or assignment is the work of another;
 - d. submitting a paper or assignment that contains ideas or research of others without appropriately identifying the sources of those ideas;
 - e. stealing examinations or course materials;
 - f. submitting, if contrary to the rules of a course, work previously presented in another course;
 - g. tampering with the laboratory experiment or computer program of another student;
 - h. knowingly and intentionally assisting another student in any of the above, including assistance in an arrangement whereby any work, classroom performance, examination or other activity is submitted or performed by a person other than the student under whose name the work is submitted or performed.

Use of online services, third-party content, and work previously presented in another course

- Unauthorized use of ChatGPT, or other generative AI writing tools, is not permitted in this course and will be treated as plagiarism.
- You may use other online information and learning materials/sources, such as StackOverflow, YouTube and LinkedIn Learning, to help in completing graded course activities.
- You must properly cite and acknowledge any design elements, code, or other third-party material that you incorporate into your own work. Failure to do so will be considered a form of academic misconduct and is subject to disciplinary action.
- Submitting work previously presented in another course is not allowed, unless approved by the instructor in writing.

If you have any questions or concerns on acceptable practices, consult the instructor in advance.

Tentative course schedule

<i>WEEK</i>	<i>TOPICS</i>	<i>COURSEWORK DUE</i>
01	Syllabus review Design principles and patterns	
02	Common UX/UI design deliverables and intro to lean UX	Assignment 1: Identify design principles and patterns
03	Lean UX process	
04	Prototyping interactions	Project 1: Initial design concepts
05	Designing micro-interactions and functional animations	Assignment 2: Turn design concept into a clickthrough prototype
06	Designing for errors and user input	Assignment 3: Design and prototype micro-interactions and functional animations
07	Visual design principles	Assignment 4: Design and prototype web forms
08	Grid-based layouts	Assignment 5: Applying grids and other layout patterns
09	Responsive design	Midterm exam (Canvas)
10	Overview of design systems	Assignment 6: Prototype responsive design
11	Design system elements: style guides and pattern libraries	Project 2: From clickthrough prototype to an interactive web prototype
12	Practice: creating a design system	Assignment 7: Identify design system elements
13	Overview of managing design projects	
14	Articulating design decisions	Assignment 8: Plan design review meeting
15	Practice: design review meeting with stakeholders	Project 3: Design review meeting
16	Final exam period	Final exam (Canvas)

Important Note: Refer to Canvas for specific due dates for coursework. If you have any questions, please contact the instructor.