

WD 310 – Evaluation of User Interfaces (4 credits)

Section 1 – Spring 2024

Course description: Concepts and methods for evaluating interfaces with users and expert audits to improve usability and user experience. Qualitative and quantitative methods, including, but not limited to, walkthroughs, checklists, user testing, survey methods and online tools.

Course information

Class meetings	Mondays and Wednesdays, 3:00 PM – 4:50 PM, SCI A224
Final exam time	This course does not have a final exam.
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 310” on the subject line.
Office hours	In-person: Monday through Wednesday, 10:00-11:00 AM Online: Thursdays, 10:00-11:00 AM 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	The following required textbook is available at Text Rental: <ul style="list-style-type: none">• Bill Albert & Tom Tullis: <i>Measuring the User Experience</i>, 3rd Ed, Morgan Kaufmann. ISBN: 978-0-128180808.

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

Upon completing this course, the expectation is that you will have gained and successfully demonstrated the following knowledge and skills:

- Apply key usability and UX evaluation concepts and tools such as evaluation metrics, descriptive and inferential statistics, and visual data presentations in data analysis.
- Execute ethical guidelines related to user research.
- Compare key usability and UX evaluation methods, including their application and appropriate uses, differences and similarities between methods, and benefits, drawbacks, and limitations.
- Implement evaluation methods to carry out small-scale usability and UX evaluation studies.
- Analyze, report, and present the findings of usability and UX evaluation studies.

Course requirements

Completing coursework awards a maximum total of 100 points.

Assignments: 30 points.

- Assignments will help you familiarize yourself with the concepts and techniques introduced in course content.
- The course has six assignments.

Course projects: The course projects award a total of 50 points.

- The course project supports you in demonstrating your competence in applying the knowledge and skills gained during class.

- The course has three small scale projects that will be carried out in small groups.

Exams and quizzes: Exams and quizzes award a total of 20 points.

- Exams and quizzes covering assigned readings and class content will assess your ability to describe, explain and apply the key topics and concepts introduced in this course.

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.

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	94.00% or more	B-	83.99% – 81.00%	D+	68.99% – 65.00%
A-	93.99% – 91.00%	C+	80.99% – 78.00%	D	64.99% – 60.00%
B+	90.99% – 88.00%	C	77.99% – 74.00%	F	Less than 60.00%
B	87.99% – 84.00%	C-	73.99% – 69.00%		

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

Course policies

Late work

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

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 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 practical to 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 for providing 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](#).

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 grades

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 Fall 2024.

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.

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.

Accommodations

UWSP is committed to providing reasonable and appropriate accommodations for 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. DRC can be reached at (715) 346-3365 or drc@uwsp.edu.

Academic integrity and honesty

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.

As an academic community, we at UWSP place great emphasis on academic integrity and honesty. Plagiarism, fabrication, cheating, helping others commit these acts, and any form of dishonesty compromise the educational process and devalue the achievements of all students. All work you submit must be original and completed individually unless collaboration is explicitly allowed. Always acknowledge your sources, cite appropriately, and give credit where it's due.

If instances of alleged academic dishonesty are identified, appropriate actions will be taken in accordance with the institution's policies ([UWSP Chapter 14](#)). These actions could include revising the assignment, receiving a lower grade or no credit for the assignment, receiving a lower grade for the entire course, or facing more serious academic consequences. If you are unsure if something might be considered academic misconduct, you are struggling to understand the content or an assignment, or you have fallen behind for whatever reason, please contact your instructor as soon as possible.

By nurturing a community of support, honesty, and respect, we ensure that academic pursuits and your experiences at UW-Stevens Point are both meaningful and genuine.

Use of third-party content and previous assignments

- Unauthorized use of ChatGPT, or other generative AI writing tools, is not permitted in this course and will be treated as plagiarism, unless permitted in writing by the instructor.
- 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.

Emergency preparedness

In the event of a medical emergency call 9-1-1 or use the nearest campus phone outside SCI D230. Provide assistance, if trained and willing to do so. Guide emergency responders to victim(s).

In the event of a tornado warning, proceed to the basement corridor in the Science building and shelter in place.

In the event of a fire alarm, evacuate the building in a calm manner. Meet in front of the Marshfield Clinic Health System Champions Hall. Notify instructor or emergency response personnel of any missing individuals.

Active Shooter – RUN. HIDE. FIGHT. If trapped, hide, lock doors, turn off lights, spread out and remain quiet. Call 9-1-1 when it is safe to do so. Follow instructions of emergency responders.

See [UW-Stevens Point Emergency Procedures](#) for details on all emergency response at UW-Stevens Point.

Tentative course schedule

WEEK	TOPICS	COURSEWORK DUE
01	Syllabus review and course introduction Goals of evaluation, UX metrics (Chapter 1)	
02	Variable and data types (Chapter 2.1-2.2) <ul style="list-style-type: none"> Independent vs. dependent variables Data types: nominal, ordinal, interval, ratio Descriptive statistics (Chapter 2.2) <ul style="list-style-type: none"> Measures of central tendency: mean, median, and mode Variance and standard deviation Confidence intervals 	Assignment 1 (in-class): Working with descriptive statistics
03	Data analysis (Chapter 2.4-2.7) <ul style="list-style-type: none"> Comparing means: independent vs. (paired) dependent samples, multiple samples (analysis of variance) Non-parametric tests: Chi-Square Relationships between data: correlation Visual data presentation: graphs, charts, and plots 	Assignment 2 (in-class): Statistical inference using Excel
04	Planning evaluation studies (Chapter 3.1-3.4) <ul style="list-style-type: none"> Study goals: formative vs. summative UX goals: performance vs. preferences vs. emotional response Choosing UX metrics 	Quiz 1: Weeks 1-3 Project 1: UX study dataset analysis
05	Planning evaluation studies (continued) (Chapter 3.5) <ul style="list-style-type: none"> Choosing user research methods and tools Defining study details: budget, scheduling, participant recruiting, data analysis 	Assignment 3 (in-class): Select evaluation project topic
06	Studies using issue-based metrics (Chapter 6) <ul style="list-style-type: none"> Identifying relevant issues: heuristic evaluation, observing participant behavior, web analytics, eye-tracking Establishing severity ratings for issues 	Quiz 2: Weeks 4-5
07	Studies using issue-based metrics (continued) <ul style="list-style-type: none"> Analyzing and reporting issue-based metrics Respondent/rater consistency and dealing with bias; sample size 	Assignment 4 (in-class): Practice heuristic evaluation
08	Studies using performance metrics (Chapter 4) <ul style="list-style-type: none"> Defining success: binary (yes/no) vs. levels of success Metrics: time on task, errors, efficiency metrics, and learnability 	
09	Studies using self-reported metrics (Chapter 5) <ul style="list-style-type: none"> Understanding rating scales Dealing with respondent bias Analyzing ratings scale data Using post-task ratings 	Project 2: Heuristic evaluation
10	Studies using self-reported metrics (continued) <ul style="list-style-type: none"> Methods for measuring overall UX of a product Online services for self-reported metrics collection Analyzing open-ended responses 	Assignment 5: Analyze and report a questionnaire
11	Studies using behavioral and physiological metrics (Chapters 7 and 8) <ul style="list-style-type: none"> Using eye-tracking: how does it work? Analyzing eye-tracking data: Areas of Interest (AOI), dwell time, fixations, and other relevant metrics 	Quiz 3: Weeks 6-10
12	Behavioral and physiological metrics (continued) <ul style="list-style-type: none"> Methods for measuring emotions: verbal expressions, self-reporting, biometrics 	Assignment 6: Eye-tracking hands-on (in-class)
13	Special topics (Chapter 10) <ul style="list-style-type: none"> Accessibility evaluation methods, first click testing Calculating ROI of usability and UX work 	
14	Guest presentation (tentative)	Quiz 4: Weeks 11-13
15	Project presentations	Project 3: Usability testing
16	Final exam period	Final exam (tentative) (Canvas)