



Northeastern University

College of Engineering

CSYE 7280 User Experience Design and Testing

Course Information

Course Title: User Experience Design and Testing
Course Number: CSYE 7280
Term and Year: Summer 2022
Credit Hour: 4
Course Format: On-Ground

Instructor Information

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Course Prerequisites

Graduate Level CSYE 6200 Minimum Grade of C- or Graduate Level INFO 5100 Minimum Grade of C-

Course Description

Introduces user experience concepts while working on Web design projects. Offers students an opportunity to build the necessary skill sets to make better decisions when designing contemporary websites that cater to customer needs. Students practice interview techniques to understand user requirements while keeping user experience central to the effort. Uses wireframes and user scenarios to drive the creative design process. Various case studies are introduced and discussed in team settings to emphasize user perspectives. Uses quality assurance and usability testing to drive validation and user-acceptance testing and approvals.

Standard Learning Outcomes

Learning outcomes common to all College of Engineering Graduate programs:

- 1. An ability to identify, formulate, and solve complex engineering problems.*
- 2. An ability to explain and apply engineering design principles, as appropriate to the program's educational objectives.*
- 3. An ability to produce solutions that meet specified end-user needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.*

The Information Systems Program accepts students of different engineering backgrounds with minimum programming skills and produces first class Information Systems engineers that operate at the intersection of real-world complexity, software development, and IT management. Graduating students will be able to construct end-to-end advanced software applications that meet business needs.

Specific Learning Outcomes for the Information Systems program:

- 1. Create a strong technical foundation through diverse, high-level courses*
- 2. Built crucial interpersonal skills needed to succeed in any industry*
- 3. Foster a deep level of applied learning through project based case studies*

Course Outcomes and Assessment Standards

1. Understand the User Experience concepts and importance of making usable websites or products
2. Understand the importance of gathering user requirements early on during the design phase of the project
3. Learn Wire framing tools and techniques
4. Learn how to test the products or websites with usability in mind
5. Learn about the visualization techniques and concepts
6. Develop and display critical thinking and analytical skills through presentations
7. Learn using case studies and group discussions in a friendly setting
8. Learn Quality Assurance techniques and basic understanding of automation tools like Selenium
9. Apply the knowledge readily to the next assignment or job
10. This class assumes no prior experience in the User Experience design and User Experience testing concepts. Web programming experience is helpful but is not required. Comfort with computers, desktop tools and general computing concepts are expected.

Recommended Text: (Some reading materials will be provided via pdf files)

1. The Design of Everyday Things by Don Norman (ISBN-10: 0465050654).
2. Don't Make Me Think, Revisited: A Common Sense Approach to Web Usability by Steve Krug (ISBN-13: 978-0321965516)
3. Rocket Surgery Made Easy: By Steve Krug (ISBN-13:978-0-321-65729-9)
4. The Elements of User Experience By Jesse James Garrett (ISBN-13: 075-2064712022)
5. Articles from Nielson Norman Group (<http://www.nngroup.com/articles/>)
6. Web Development and Design Foundations with HTML5 by Terry Felke-Morris (ISBN-13: 9780133571783)
7. (ISBN-13: 9780133571783)
8. User-Centered Web Site Development: A Human-Computer Interaction by Daniel D. McCracken (ISBN-13: 9780130411617)
9. Selenium testing tool and documentation (www.seleniumhq.org)

Grading:

Assignments 25%

Quizzes 25%

Midterm Presentation 20%

Final Project 20%

Creativity and Class Participation 10%

Attendance policy

The Information Systems Department has a strict class attendance policy. Students who miss two or more Classes will automatically receive one letter grade lower in their final grade. Students who miss three Classes will receive an automatic F for the class. No exceptions are allowed for this rule

Final Team Project:

The final projects will be completed by a team of 4-5 students. The project details will be provided during the second/third week of the course. Students are encouraged to choose their topic of choice either from

healthcare, business, and/or technology related fields. Details on project deliverable requirement will be specified at a later time.

Class 1		Course Outline and Introductions Introduction to the User Experience Concepts Videos and Class discussions
Class 2		Techniques to gather User requirements using User Experience concepts Wire framing techniques and Wireframe tools using Mocqups tool
Class 3		Wire frames using Balsamiq tool Quiz
Class 4		Information Architecture Card Sorting Exercise The Elements of User Experience (continue discussion from that book from Jesse James Garrett)
Class 5		The Elements of User Experience (discussion from that book from Jesse James Garrett) Web Design concepts and principles of User Experience
Class 6		Student presentations on the Wire frame design
Class 7		Mid Term Presentation Advanced Website Design and concepts Project Assignments Discussion
Class 8		Human Factored Design Storyboarding techniques
Class 9		Discussion on the best and worst websites Group discussion Usability Testing
Class 10		IBM Design Thinking Case Study
Class 11		Introduction and basic techniques for Automation testing Google Material Design Final Project discussion and clarifications
Class 12		Prototyping techniques using Axure tool Quality Assurance Concepts plus Automation Testing using Selenium
Class 13		Prototyping techniques using Figma tool User Experience testing as part of overall Quality Assurance UX Research Methods
Class 14		Project Presentations

End-of-Course Evaluation Surveys

Your feedback regarding your educational experience in this class is very important to the College of Professional Studies. Your comments will make a difference in the future planning and presentation of our curriculum.

At the end of this course, please take the time to complete the evaluation survey at <https://neu.evaluationkit.com>. Your survey responses are **completely anonymous and confidential**. For courses 6 weeks in length or shorter, surveys will be open one week prior to the end of the courses; for courses greater than 6 weeks in length, surveys will be open for two weeks. An email will be sent to your HuskyMail account notifying you when surveys are available.

Academic Integrity

A commitment to the principles of academic integrity is essential to the mission of Northeastern University. The promotion of independent and original scholarship ensures that students derive the most from their educational experience and their pursuit of knowledge. Academic dishonesty violates the most fundamental values of an intellectual community and undermines the achievements of the entire University.

As members of the academic community, students must become familiar with their rights and responsibilities. In each course, they are responsible for knowing the requirements and restrictions regarding research and writing, examinations of whatever kind, collaborative work, the use of study aids, the appropriateness of assistance, and other issues. Students are responsible for learning the conventions of documentation and acknowledgment of sources in their fields. Northeastern University expects students to complete all examinations, tests, papers, creative projects, and assignments of any kind according to the highest ethical standards, as set forth either explicitly or implicitly in this Code or by the direction of instructors.

Go to <http://www.northeastern.edu/osccr/academic-integrity-policy/> to access the full academic integrity policy.

Student Accommodations

Northeastern University and the Disability Resource Center (DRC) are committed to providing disability services that enable students who qualify under Section 504 of the Rehabilitation Act and the Americans with Disabilities Act Amendments Act (ADAAA) to participate fully in the activities of the university. To receive accommodations through the DRC, students must provide appropriate documentation that demonstrates a current substantially limiting disability.

For more information, visit <http://www.northeastern.edu/drc/getting-started-with-the-drc/>.

Library Services

The Northeastern University Library is at the hub of campus intellectual life. Resources include over 900,000 print volumes, 206,500 e-books, and 70,225 electronic journals.

For more information and for Education specific resources, visit <http://subjectguides.lib.neu.edu/edresearch>.

24/7 Blackboard Technical Help

For immediate technical support for Blackboard, call 617-373-4357 or email help@northeastern.edu

Within Blackboard, open a support case via the red support button on the right side of the screen, click Create Case

myNortheastern, e-mail, and basic technical support

Visit the [Information Technology Services \(ITS\) Support Portal](#)

Email: help@northeastern.edu

ITS Customer Service Desk: 617-373-4357

Diversity and Inclusion

Northeastern University is committed to equal opportunity, affirmative action, diversity and social justice while building a climate of inclusion on and beyond campus. In the classroom, member of the University community work to cultivate an inclusive environment that denounces discrimination through innovation, collaboration and an awareness of global perspectives on social justice.

Please visit <http://www.northeastern.edu/oidi/> for complete information on Diversity and Inclusion

TITLE IX

Title IX of the Education Amendments of 1972 protects individuals from sex or gender-based discrimination, including discrimination based on gender-identity, in educational programs and activities that receive federal financial assistance.

Northeastern's Title IX Policy prohibits Prohibited Offenses, which are defined as sexual harassment, sexual assault, relationship or domestic violence, and stalking. The Title IX Policy applies to the entire community, including male, female, transgender students, faculty and staff.

In case of an emergency, please call 911.

Please visit www.northeastern.edu/titleix for a complete list of reporting options and resources both on- and off-campus.