![Northeastern University College of Engineering]

Multidisciplinary Graduate Engineering
Course Syllabus

Course Information

User Experience Design and Testing
CSYE 7280-02
Spring 2022

On ground

Instructor Information

Peter McKeown

p.mckeown@northeastern.edu

Course Materials

Reading Materials
Required: Sprint: How to Solve Big Problems and Test New Ideas in Just Five Days
 by Jake Knapp, John Zeratsky

Suggested: Lean UX: Designing Great Products with Agile Teams

by Jeff Gothelf and Josh Seiden

Suggested: The User Experience Team of One: A Research and Design Survival Guide
 by Leah Buley

Software
Figma: https://www.figma.com/

Online design and prototyping tool, free for students.

Course Description

In just the last few years, customer expectations for high quality, easy-to-use products have risen sharply, and poorly designed, poorly built products simply won't be tolerated. In this course, students will learn tools and techniques that will help them understand good design, understand their customers needs and desires, and design solutions that are helpful, efficient, and delightful to use.

In modern businesses, it is understood that all disciplines will contribute to planning and building excellent, user centered products. Through two hands-on projects, we'll apply techniques to understand our users, use design and prototyping tools to build mockups and prototypes, then test our solutions to validate our direction. We'll also present our work in a way that will highlight the value for both customers and the business.

This is a great course for:

- Engineers who would like to learn more about how design partners work so you can partner more closely and efficiently with them to influence strategic direction

- Those in startup environments who may wear many hats, including engineer, product manager, designer, and user researcher

- Students considering a product design track who want to learn new techniques and build portfolio pieces to illustrate their work

Course Objectives

By the end of the course students will:

- Understand the importance of basic design principles like layout, spacing, color, font usage, and accessibility

- Have a clear understanding of modern product design process, tools, and techniques

- Learn how their work, as engineers, entrepreneurs, or product designers will contribute to defining strong strategic direction for businesses

- Learn Design Sprint, a popular technique used widely in technology companies today to solve complex problems quickly and efficiently

- Complete two end-to-end design projects, including usability testing, that will be presented in a product design portfolio format

- Be armed with valuable user centered, problem solving techniques that can be applied immediately in any business setting

Prerequisites

This class assumes no prior experience in Design Principles, User Experience Design, Product Design, or User Experience testing concepts.

Grading

Grades will be based on a combination of weekly assignments and class preparation, an exam, and final projects at mid-term and end-of-term.

• Weekly homework and class participation: 20%

• First project (presentation and prototype): 30%

• Final projects (presentation and prototype): 50%

Attendance Policy

Students are expected to complete course readings, participate in class discussions or other learning activities during the unit, and complete written assignments for each unit during the time of that unit.

It is understood that there might be one week when active participation in ongoing class conversations and learning activities might be delayed.

Beyond one week time, if there is an absence or lateness in participation (1) faculty must be notified in advance; (2) grades will be adjusted accordingly.

Late Work Policy

Students must submit assignments by the deadline.

Students must communicate with the faculty prior to the deadline if they anticipate work will be submitted late.

Work submitted late without prior communication with faculty may not be graded.

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.

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.