

CS 5340: Computer / Human Interaction

**Graduate Course, Khoury College of Computer Sciences
Northeastern University
Fall 2022**

Class Format: Asynchronous Online Class using Canvas

Lectures, videos, readings & assignments will be posted on Mondays
Assignments will be due by 5pm ET the following Monday
Mix of individual assignments & team projects
Project meetings via Zoom (arranged by student schedule)
We will use Canvas to post assignments, readings, and video materials.
Students will submit their assignments using Canvas as well.

Credit Hours: 4 SH

Instructor: Holly Jimison, PhD, FACMI
Office Hours: TBD and by arrangement
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Teaching Assistants:

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Required Text:

Designing User Experience: A guide to HCI, UX and interaction design, 4th Edition
by David Benyon, Pearson Publishers (2019)

Course Prerequisites

Students must be comfortable programming in a high-level language, and be able to become proficient in Java basics by mid-semester on their own.

Course Description

This course provides an introduction to and overview of the field of human-computer interaction (HCI). HCI is an interdisciplinary field that integrates theories and methodologies from computer science, cognitive psychology, design, and many other areas. Course readings will focus on current practice in interface specification, design and evaluation, with a few additional readings in current HCI research. Students will work on both individual and team projects to design, implement and evaluate computer interfaces. Students will be incrementally led through the phases of ethnographic study and requirements analysis, scenario-based design, paper prototyping, computer prototyping, and several methods of usability analysis and evaluation.

Course Grading Criteria

Students will be graded on discussion board participation, individual and project team assignments, a final team project (written and presentation), and a final exam.

- Discussion board participation (15%).
- Individual homework (30%).

- Exam (15%)
- Project (40%, comprised of 20% for team assignments, 20% for final submissions).

Late Policy

Prior to an assignment due date, a student may request an extension with a reasonable explanation. It is the discretion of the instructor to permit late assignments. Unexcused late assignments will be subject to a reduction in approximately one half letter grade per day late.

Academic Honesty / Accommodation Statement

- Complete adherence to Northeastern University's Academic Honesty and Integrity Policy is required. Requirements can be found at: <http://www.osccr.neu.edu/policy.html>. Infractions will be dealt with according to the university's disciplinary process at: <http://www.osccr.neu.edu/process.html>
- Appropriate accommodations will be made for students with disabilities in accordance with University policies, <http://www.drc.neu.edu>.
- Assignments that involve writing and presentation will be judged on clarity of presentation as well as content. Students who are having difficulty with writing will be referred to the Northeastern University Writing Center.

#	Topic	Due
W 1.1	Overview of HCI and course	
W 2.1	HCI development process; project idea brainstorming	I0: Survey
W 2.2	Critical analysis of UIs; Evaluation	I1: Brainstorming
W 3.1	Humans and human factors	
W 3.2	Interviews and observational studies	I2: UI critique
W 4.1	Requirements analysis; users and tasks	
W 4.2	Interaction, personas, user scenarios	I3: Qualitative user research
W 5.1	President's Day - no class	
W 5.2	Project problem pitches	I4: Brainstorming #2
W	UX frameworks, GUI software	

6.1	architecture	
W 6.2	Design thinking	T1: Project proposal (Sat after class)
W 7.1	Brainstorming, ideation, and sketching; Storyboards and wireframes	
W 7.2	Prototyping	T2: Requirements analysis
W 8.1	Prototyping 2	
W 8.2	Topic: Special topic	
W 9.1	Topic: Designing for security, privacy, and accessibility	
W 9.2	User studies	T3: Prototyping
W 10.1	Evaluation	
W 10.2	Usability testing	
W 11.1	Reporting usability testing results	
W 11.2	Interface evaluation I	Interface evaluation I
W 12.1	Interface evaluation II	Interface evaluation II
W 12.2	Topic: Designing for the Web; Mobile interfaces	
W 13.1	Topic: AI and HCI	
W 13.2	Final presentations 1	
W 14.1	Final presentations 2	
W 14.2	Final presentations 3	T5: Final project evaluation, report, and presentation

Course subject content is tentative and rarely may change during the semester. Students will be notified of such changes.

Academic Integrity

- If you borrow anything for use in your homework or project, you must have a citation.
- Unless working on your team project, individual assignments must reflect individual work.

Here are a few examples of academic dishonesty:

- Working with one or more partners on an assignment that is to be completed individually.
- Submitting a copy of work done by another student, with or without their knowledge.
- Submitting work that was primarily found on the web or provided by someone else outside of this class.
- Submitting work by anybody who took this course in the past whether the course was here at Northeastern or at another campus or institution.
- Providing or receiving significant help to another student on an individual assignment.

If you have a question about what is considered a violation of this policy, **please ask!**

The university's academic integrity policy discusses actions regarded as violations and consequences for students <http://www.northeastern.edu/osccr/academic-integrity>.

Reasonable Accommodations

One goal of instructors is that every student should be able to participate in this course. If you require any special accommodations, let me know immediately so that we can work out appropriate arrangements. Students with disabilities who wish to receive academic services and/or accommodations should visit the [Disability Resource Center](#) or call (844) 688-6287. If you have already done so, please provide your letter from the DRC to the instructor early in the semester to arrange those accommodations.

Student Feedback

Your opinions are very important to me. All students are strongly encouraged to use the TRACE (Teacher Rating and Course Evaluation) system <https://www.northeastern.edu/trace/> near the end of the course to evaluate this course. A reminder about TRACE should arrive via email about two weeks before the end of the course. In addition, I will be asking for your feedback at least once about halfway through the semester. However, if you have concerns about the course, don't wait until you are asked. You can contact me any time!

Title IX

Title IX of the USA 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.

Faculty members are considered “responsible employees” at Northeastern University, meaning they are required to report all allegations of sex or gender-based discrimination to the Title IX Coordinator.

The university offers confidential resources for medical treatment, emotional support and counseling through Confidential Employees. Confidential Employees are not required to disclose information about Prohibited Offenses to the Title IX Coordinator without prior consent of the student. Confidential Resources on campus include University Health and Counseling Services (UHCS) staff, Sexual Violence Resource Center (SVRC), Office of Prevention and Education and the Center for Spiritual Dialogue and Service (CSDS). [From Title IV Policy, Section III.C]

Alleged violations can be reported to the Title IX Coordinator within The Office for University Equity and Compliance at: titleix@northeastern.edu and/or through NUPD (844) 688-6287. Reporting Prohibited Offenses to NUPD does NOT commit the victim/affected party to future legal action.

Please visit The Office for University Equity and Compliance for the full Title IX Policy, a complete list of reporting options and resources both on- and off-campus.