



## BHCI Project Course 2018

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# Overview & requirements

### 05-571: HCI Undergraduate Project

Spring 2018

WEH 5409

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Room:WEH 5409

All class meetings are in WEH 5409, except for an occasional joint meeting with the MHCI students. These meetings are marked in the schedule, and their location will be announced.

### Class meetings MW 10:30am-11:50am.

Since the class is a project class, there will only be a small number of class meetings -- approximately five lectures and five presentation sessions. Students are required to attend all class meetings listed in the *Course Schedule* below.

Course information will periodically be updated on the course web site: <http://bhciproj18.hciresearch.org/> and through email to the class.

## Course Overview

The HCI Undergraduate Project course is a semester-long capstone project for the HCI program and integrates everything the students have learned in their coursework into one end-to-end experience. Students work in interdisciplinary teams for a client to produce a working prototype that serves as a proof of concept of a novel service or product idea. The students come from a variety of backgrounds including Computer Science, Information Systems, Psychology, Design, and related programs.

## Course Requirements

In the first phase of the project, students conduct user research and brainstorm design ideas. The user research phase begins with students conducting contextual inquiries and background research to understand the nature and needs of the users and tasks relevant to their problem. Based on that understanding, students go through a design ideation phase producing design ideas to meet the identified needs. With client input, they narrow down and refine their ideas. In the next phase of the project, students engage in prototyping and user testing.

They produce prototypes with increasing fidelity and iteratively test them with users to improve the design. The end goal is a working prototype (along with other deliverables based on the needs of the client) that serves as a proof of concept of the product idea.

Over the course of the semester, each project group is required to give five presentations. The first two of these are for the class only. The third is a presentation to MHCI students, who provide feedback on an initial hi-fi prototype. The fourth is a formal in-class presentation during finals week, in which students present their designs along with their background and user research to the class and their client. Students must be able to back up their design decisions with research and data analysis. Finally, during commencement weekend, students present an abbreviated version of their final presentation to family and friends of graduating HCI students, as part of the (festive) graduation ceremony.

Students are required to work with their groups and clients throughout the semester. Groups should meet at least twice a week, once with the instructors, and once by themselves. They should also meet with their clients on a regular basis (weekly, or less frequently as needed).

## Grading

- 10% - Team grade on user research presentation & report (from client and instructor)
- 10% - Team grade on Lo-fi Prototype presentation & report (from client and instructor)
- 10% - Team grade on Mid-fi Prototype presentation & report (from client and instructor)
- 35% - Team grade on final presentation, report & other deliverable (from client and instructor)
- 25% - Teammate Evaluations (Average of last 3)
- 10% - Participation in class sessions and mentor meetings

Student projects will be assigned a group grade based on rigor of HCI methods, thoroughness of background research, innovativeness of design, quality of data analysis and argumentation from data (i.e., how are design motivations grounded in the research results). Part of the grade will also be determined based on group participation in class meetings and weekly meetings. All students will submit three peer evaluations in which they indicate what percentage of the contribution they believe member of their team (including themselves) have contributed to the project. These peer evaluations will be used to adjust the grades of individual group members.

The instructors may take attendance during lectures and other class meetings, which will be part of the 10% participation portion of your grade.

You will meet with your faculty mentor and your client weekly. You should start each faculty meeting with a short (5-10 minute) project summary. This should review your goals for the previous week and the progress you've made in achieving them. It should describe decisions and feedback from your recent meetings with your team, client and faculty mentor, and challenges you are facing. Most importantly, it should highlight issues that you think would benefit from feedback from your mentor. Don't assume either your adviser or client remembers all your decisions, even if they helped you make them. It will be helpful to have slides or notes, summarizing this material. Things to include are:

- Current objective/hypothesis/"hunt" statement and why one should care
- What were your concrete goals for the week?
- What did you do, learn and why?
- What do you want to do and learn next and why?
- Any challenges/obstacles/things holding you back

A similar structure could work for your client meetings as well.

Many of you will be traveling this semester to visit graduate schools and do job interviews. Each of you is expected to notify your team well in advance what your travel schedule is. Furthermore, you should schedule your work around your travel schedule. For example, if you know that you will be gone for an entire week towards the end of the semester, you should do more work upfront to compensate for your absence.

A "team first" attitude is crucial to conducting a successful project.

## Students will ... *class activities*

- Carry out a team project for a client
- Apply user-centered research, interaction design, prototyping, and several rounds of user testing and redesign to solve the client's problem
- Produce as a final deliverable a functional prototype with complete documentation of research, process, and code

... in order to ... *learning goals*

- Understand how user-centered research, interaction design, prototyping, and testing with users can be combined effectively to solve significant problems
  - Selecting and/or adapting appropriate user research methods to uncover user behaviors
  - Discovering user expectations and pain points
  - Distilling, organizing and communicating large amounts of information/data
  - Practicing sketching and prototyping early in the product development lifecycle
  - Understanding how to consider design trade-offs throughout product development
  - Producing and refining lo-fidelity and high-fidelity prototypes
  - Learning how to create usable and aesthetically pleasing artifacts/deliverables for clients
  - Understanding a typical product development lifecycle
  - Impartially evaluating and validating ideas/designs with users and stakeholder
  - Learn to collaborate effectively in interdisciplinary teams
  - Learn to finish a project on schedule by adhering to a project schedule
  - Learn to communicate with a client to solve the client's problem
  - Balancing client/stakeholder's expectations and priorities with users' needs/goals

## COURSE THEMES

In addition to the learning outcomes, we hope to expose you to the merits of:

- Being flexible
- Taking risks and failing fast
- Less documentation, more communication (i.e. 5 minute standup)
- Refining "pitch" skills (i.e. movie trailer)
- Leaving the office/lab for customer discovery and design

## Rules of the road

Students need to respect the time and efforts of their classmates. When student teams are presenting, you should use laptops solely to offer feedback, phones should be off, and all students should give their full attention to their classmates.

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