HCI 440: Introduction to User-Centered Design

Dr. Michael A. Oren, Instructor
Fall 2013
Wednesdays, 5:45-9:00 PM CT
Office Hours: Monday 5-6 PM CT (only via Skype: michaelaoren)
Wednesday: 5-5:30 PM CT (classroom only)
Lewis 1207

Course homepage: https://d2l.depaul.edu/

Summary of Course

This course introduces students to some of the principles and practices of user-centered design (UCD). This course is designed to allow students to explore a variety of secondary skills/ disciplines outside of a previous core focus. This leads to a few key components that are likely new to most students in regards to grading and group work:

- Grading in this course is intended to reflect students' specialization while providing a low risk environment to grow new skill sets.

- Given the diversity of skills needed to be successful in UCD, it is encouraged that students collaborate with one another on projects.

- However, it is recognized that some students may prefer to work alone for various reasons, so those students will be allowed to work on projects individually in order to improve everybody's overall learning.

- While solo work on projects is allowed, an individual's choice to work alone does not lead to any leniencies in project grading.

The course introduces the essential elements of these practices and sets the context for further study of them in other foundation and advanced courses. Topics covered in the course include (with their approximate timelines[1]):

- The fundamentals and process of UCD (Weeks 1-2);
- Establishing requirements, including task description and analysis (Weeks 3-4);
- Conceptualizing and modeling interaction (Weeks 5-6);
- The cognitive and social aspects of interaction (throughout);
- Interaction design, prototyping, and construction (Weeks 7-8); and,
- Evaluation and evaluation frameworks (Weeks 9-10).

The coursework consists of:

- Lectures, discussions, and class activities;
- Reading assignments;
- A large project with three deliverables;
- Up to ten smaller assignments;
- A final report on course progress.

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[1] Approximate since the instructor reserves the right to cover topics in more or less detail depending upon student interests and level of mastery of topics.

All course content (except COL recordings) is delivered through Desire2Learn–D2L (https://d2l.depaul.edu/). Class COL recordings are available through a link in D2L or directly from COLWeb (https://col.cdm.depaul.edu/).

Learning Objectives

After completing the course, a student will be able to:

1. **Implementation:** Demonstrate competency in creating basic interactions.
2. **Design:** Apply classic theories of interface design in the development of a traditional desktop or web application.
3. **Evaluation:** Understand how to conduct an expert review and a controlled usability study.
4. **Phenomena:** Understand the basic theories of perception that apply to interaction design, the process that defines UCD, and how experiences are defined through interactions.

Time Budget

The goal of the assignments in this class are to provide evidence of basic content mastery, which some of you might be interested in showcasing in future portfolios. As such, the amount of time you choose to invest is based on what you choose to leave this course with. In addition, the amount of effort necessary to produce strong deliverables is proportional to any existing skills and knowledge you bring into this course. For example, a skilled designer will be able to produce wireframes sufficient for one of the assignments in this course in well under 10 hours; however, that same task may take a programmer or psychologist upwards of 15 hours. That time will ultimately balance out; however, as the skilled designer would be less proficient in the basic principles of cognitive and behavioral research.

Academic Integrity

This is a zero-tolerance course with respect to academic integrity violations. All students are expected to read and fully comply with DePaul's Academic Integrity Policy, the text of which is available at:

http://academicintegrity.depaul.edu/

A discussion of academic integrity is held during the first class. Students must complete a short academic integrity awareness quiz before submitting their first assignment. If you have any questions about what constitutes an academic integrity violation or what its consequences might be, please be sure to have these questions answered before submitting your first assignment.

Textbooks and printed resources

Required:

- *Interaction Design: Beyond Human-Computer Interaction, Third Edition*, Yvonne Rogers, Helen Sharp, & Jennifer Preece. Wiley, 2011, ISBN 978-0-470-66576-3.

This text is also available online at the DePaul Libraries Web site, http://library.depaul.edu/ in the Safari database. Campus Connection login is required to access the Safari eBook.

Recommended:

- *Experience Design*. Hassenzahl. Morgan Claypool, 2013, ISBN: 608450473.

This text can be accessed for free from within the DePaul network from the publisher's website: http://www.morganclaypool.com/

Prerequisites

None.

Grading

With the exception of any quizzes, weekly participation and the final report, all grades will be determined based on your personal allocation of points between the following components:

All assignments will contain, to varying degrees, the following components (while some assignments/deliverables may emphasize one component more than another, they are designed to balance out over the entirety of the course):

- Design (application of UCD, cognitive principles, and basic aesthetics);
- Implementation (demonstration of interaction concepts in action);
- Evaluation (demonstration of applying information gleaned from stakeholders and users to the final product--or justifications for deviating from the evidence);
- Phenomena (demonstration of mastery of theories and principles introduced in this course [i.e. appropriately citing the textbook and other secondary sources in your report]). **NOTE**: You may not distribute more than 20% of your grade to this area.

Students choose their primary focus and divide their score grade up between the three categories, but a minimum of 20% of the score must be assigned to each category.

> Sample
> 20% Design
> 25% Implementation
> 30% Evaluation
> 20% Phenomena
> _____
> 100% Total Score

Given this grading scheme is intended to be different for all members of a group, it is unlikely that all group members will receive the same grade on project deliverables. While all team members are expected to contribute to all components, teams are designed to balance out specializations so there is at least one primary designer, researcher, and implementor on each team. Thus, if a project does great for the design component but poorly in the other two areas, the individual with the design focus will receive the higher grade than the other two members of the team.

Your chosen distribution must be provided to the instructor by the end of the second class. Students will have one opportunity to change their point distribution after the grade is assigned for the first project deliverable.

Coursework includes the following components:

- *Weekly participation.* In-class students are expected to attend every class session; OL students are expected to view the COL recording of the class within 2-3 days of the in-class meeting. All students must post at least one substantive comment, relevant to the

class topics and activities for the week, to the online participation forum. A substantive comment is one that further explores a topic covered in class or one posted by another student. A "*thank you*" or "*that's interesting*" does not constitute a substantive comment. Questions on the topic are encouraged.

- *Small assignments (individual only)*. The small assignments are intended to evaluate individual grasp of key course topics and will be assigned at the discretion of the instructor with a maximum of one small assignment per week.

- *Large project*. This may be done as part of a team consisting of 3 or 4 students. While students have the option to work alone on a project, those choosing to work in a team will be partially assigned the team by the instructor[2]. The large project is intended to allow students to apply the knowledge obtained in the class on a project that demonstrates the ability to apply the knowledge, work in a cross functional team (if the student chooses to do group work), on a project that continuously builds on to previous components and can be showcased in a portfolio.

- *Online quizzes*. While no quizzes are currently planned, the instructor reserves the right to assign online quizzes in order to help assess student mastery of core topics, which will count toward the small assignment grade.

- *Final report*. In lieu of a final exam, students will deliver a minimum 7-page (1.5 line spacing) report detailing what was learned from the course, where their project could have been improved, what they would have done differently on components of the project, and any changes they made to their project based on the feedback received throughout the course. Students are also encouraged to discuss components of the course that they wish were covered in more detail, provide feedback on how individualized grading schemes worked, and provide feedback on how the large project worked in terms of freedom to work individually and teams operating in a fashion somewhat similar to a business.

The following table details the final grade proportions for the coursework components:

Coursework	Grade Proportion
Weekly participation	10%
Small projects	25%
Team assignments	45%
Final report	20%
Total	100%

[2] Partial assignment consists of balancing the core skill sets (design, implementation, and research) within a team but allowing team leader(s) to review and "hire" teammates. Individuals can quit a team at any time but to fire a member of the team, there has to be unanimous agreement among all team members. If a member of the team is fired, you will not be able to backfill the position and the fired team member will need to apply for other positions or work on the remaining project components alone. The instructor reserves the right to make changes to this policy.

Assignment Submission. Unless otherwise specified, all assignments must be submitted to D2L (https://course.depaul.edu/) and are due by 11:59 PM on the assignment due date. Assignment documents may be submitted in Microsoft Word (.doc or .docx) or Adobe PDF only. No other document format is accepted.

Assignment Grading. No late small assignments will be accepted. However, every group is allowed **one** late project deliverable, after which there is a 50% late penalty for every 24 hours late (this late penalty is accrued--if the assignment is 1 hour late, then it is a 3.57% deduction).

Coursework Grade Review Requests. All requests must be in writing within a week of the grade assignment and include justification for the higher grade for the instructor to review.

Final Grade Numeric/Letter Mapping. Final letter grades are computed using the following scale:

If the final numeric grade is less than:	and greater than or equal to:	the final letter grade is:
-	93	A
93	90	A-
90	87	B+
87	83	B
83	80	B-
80	77	C+
77	73	C
73	70	C-
70	67	D+
67	63	D
63	60	D-
60	-	F

Other Course Policies

In-Class and Online Sections. Every effort is made to accommodate and be inclusive of online students. Adequate time is given to complete all assignments, so all students must submit assignments by the same day and time.

Student Support. Support for both in-class and online students is provided through weekly office hours dedicated to the course and through online question-and-answer discussion forums on D2L.

Online Teaching Evaluation: Evaluations are a way for students to provide valuable feedback regarding their instructor and the course. Detailed feedback will enable the instructor to continuously tailor teaching methods and course content to meet the learning goals of the course and the academic needs of the students. They are a requirement of the course and are key to continue to provide you with the highest quality of teaching. The evaluations are anonymous; the instructor and administration do not track who entered what responses. A program is used to check if the student completed the evaluations, but the evaluation is completely separate from the student's identity. Since 100% participation is our goal, students are sent periodic reminders over three weeks. Students do not receive reminders once they complete the evaluation. Students complete the evaluation online in CampusConnect<https://campusconnect.depaul.edu/>.

Email: Email is the primary means of communication between faculty and students enrolled in this course outside of class time. Students should be sure their email listed under "demographic information" atCampusConnect<http://campusconnect.depaul.edu/> is correct.

Communication. Any form of inflammatory or discriminatory language in email, online chat, or discussion forums is considered unacceptable. The instructor makes every effort to deal with such situations by providing constructive feedback and guidance should an incident occur; however, in extreme cases, appropriate administrative action may be mandated by DePaul University policy. The goal of the instructor's communication policy is not to stifle debate or to impose a regimen of political correctness, but rather to encourage an open, non-inhibiting learning environment.

Academic Integrity Policy: This course will be subject to the academic integrity policy passed by faculty. More information can be found athttp://academicintegrity.depaul.edu/

Plagiarism: The university and school policy on plagiarism can be summarized as follows: Students in this course should be aware of the strong sanctions that can be imposed against someone guilty of plagiarism. If proven, a charge of plagiarism could result in an automatic F in the course and possible expulsion. The strongest of sanctions will be imposed on anyone who submits as his/her own work any assignment which has been prepared by someone else. If you have any questions or doubts about what plagiarism entails or how to properly acknowledge source materials be sure to consult the instructor.

Incomplete: An incomplete grade is given only for an exceptional reason such as a death in the family, a serious illness, etc. Any such reason must be documented. Any incomplete request must be made at least two weeks before the final, and approved by the Dean of the College of Computing and Digital Media. Any consequences resulting from a poor grade for the course will not be considered as valid reasons for such a request.

Resources for Students with Disabilities: Students who feel they may need an accommodation based on the impact of a disability should contact the instructor privately to discuss their specific needs. All discussions will remain confidential. To ensure that you receive the most appropriate accommodation based on your needs, contact the instructor as early as possible in the quarter (preferably within the first week of class), and make sure that you have contacted the Center for Students with Disabilities (CSD) at:

> Student Center, LPC, Suite #370
>
> Phone number: (773)325.1677
>
> Fax: (773)325.3720
>
> TTY: (773)325.7296

Exceptional Circumstances. Every effort is made to accommodate students who encounter exceptional personal circumstances during the quarter. Students who experience *unanticipated* personal, work, health, or family emergencies should notify the instructor by email or phone as

soon as possible with a brief explanation of the circumstances and any anticipated impact these might have on coursework. Students who have *anticipated* exceptional circumstances such as secular or religious holiday observances, medical treatment, or travel should notify the instructor as early as possible of these circumstances and any anticipated impact these might have on coursework. In both unanticipated and anticipated cases, a suitable plan for dealing with the coursework impact is agreed upon by the student and instructor. In some cases, suitable documentation of the exceptional circumstances may be requested by the instructor.

Grade Responsibility. Grades are earned, not given. One of the reasons for the grading policies established in this course is that students are solely responsible for the grade earned. Short of providing evidence that the grade given does not match the work turned in, discussions about grades will not be entertained.