

HCI 440: Introduction to User-Centered Design

Winter 2019-2020

Instructor	Course Information
Ken Douros, Instructor College of Computing & Digital Media, DePaul University Office: Mobile Email: kdouros@depaul.edu Mobile phone: 847-284-7090 (emergencies only) Office hours: Monday 5:00-5:45 PM (Appt & Walk-in) Monday 9:00-9:45 PM (Appt only) 25 E. Jackson Blvd., Lewis 1507 (Classroom)	HCI 440 Section 801/810 Class time: Mondays, 5:45-9:00 PM Room: 25 E. Jackson Blvd., Lewis 1507 Campus: Loop Course homepage: https://d2l.depaul.edu/ Last day to drop with no penalty is January 17th . After that date, a grade of "W" will be assigned. Last day to withdraw from class is February 21st . Last day of normal class is March 9th .

Course Summary

This course presents the principles and practices of user-centered design (UCD), which include: user and task analysis; conceptual modeling and design; detailed design; prototyping; and evaluation. Students apply these UCD principles and practices in a series of individual and team assignments. 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:

- The fundamentals and process of UCD;
- User research and establishing requirements, including task description and analysis;
- Conceptualizing and modeling interaction;
- Cognitive aspects of interaction;
- Interaction design, prototyping, and construction; and
- Usability inspection and evaluation

The coursework consists of:

- Lectures;
- Class-time activities;
- Reading assignments;
- An individual assignment;
- Team assignments; and
- Three online quizzes.

Students perform UCD activities on a team-selected project throughout all team assignments.

Learning Objectives (LO)

By the end of this course, students will be able to:

1. Understand the vocabulary, principles, practices, and methodology involved in user-centered design and its areas of application. (LO1)
2. Understand and apply the basic elements of the user-centered design process. (LO2)
3. Understand and apply research methods such as secondary research, user observation, and user interviews to establish interaction design requirements. (LO3)
4. Apply the principles of user-centered design to create coherent interaction designs that implement requirements and reflect design and usability principles. (LO4)
5. Apply iterative design and prototype evaluation methods to refine their interaction designs. (LO5)
6. Communicate the results of their work in an effective and professional manner. (LO6)
7. Understand and apply principles of effective interpersonal skills in order to participate and contribute to the efforts of a multidisciplinary team. (LO7)

Required Text

Hartson, R. and P.S. Pyla (2019). *The UX Book 2: Agile UX Design for a Quality User Experience*, Morgan Kaufmann/Elsevier Science, 2019. ISBN: ISBN: 978-0-12-805342-3
[Preferred edition]

OR

Hartson, R. and P.S. Pyla (2012). *The UX Book: Process and Guidelines for Ensuring a Quality User Experience*, Morgan Kaufmann/Elsevier Science, 2012. ISBN: 978-0-12-385241-0
[Previous edition, still acceptable]

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.

Additional reading materials will be provided on D2L.

Prerequisites

None.

Class Format

Class meetings include a combination of lectures, discussions, hands-on activities, presentations of projects, and group work (during and outside of class). Success and enjoyment of this class depends on your participation, so I strongly encourage participation and cooperation from each student. You will obtain the most value and networking opportunities from the course if you are willing to collaborate and learn from one another.

Tentative Course Schedule (see D2L Calendar for the definitive class schedule)

Date/ Week	Classroom Lecture Topic	Reading UX V1	Reading UX V2	Assignments, Quizzes & Discussion Forum Topics
1/6 Wk 1	Logistics, Syllabus Review & User-Centered Design Process	Ch 1-2	Ch 1-3, 5	Individual Homework discussion Team Recruitment <i>Introduction Discussion</i>
1/13 Wk 2	Exploration: Structured Observation	Ch 3 4 (skim)	Ch 7 8 (skim)	Individual Assignment Due <i>Introduction Replies</i>
1/20 Wk 3	Exploration: Structured Observation & Structured Inquiry	Ch 3 (revisit) 4	Ch 7 (revisit) 8	Quiz #1 Available <i>Team Topic Discussion</i>
1/27 Wk 4	Definition: Task Analysis, Diagramming & Modeling	Ch 5-6, 21 (skim)	Ch 9-10, 12-13 31 (skim)	Team Project Homework #1 Due Quiz #1 Closed <i>Team Topic Replies</i>
2/3 Wk 5	Definition: Personas, Narrative & Requirements	Ch 5 (revisit) 7, 10	Ch 10 (revisit) 14, 22	Quiz #2 Available <i>Team Peer Evaluation</i>
2/10 Wk 6	Design: Ideation, Concept & Prototyping	Ch 8-9, 11, 20 (skim)	Ch 15-18, 20 30 (skim)	Team Project Homework #2 Due Quiz #2 Closed <i>Research Methods Discussion</i>
2/17 Wk 7	Evaluation: Structured Inspection	Ch 12-14	Ch 21, 23	Quiz #3 Available <i>Research Methods Replies</i>
2/24 Wk 8	Evaluation: Usability Testing	Ch 15-16, 18, 17 (skim)	Ch 24-26 27 (skim)	Team Project Homework #3 Due Quiz #3 Closed <i>Evaluation Methods Discussion</i>
3/2 Wk 9	Standards & Documentation	Ch 9, 12, 17 22 (skim)	Ch 16, 21, 27 32 (skim)	<i>Presentation prep</i> <i>Evaluation Methods Replies</i>
3/9 Wk 10	Project Presentations	Ch 19, 23-24	Ch 4, 29	Team Final Project Presentation Optional Final Exam Available <i>Team Final Evaluation</i>
3/16 Wk 11	Optional Final Exam 6:00 - 8:15 pm	Review	Review	Optional Final Exam Closed <i>Constructive Criticism</i>

Evaluation & Grading

Coursework includes the following components:

Coursework	Grade Proportion
Weekly Participation	10%
Individual Assignment	10%
Team Assignments	30%
Team Project Presentation	20%
Quizzes	30%
<i>(Optional) Final Exam</i>	<i>+5% Max</i>
Total	100%

Individual Participation (10%)

In-Class Students

In-class students are expected to attend every class session and participate in all class activities. This is not mandatory, but recommended to get the most out of class exercises when they are available. Students are individually responsible for material they may have missed due to absence or tardiness. (LO1)

Online Students

OL students (or in-class students that miss a lecture) are expected to view the COL recording of the class as soon as possible, usually within 2-3 days of the in-class meeting. (LO1)

All Students

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, nor does simply posting a URL without a substantive discussion of its relevance. (LO1)

Individual Assignment (10%)

The individual assignment acts as a foundation exercise for the rest of the coursework, particularly the team assignments and the completed secondary research analysis will help inform the team research assignment. (LO1-LO3)

Team Assignments/Team Participation (50% total)

These are done as part of a team consisting of 3-5 students. Team assignments consist of practical exercises in performing various user-centered interaction design (UCD) activities, culminating in a team final project presentation summarizing the entire research & design process and outputs.

Each team must complete a team working agreement. All students on each team are expected to contribute equally to every assignment. If a student does not contribute their fair portion to an assignment, that student’s grade on the assignment is reduced. Twice throughout the quarter, students

must complete an online Peer Review of their teammates. The review is used, if necessary, to adjust a student's grade on the assignment, and in determining each student's final team assignment participation grade component. (LO1-LO7)

Quizzes (30%)

Quizzes provide the student with the opportunity to test basic comprehension of course material. Each quiz is available online in D2L for 5+ days, so that the student may take the quiz at a convenient time. No time extensions are granted for quizzes without prior permission. (LO1-LO3)

Optional Final Exam (+5%)

The final exam is optional. It cannot hurt your grade, but can help for those students on the borderline between grades. The comprehensive final exam tests more advanced comprehension of vocabulary, concepts, and application of the practical elements of UCD.

Time Budget

Students should allow approximately 3-4 hours of work outside of class for each scheduled hour of class; this works out to 10-12 hours each week (on average) for most students. Team meetings and team assignment collaboration may increase the amount of time required.

Grading Scale

Final letter grades will be given based on the following minimum percent of total points earned:

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	60	D
60	0	F

Grading and Final Grade Posting

Grading during the quarter is completed as soon as possible, usually within one week of assignment submission. Final grades will be posted as soon as possible after the end of the quarter, but not later than **20 March 2020** at 11:59 PM.

Grade Responsibility

Every effort is made to provide the student with the resources and support needed to succeed in the course. Grades are assigned fairly and impartially based on the coursework submitted by the student,

without regard to external circumstances such as GPA goals or employer tuition reimbursement minimum grade requirements. It is the student's responsibility to earn his or her final grade. Please do not ask for a grade which you do not earn.

In-Class and Online Sections

Every effort is made to accommodate and be inclusive of online students. Since the quizzes are delivered online, OL students do not need to make proctoring arrangements for these. Adequate time is given to complete all assignments, so all students must submit assignments by the same day and time. The optional final exam will also be available online for those students who choose to take it.

Student Support & Communication

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. Students in the Chicago area may come to the instructor's posted office hours before or after class, or by appointment. Online students may call during these posted office hours; however, it is recommended that such calls be scheduled in advance in order to ensure a place in the queue. Other means of communication (video conferencing, etc.) may be made available upon advance coordination.

Online discussion forums are available to all students and should be used for posting general coursework questions and comments. The instructor makes every effort to respond to postings within 24 hours. However, due to schedule issues, it occasionally may take longer to receive an instructor response. Email should be used only for personal issues or for student- or team-specific coursework questions that cannot be addressed through the discussion forums. For technical issue (as opposed to personal issue) team emails, please Cc: all team members. Make all questions clear and specific.

Please include the course number and section (e.g., HCI 440 - OL) in the email Subject: field and include your full name in the body of the email.

Note: The instructor does not preview homework assignments. However, the instructor does answer specific questions about assignments.

Class Schedule

A detailed course schedule with lecture topics, assignments and due dates is provided in the Calendar on D2L. The D2L Calendar represents the definitive class schedule for all coursework and will be updated, if necessary, as the quarter progresses.

Policies & Expectations

An asterisk “” following a heading indicates that the section includes an instructor-specific policy.*

Guidelines for Class Behavior

- Be on time.
- Take an active role in class discussions and activities.
- Be a respectful participant by keeping phones in silent mode.
- Please keep eyes up (and off your electronic devices) when attention should be paid to the group discussion or presentation. It is unprofessional and disrespectful to the instructor and other students to be surfing the internet, chatting, or checking social media.
- Practice professionalism in your communications (face-to-face, emails, etc.) with the professor and fellow students.

Attitude

A professional and academic attitude is expected throughout this course. Measurable examples of non-academic or unprofessional attitude include but are not limited to: talking to others when the instructor is speaking, mocking another’s opinion, cell phones ringing, emailing, texting, or using the internet whether on a phone, tablet, or computer. If any issues arise a student may be asked to leave the classroom. The professor will work with the Dean of Students Office to navigate such student issues.

Team Management and Behavior*

Teamwork is an integral part of this course. The primary purpose of teams in this course is to provide diverse perspectives and skills for the coursework, not to reduce the amount of work done by individual students. Whenever possible, all team members should attempt every element of the coursework, then the team as whole should combine the individual efforts into the final product for submission. This gives all students experience in every elements of the coursework, and provides a richer and more coherent final product.

Since team sizes are small, teams are encouraged to use a consensus approach to decision making:

- Discuss and weigh the pros and cons of each decision option;
- Work toward the options that have the most benefit for the project;
- When it is clear which option is most suitable, work with its opponents to help them accept it—persuade, do not dictate.

Consensus takes more time than majority rule by vote, but reduces team friction and generally is more effective for small teams.

Team Peer Reviews

It is expected that all members of a team participate fully and equally in all team planning efforts, meetings, decisions, and coursework. To encourage and assess this participation, the course utilizes a confidential online Peer Review system. The following team member participation criteria are evaluated in the Peer Review:

Initiative: Was the individual a leader in organizing the project effort or did the individual take initial actions to successfully get the project started?

Reliability: Did the individual attend required meetings, promptly answer email, and provide materials when they were due?

Quantity of work: Did the individual contribute an average (expected) amount of work, contribute more work than other team members, or contribute less work than others?

Quality of work: Did the individual contribute work that required little additional editing or few corrections?

Support of learning: Did team members learn from the individual, possibly through informed discussion or constructive feedback? Did the person contribute to a supportive environment where thoughts and ideas were welcomed?

Students receive credit for completing each Peer Review. However, if you rate everyone a 25 or a 0, your evaluations will not be counted and you will not receive credit for the peer review—the instructor expects thoughtful evaluations.

For the results of Peer Reviews that are applied toward coursework grades, the following grade adjustment policy applies:

The average of the scores you receive from your team members acts as a multiplier for the relevant coursework. The scores you give to yourself are not included in the average. The following gives the resulting percentage of the coursework element grade you receive based on your average Peer Review score from your team members:

- Average score of 15 to 25 points: 100% of coursework element grade
- Average score of 11 to 14 points: 90% of coursework element grade
- Average score of 6 to 10 points: 80% of coursework element grade
- Average score of 1 to 5 points: 70% of coursework element grade
- Average score of 0 points will be investigated

Students who have their grades reduced as a result of the Peer Review process receive an explanatory email from the instructor.

Teams that have significant participation, behavioral, or other difficulties with a team member first should attempt to resolve the problems with the problematic team member causing the difficulties. **BE EXPLICIT WITH THE PROBLEMATIC TEAM MEMBER:** *let the problematic team member know that there is a problem and work with them to resolve the problem.* Do not simply make vague or oblique statements or suggestions. If the team member refuses input or persists in failing to participate, exhibiting inappropriate behavior, or causing other disruptive conditions, the team should contact the instructor via email—copying all other team members except the problematic member—rather than wait to raise the issue via the Peer Review process. The team should provide the instructor with a clear description of

the issue(s), evidence supporting their issue claims (such as emails or samples of the problematic team member's contributions), and a suggested action by the instructor. In most cases, the instructor will attempt to resolve the issue with the least amount of disruption to the team. Most problematic team members will receive one written email warning from the instructor. After the warning, if the disruptive behavior persists and the team feels it is warranted, it may request that the instructor remove the team member from the team. In exceptional situations, the instructor may remove the problematic team member immediately, without an email warning. Removal from a team is at the instructor's discretion. A removed student must complete all remaining team assignments individually and incurs a 20% grade penalty on all remaining team assignments.

Civil Discourse

DePaul University is a community that thrives on open discourse that challenges students, both intellectually and personally, to be [Socially Responsible Leaders](#). It is the expectation that all dialogue in this course is civil and respectful of the dignity of each student. Any instances of disrespect or hostility can jeopardize a student's ability to be successful in the course. The professor will partner with the Dean of Students Office to assist in managing such issues.

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 after the emergency with a brief explanation of the circumstances and any anticipated impact these might have on coursework. All such exchanges are treated as strictly confidential. Students who have anticipated exceptional circumstances such as secular or religious holiday observances, planned 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.

Incomplete Grades

An incomplete grade is a special, temporary grade that may be assigned by an instructor when unforeseeable circumstances prevent a student from completing course requirements by the end of the term and when otherwise the student had a record of satisfactory progress in the course. CDM policy requires the student to initiate the request for incomplete grade before the end of the term in which the course is taken. Prior to submitting the incomplete request, the student must discuss the circumstances with the instructor. Students may initiate the incomplete request process in MyCDM.

- All incomplete requests must be approved by the instructor of the course and a CDM Associate Dean. Only exceptional cases will receive such approval.
- If approved, students are required to complete all remaining course requirement independently in consultation with the instructor by the deadline indicated on the incomplete request form.

- By default, an incomplete grade will automatically change to a grade of 'F' after two quarters have elapsed (excluding summer) unless another grade is recorded by the instructor.
- An incomplete grade does NOT grant the student permission to attend the same course in a future quarter.

Withdrawal

Students who withdraw from the course do so by using the Campus Connection system (<http://campusconnect.depaul.edu>). Withdrawals processed via this system are effective the day on which they are made. Simply ceasing to attend, or notifying the instructor, or nonpayment of tuition, does not constitute an official withdrawal from class and will result in academic as well as financial penalty.

Instructor Request: Withdrawal*

Because of the strong inter-dependency among team members and teams, please notify me and, if you choose, your other team members, as soon as possible after any decision to withdraw from the course. This will allow me to make appropriate adjustments to teams to accommodate the loss of a team member.

Retroactive Withdrawal

This policy exists to assist students for whom extenuating circumstances prevented them from meeting the withdrawal deadline. During their college career students may be allowed one medical/personal administrative withdrawal and one college office administrative withdrawal, each for one or more courses in a single term. Repeated requests will not be considered. Submitting an appeal for retroactive withdrawal does not guarantee approval.

College office appeals for CDM students must be submitted online via MyCDM. The deadlines for submitting appeals are as follows:

- Autumn Quarter: Last day of the last final exam of the subsequent winter quarter
- Winter Quarter: Last day of the last final exam of the subsequent spring quarter
- Spring Quarter: Last day of the last final exam of the subsequent autumn quarter
- Summer Terms: Last day of the last final exam of the subsequent autumn quarter

Coursework Grade Review Requests*

Every effort is made to grade in a fair and consistent manner. Should a disagreement arise about a coursework grade, the student or team may submit a grade review request in writing to the instructor. The request must be submitted within 48 hours after the assignment grade has been posted. The request must include the student's or team's argument for a different grade evaluation, based on verifiable evidence presented by the student. The instructor handles grade review requests and responds to the student with a review decision as soon as possible.

Academic Integrity Policy and Plagiarism*

This course will be subject to the academic integrity policy passed by faculty. More information can be found at <http://academicintegrity.depaul.edu/>.

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 grade of '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.

Instructor Policy Extensions: Academic Integrity Policy and Plagiarism*

All assignment submissions to D2L are subjected to automated plagiarism analysis using Turnitin. Analysis results are visible to the student.

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.

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 \(CSD\)](#) on the Loop Campus at:

25 East Jackson Boulevard
Lewis Center, Suite 1420
Chicago, IL 60604-2287
Phone: (312)362.8002
Fax: (312)362.6544
TTY: (773)325.7296
Email: csd@depaul.edu

Online Instructor Evaluation

Instructor and course evaluations provide the best way for students to provide valuable feedback that can improve teaching and the learning environment. Detailed feedback can help the instructor to build on the elements of the course that are strong and improve those that are weak, tailoring teaching methods and materials to those aspects the students find most valuable. Positive comments identify those areas that are most valuable and can even be further emphasized; constructive criticism provides the opportunity to revisit course materials or methods and make modifications to improve the course content. The evaluation of the instructor and course provides you an opportunity to make your voice heard the quality of teaching at DePaul. The evaluations are anonymous; while you will continue to

receive periodic reminders to participate, the instructor and administration will not be able to associate ratings with any particular respondent. Students are encouraged to complete the evaluation online in [CampusConnect](#) and make your voice heard!

Changes to Syllabus

This syllabus is subject to change as necessary during the quarter. If a change occurs, it will be thoroughly addressed during class, posted under *News* in D2L and sent via email.