

## HCI 450: Foundations of HCI

### Instructor

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### Course Information

HCI 450 Section 901/910  
Monday, 5:45-9:00 PM  
Room: Lewis 1107  
Campus: Loop  
Course homepage: <https://d2l.depaul.edu/>  
Last day to drop with no financial penalty: Apr 7 (in-class) or Apr 9 (OL); after Apr 7 (in-class) or Apr 9 (OL), a grade of "W" will be assigned.

### Course Summary

This course discusses the application of psychological and physiological theory and experimental findings to the design of human-computer interaction. Topics include: an overview of applicable research methods; visual, auditory, and haptic perception; cognition; decision making; display and control design; stress; and social aspects of design.

Coursework consists of:

- Lectures;
- Weekly participation comments and occasional supplemental activities;
- Reading assignments;
- Individual written assignments and small projects;
- Research review documents and presentation; and
- Three online quizzes.

### Learning Objectives (LO)

1. Students will demonstrate understanding of the psychological and physiological factors behind HCI usability guidelines and heuristics in activities, individual assignments, small projects, and quizzes. (LO1)
2. Students will demonstrate understanding of the fundamentals of research methods in general, and the use of these methods in HCI in particular, in individual assignments and quizzes. (LO2)
3. Students will find, evaluate, and summarize research on a selected HCI research topic in a series of research review assignments. (LO3)
4. Students will communicate the results of their research summarization in an effective and professional manner in a final research review paper and recorded presentation. (LO4)

### Texts

*Required:*

Johnson, J. (2014). *Designing with the Mind in Mind: Simple Guide to Understanding User Interface Design Guidelines, Second Edition*, Morgan Kaufmann/Elsevier Science. ISBN-13: 978-0124079144 ISBN-10: 0124079148. (Abbreviated as 'DMM' in the *Class Topic Sequence*, following.)

This text is also available online at the DePaul Libraries Web site, <http://library.depaul.edu/>, in the *Safari* database, which has a 7-user maximum. Campus Connection login is required to access the eBook.

**Recommended:**

Norman, D. (2013). *The Design of Everyday Things: Revised and Expanded Edition*, Basic Books. ISBN: 0465050654.

This text is also available online at the DePaul Libraries Web site, <http://library.depaul.edu/>, in the *Books 24x7* database. Campus Connection login is required to access the eBook.

**Prerequisites**

IT 403 Statistics and Data Analysis

**Class Format**

Class meetings involve a combination of lecture and discussions. Some class-time activities may be included, if time permits.

**Evaluation & Grading**

Coursework includes the following components:

Coursework	Grade Proportion
Participation (incl. Module Activities)	15%
Written Assignments and Small Projects	30%
Research Review Assignments	30%
Quizzes	25%
Total	100%

**Participation**

*Academic integrity quiz.* All students must review available academic integrity resources and complete a short online affirmation of their awareness of these resources. This coursework component is mandatory.

*Personal introduction.* All students must post a brief personal introduction at the start of the quarter.

*Weekly participation.* In-class students are expected to attend every class session; OL students are expected to view the COL recording of the class as soon as possible, usually within 2-3 days of the in-class meeting. 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. Participation forums are NOT reopened after the participation due date.

(LO1, LO2)

*Activities.* Activities are intended to introduce students to some practical aspect of a presentation or upcoming assignment. Students must perform the activities and post their comments or other evidence of performing the activity on the corresponding D2L Discussion Forum topic by the indicated due date.

(LO1)

**Written Assignments and Small Projects.** These two or three assignments include (1) a written HCI theories assignment and (2) reports for task observation assignments with test subjects. All assignment are individual; there are no team assignments. (LO1, LO2)

**Research Review Assignments.** These assignments include (1) a research topic proposal with preliminary references; (2) an annotated bibliography; (3) a research review of a maximum of 10 pages; (4) a 5-minute recorded presentation summarizing your review; and (5) comments on five (5) other student presentations. (LO3, LO4)

**Quizzes.** Quizzes provide the student with the opportunity to test her or his basic comprehension of course material. Each quiz is available online in D2L for several days, so that the student may take the quiz at a convenient time. Since the quizzes are delivered online, OL students do not need to make proctoring arrangements for these. No time extensions are granted for quizzes without prior permission. (LO1, LO2)

**Time Budget.** Students should allow approximately 3-4 hours of work outside of class for each scheduled credit hour of class; this works out to 10-12 hours each week (on average) for most students.

**Grading Scale.** Final letter grades will be given based on the following 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 **16 June 2017** 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 final exam is online, online students do not need to make proctoring arrangements for the exam. Adequate time is given to complete all assignments, so all students must submit assignments by the same day and time.

**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. 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. 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-specific coursework questions. Please make all questions clear and specific.

**Please include the course number and section (e.g., HCI 450 - OL) in the email**

***Subject:* field and include your full name in the *body* of the email.**

*Note: The instructor does not preview whole homework assignments. Please make all questions specific, not general.*

**Class Topic Sequence (*provisional—subject to revision*)**

Due to the variable student composition of each class, it is practical only to provide a list of the sequence of topics and corresponding readings. Due to varying student interests and engagement, multiple topic groups may be presented in a single class meeting, or topic groups may span more than one class meeting. Thus, only one date is listed in the following schedule: the official date of the final exam.

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

Topic Group 1	
<b>Course Logistics</b>	
<b>Introduction, Usability, Historical Background, and Design Guidelines</b>	<i>Reading: DMM Introduction &amp; Appendix</i>
Topic Group 2	
<b>Research Methods</b>	<i>Reading: None</i>
<b>Quiz:</b> <i>Statistics Review Quiz + Quiz 1 (Modules 1 &amp; 2 + Library Resources) follows Group 2</i>	
Topic Group 3	
<b>Visual Perception I: Anatomy &amp; Physiology</b>	<i>Reading: DMM Ch's 1-5</i>
Topic Group 4	
<b>Visual Perception II: Aspects of Perception</b>	<i>Reading: DMM Ch's 1-5</i>
Topic Group 5	
<b>Visual Perception III: Perception of Objects</b>	<i>Reading: DMM Ch's 1-5</i>
<b>Quiz:</b> <i>Quiz 2 (Modules 3, 4, &amp; 5) follows Group 5</i>	
Topic Group 6	
<b>Perception in Other Sensory Modalities</b>	<i>Reading: None</i>
Topic Group 7	
<b>Memory and Attention</b>	<i>Reading: DMM Ch's 7-9</i>
Topic Group 8	
<b>Decision Making</b>	<i>Reading: DMM Ch. 12</i>
Topic Group 9	
<b>Displays and Controls</b>	<i>Reading: DMM Ch's 13 &amp; 14</i>

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Topic Group 10

**Stress, Human Errors, and Cultural Factors**

*Reading: None*

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Week 11 *Final exams week—no class meeting*

Tue 6 Jun *Quiz 3 (Modules 7-10) available online in D2L for 3-4 days, including official exam date)*

Final grades will be posted ASAP but no later than 11:59 PM on Jun 16.

## 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.

### 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. Students who have anticipated exceptional circumstances such as secular or religious holiday observances, medical treatment, or travel must 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.

#### Formal University Policy: Excused Absence

In order to petition for an excused absence, students who miss class due to illness or significant personal circumstances should complete the Absence Notification process through the Dean of Students office. The form can be accessed at <http://studentaffairs.depaul.edu/dos/academicprocesses.html>. Students must submit supporting documentation alongside the form. The professor reserves the sole right whether to offer an excused absence and/or academic accommodations for an excused absence.

### 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.

### **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 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—requests submitted after 48 hours are not considered. The request must include the student'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*. Originality 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) at:

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

### **Online Instructor Evaluation**

Instructor and course evaluations provide valuable feedback that can improve teaching and learning. The greater the level of participation, the more useful the results. As students, you are in the unique position to view the instructor over time. Your comments about what works and what doesn't can help faculty build on the elements of the course that are strong and improve those that are weak. Isolated comments from students and instructors' peers may also be helpful, but evaluation results based on high response rates may be statistically reliable (believable). As you experience this course and material, think about how your learning is impacted. Your honest opinions about your experience in and commitment to the course and your learning may help improve some components of the course for the next group of students. Positive comments also show the department chairs and college deans the commitment of instructors to the university and teaching evaluation results are one component used in annual performance reviews (including salary raises and promotion/tenure). The evaluation of the instructor and course provides you an opportunity to make your voice heard on an important issue—the quality of teaching at DePaul. Don't miss this opportunity to provide feedback!

### **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.