CS 124 – User Interface Design – Fall 2014

Who, When, and Where
Instructor: Jim Boerkoel, boerkoel@cs.hmc.edu, Olin 1265
When: T/Th 9:35 – 10:50
Where: SHAN 3425
Grutors: Sasha Heinen, Linnea Nelson, Samantha Stilson

About
CS 124 introduces Human Computer Interaction by exploring two basic questions: How do people interact with computers? And how can interactive systems be designed to enhance people’s experiences? You will learn about how to scope, prototype, design, and evaluate a user interface through both interactive investigations and a course-long group project. In your group project, you will be reimagining and (re)designing the web presence of local community-based service providers in the greater Claremont / Pomona area in a way that caters to their specific users. Other topics that we will discuss in this course may include key findings from cognitive and social psychology and the social implications (e.g., accessibility, privacy, ethics, values, etc.) of design.

Course Goals
By the end of the semester, students should gain:
• a basic understanding of traditional user interface design principles;
• experience with methods encompassing the full interaction design lifecycle;
• the ability to critique a design based on principles of human-computer interaction;
• practical experience communicating with real clients and users about design;
• the ability to think, speak, and write critically about advantages/disadvantages of new or emerging UI technologies and paradigms;
• an appreciation for socially-significant areas of current research.

Please note: gaining programming experience and learning specific technologies are NOT among the goals for this class. Your web application projects will be built on top of the Drupal Content Management System. This abstracts away much of the back-end programming, which in turn allows you to focus on gaining experience designing useful, usable front-ends.

Textbook
Copies of all required/recommended texts will also be available through the CUC library and also in our course library, which will be housed in Olin 1261.

Required – Coursepack (Available at Huntley Bookstore);
Design of Everyday Things (Revised and Expanded Edition), Norman. 0465050654

Recommended – Don’t Make me Think (Revisited). Krug. 0321965515

Office Hours, Help Sessions, and Other Help
There are lots of opportunities to get help on the homework problems and material.
• Jim will offer regular office hours. These are tentatively scheduled for 4:00-5:00PM on M-W. To guarantee a 1-1 time to meet with Jim, please schedule an appointment.
• Grutors are available to consult with teams about their projects as technical and other challenges arise. Please contact staff through Canvas to schedule a consultation.
• You may post requests for clarifications using the Canvas discussion or messaging tool. Please be careful not to post “spoilers”. However, if you have a conceptual question about the material or a relatively "big" question about a homework problem, you should come and talk to one of us in person. *In any case, we ask that you use Canvas rather than e-mail to communicate with the course staff so that we can answer your questions as quickly and efficiently as possible.*

**Course Management Sites**

• Homework assignments and programming projects will be hosted and submitted online through our course’s Canvas site: [https://canvas.instructure.com/courses/864304/](https://canvas.instructure.com/courses/864304/)

**Course Requirements**

• Reading Responses / In-class participation: Each lecture will be accompanied with a reading assignment and associated discussion questions. You are responsible for completing the reading, responding to the discussion questions, and coming to class prepared to contribute your ideas to the class discussion. You will submit your responses through Canvas prior to class.

**10% Extra Credit:** 10% Extra-Credit will be rewarded if you read the additional optional reading (or find a relevant article on your own) and write a short 3-5 sentence summary.

• Investigations: Investigations are your opportunity to explore one or more of the ideas that we discuss in class either on your own or as a group. Many investigations are designed to help your group make meaningful progress on your course project and to provide opportunities for feedback and further discussion. Investigations will be submitted through Canvas. Typically, Investigation deadlines will on the Wednesday after their introduction, at 11:59PM.

• Midterm: There will be one exam (tentatively scheduled to be due on October 17). Details about this exam will be announced later in the semester.

• Final Project Deliverables: In addition to the Investigations, you will be required to make presentations about your project and to turn in code, documentation, and all supporting files. These final will act as the final in this course.

**Grading**

- Reading/Participation: 25%
- Investigations: 45%
- Midterm(s): 15%
- Final Project Deliverables: 15%

Please note: To receive a passing grade in this class, you must submit all Investigations and Project Deliverables.

**Late Submission Policy**

In general, work will not be accepted late. However, for Investigations not involving a presentation or final project deliverables only, you have three free 24-hour extensions that you
can use for any reason; beyond these free extensions, each Investigation will lose 33% of its value for each 24-hour period that it is late (weekends count). You may use at most two extensions on any one investigation. For group Investigations, all team members must agree to use an extension. You do not need to ask me in advance to take your extension.

**Investigation Resubmission Policy**

Students may resubmit up to one Investigation for regrade. Your new Investigation grade will be the average of the original score and the regrade score. Resubmissions cannot be used to recover late submission penalties. Resubmissions should be completed alone and e-mailed or given directly to Jim. The deadline for resubmissions is 12/1 (day after Thanksgiving break).

**Attendance**

Due to the participatory and discussion-based nature of this course, attendance is mandatory. Unexcused absences will be handled as followed:

- Up to 2 unexcused absences: no penalty
- 3-4 unexcused absences: -5% of your final grade for each absence
- More than 4 unexcused absences will result in course failure. No exceptions.

The mechanism we will use to enforce the 2 free absences will be to drop your two lowest Reading Response / Participation scores from the semester. Please use absences wisely; you never know when an unexpected clinic trip or job interview will pop up!

**Exemption for Illness**

If you get sick or confront some other emergency and can’t attend class or turn in an assignment on time, we understand! To be fair and consistent, here’s the policy. Go to Baxter, get a note from a doctor or Dean Jacobsen (or a dean at your home college if you’re not a Mudder), and send it to Jim as a Canvas note. We’ll work together to find an appropriate arrangement.

**Collaboration and Appropriate Use Policy**

You are encouraged to discuss problems you encounter with classmates, grutors, and Jim. Verbal collaboration with other students on individual assignments is encouraged. However, all submitted work should be completed by yourself individually and not a collaborative effort or copied from a common source (e.g., whiteboard).

You must indicate on each submission the names of people with whom you collaborated (project partners, discussion groups, etc.). You do not need to credit Jim or the grutors, however. The use of Internet resources (e.g., online Drupal tutorials) to aid in course work is acceptable as long as it does not substituted for an understanding of the course material. Plagiarism and direct use of external materials (e.g., books, online resources, or solution sets from previous offerings of this or other courses) to find hints or answers to any assigned work is strictly prohibited.
Questions About Grading
You may have questions or concerns about grading on occasion. When such issues arise, please send a Canvas note to the instructors indicating the specific problem and the nature of your question/concern. If you have a regrade request for an Investigation, please write a detailed justification and submit it directly to Jim. Regrade requests will not be accepted on reading responses. Please send any concerns regarding exam grading directly to Jim.

Writing Center
Many Investigations this semester will involve significant writing. You will be graded, in part, for the quality of your exposition.

The Writing Center provides a welcoming space for writers to get feedback on their composition projects, whether written, spoken or visual pieces. Writing Center Consultants are prepared to assist students in any discipline with any stage of the writing process, from developing an idea to polishing a final draft. Even the most accomplished writers benefit from seeking feedback at the writing center. The center is open Sunday through Thursday evenings from 7-11 and Saturday and Sunday afternoons from 3-5. It is located in Shanahan 1470, just up the walkway from the cafe. You may schedule an appointment through their website, www.hmc.edu/writingcenter, or you may simply drop in during normal hours. If you'd like an appointment outside of normal hours, you may email writing_center@hmc.edu with your request.

YOU WILL LIKELY FIND YOUR WRITING CENTER VISIT MORE VALUABLE IF YOU GO EARLIER THAN THE NIGHT BEFORE YOUR FINAL DRAFT IS DUE.

Acknowledgements
This course has adapted and adopted content from many wonderful sources, including Bjorn Hartmann, Maneesh Argawal, Janet Davis, and Christine Alvarado. Thanks to each for helping me create this course!
Tentative Schedule
This is a prospective course schedule, and is subject to change. All readings and assignments will be posted at least a week in advance.

Week 1: Introduction / Design Cycle
T - 9/2: Introduction
TH - 9/4: Design Cycle
Investigation 1: Individual Design Assignment — Due: 9/10

Week 2: Sketching / Project Introductions
T - 9/9: Sketching, Storyboarding and Critique
TH - 9/11: Interfacing with Community
Investigation 2: The Box — Due: 9/17

Week 3: Brainstorming / Task Analysis
T - 9/16: Brainstorming / Project Introductions
TH - 9/18: Task analysis
Investigation 3: Group Brainstorm & Collaboration Plan — Due: 9/24

Week 4: Conceptual Models
T - 9/23: Conceptual Models 1
TH - 9/25: Conceptual Model 2
Investigation 4: Individual Heuristic Review — Due: 10/1

Week 5: Evaluation
T - 9/30: Heuristic Evaluation
TH - 10/2: Human Information Processing
Investigation 5: Contextual Inquiry, Task Analysis, Competitive Analysis — Due: 10/8

Week 6: Input Devices and Prototyping
T - 10/7: Input Devices and Input Models
TH - 10/9: Prototyping
Investigation 6: Low-Fidelity Prototype — Due: 10/15
Also Due: Team Assessment 1

Week 7: User Testing, Statistical Analysis
T - 10/14: Usability Testing
TH - 10/16: Statistical Analysis / Engineering Review
Midterm!!

Week 8: Engineering Interfaces
T - 10/21: FALL BREAK!
TH - 10/23: Engineering Interfaces Wrap-up
Investigation 7: Low-Fidelity Test and Iteration — Due: 10/29

Week 9: Graphic Design / Visual Information Design
T - 10/28: Graphic Design
TH - 10/30: Information Visualization
Investigation 8: Graphic Design / Best Feature Redesign — Due: 11/5
Week 10: Historical UI, Future UI, Advanced Topics Intro
   T - 11/4: Historical UI
   TH - 11/6: Future UI / How to Lead a Discussion:
   Investigation 9: Interactive Prototype — Due: 11/12

Week 11: Interactive Prototypes
   T - 11/11: Interactive Prototype Presentations 1
   TH - 11/13: Interactive Prototype Presentations 2
   Investigation 10: Advanced Topics Presentations — Due: 11/19
   Also Due: Team Assessment 2

Week 12: Advanced Topics / Future Interactions
   T - 11/18: ATFI Presentations
   TH - 11/20: ATFI Presentations
   Investigation 11: Pilot Usability Study — Due: 12/3

Week 13: Advanced Topics / Future Interactions
   T - 11/25: ATFI Presentations
   TH - 11/27: THANKSGIVING

Week 14: Wrap-up / Guest Lectures
   T - 12/2: Panel / Guest Lecture
   TH - 12/4: Guest Lecture / Wrap Up
   Final Presentation and Poster — Due: 12/9

Week 15: Final Sales Pitches
   T - 12/9: Final Presentations 1
   TH - 12/11: Final Presentations 2
   Team Assessment, Final Video & Code