INST 631: Fundamentals of Human Computer Interaction

Spring 2015

Instructor: **Marshini Chetty**
E-mail: marshini@umd.edu
Office: Hornbake library building, South Wing, 2117H
Office hours: Wednesdays 5-6pm or by appointment
Classroom location and meeting time: HBK 0105, Wednesdays 6:00 – 8:45pm

Course Website: http://elms.umd.edu (Note: This printed syllabus is subject to change. Please refer to the course website weekly schedule for the most up to date schedule.)

Course Goals

The goal of this course is to introduce the fundamentals of human computer interaction, user interface design, and usability analysis. Students will learn the principles and guidelines for usability, quantitative and qualitative analysis methods, and apply them through critiques of existing interfaces and the development of new ones. Topics covered include cognitive models, task analysis, the psychology of human computer interaction, experimental design, and prototyping methods.

Course Outcomes

- Critically discuss common methods in the user-centered design process and the appropriateness of the individual methods for a given problem
- Use, adapt, and extend classic design standards, guidelines, and patterns
- Employ selected design methods and evaluation methods at a basic level of competence
- Build prototypes at varying levels of fidelity, from paper prototypes to functional, interactive prototypes

Course Communications

All communications will take place through ELMS (http://elms.umd.edu) including course announcements and notifications of class content or schedule changes. Please ensure you check the course website regularly or configure your settings to receive emails when notifications and such are posted. You are welcome to contact me directly on marshini@umd.edu or via ELMS for any questions or concerns. We will use the discussion posts on ELMS to post responses and answers to frequently asked questions throughout the course.

Evaluation Criteria

The following assignments will be due throughout the semester:
- Group Project (45%)
- Assignments (30%)
- Hall of Fame/Hall of Shame (5%)
- Reading Responses (10%)
- Attendance and Participation (10%)

Group Project (45 %)

Group cooperation and communication skills are essential in working with user experience and software development teams. The group project will bring all components of the course together in a semester-long project with teams of 3-4 members. Teams will be allowed to pick their own topic with guidance from the instructor. The project will allow students to apply the user-centered design methods discussed in class to inform the design of a working prototype.

Assignments (30 %)

You will complete three graded assignments. Unless specified by the instructor, assignments must be completed independently. **Assignments are due by the beginning of class on the due date and must be uploaded on ELMS.**

Hall of Fame/Hall of Shame (5 %)

Everyone is required to present one Hall of Fame/Hall of Shame design in class during the semester. For more information and to sign up for a date: see the Hall of Fame/Hall of Shame assignment sign up page on ELMS.

Reading Responses (10 %)

Along with each collection of readings/videos, you will often also receive a set of questions to think about while you read. You must submit a 1-2 paragraph response to the reading/video on ELMS in the appropriate discussion thread. Responses must be based off the readings and you are also welcome to include a response to other people's reactions to the readings on the discussion boards. Grades are pass/fail and in rare circumstances, extra credit may be awarded for exceptional work. **Completed reading responses must be posted by the beginning of class on the due date.**

Class Participation (10 %)

Students are expected to fully participate in all class activities to gain the most benefits from the class. You should come to class prepared to discuss any assigned readings as well as to provide your perspectives on these readings. You will also be expected to participate in group

discussions and other in-classroom activities. The effectiveness of the course depends on the quality of your participation and willingness to internalize the skills and concepts covered in the course and efforts to apply them to real-world settings.

Books and Web Resources

The required readings will be posted on the course website as PDF documents. The following books are not required but are recommended for further reading. These books are all available on Amazon.com.

- **Supplemental:** The Design of Everyday Things by Norman, D., Basic Books, 2013.
- **Supplemental:** Interaction – Beyond Human Computer by Preece, J., Rogers, Y., and Sharp, H., Wiley, 2011.
- **Supplemental:** Research Methods in Human-Computer Interaction, Lazar, J., Feng, J.H., Hochheiser, H., Wiley, 2010.

SCHEDULE OF TOPICS (SUBJECT TO CHANGE)

The following schedule lists the major topics and assignment due dates, which will be subject to change throughout the semester. Readings for each week are posted on the course website – please ensure that you complete the reading response and readings for each week by the start of class in that week.

Key:
Individual Assignment = IA
Group Project Assignments = GP
Reading Response = RR

Week 1 (Jan 28) - Introduction to User-Centered Design

Week 2 (Feb 4) - Understanding Users
- GP1 due on Feb 3, 11:59pm night before class
- RR1 due
- Sign up for Hall of Fame/Hall of Shame presentation due

Week 3 (Feb 11) - Conceptual Models
- IA1 due
- RR2 due

Week 4 (Feb 18) - Cognitive Aspects - Task Analysis
- GP2 due

Week 5 (Feb 25) - Sketching, Storyboards, and Prototyping
- RR3 due

Week 6 (Mar 4) - Input & Interaction I

- IA2 due
- RR4 due

Week 7 (Mar 11) - Input & Interaction II
- GP3 due (report and presentation)

Week 8 (Mar 18) - Spring Break - No Class

Week 9 (Mar 25) - Evaluation I: Heuristic and Inspection Methods
- RR5 due
- IA 3 part 1 due

Week 10 (Apr 1) - Evaluation II: Models and Intro to Empirical Method
- IA3 part 2 due

Week 11 (Apr 8) - Evaluation III: Experiments
- GP4 due

Week 12 (Apr 15) – Universal Design, Accessibility and International Development

Week 13 (Apr 22) - Trends in HCI
- RR6 due

Week 14 (Apr 29) - Final Project Presentations
- GP5 Final Presentation Slides due

Week 15 (May 6) - Project Work Week - No Class
- GP5 Final Report and Interactive Prototype due

Academic Integrity

The University of Maryland, College Park has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation of academic dishonest, and plagiarism. For more information on the Code of Academic Integrity or the Student Honor Council, please visit http://www.shc.umd.edu.

Students with Disabilities

Please let the instructor know at the beginning of the semester if you have any kind of physical or learning disability that will affect your coursework. The instructor will then contact the relevant services at the University's Disability Support Services to work out appropriate accommodations for you. Please refer to the DSS website for more details: http://www.counseling.umd.edu/DSS/.

Emergency Preparedness

Please refer to the website: http:///www.umd.edu/emergencypreparedness/ for the state of the campus. If campus is closed, information about rescheduling course activities will be provided via ELMs announcements once the campus has re-opened.

Attendance policy

Attendance is extremely important in this course, as much of the learning that will occur is based on in-class activities and discussion. Attendance will be taken at each class and will influence each student's class participation grade. Allowances can be made for special circumstances such as illness (self or dependent), religious observances, and other compelling circumstances beyond the student's control (see the University's attendance policy at http://www.testudo.umd.edu/soc/atedasse.html). Please contact the instructor as soon as you know (or suspect) that you will not be able to attend.

Late Assignments & Grading Procedures

It is important that assignments are turned in on time since we will typically be discussing them as a class once they are submitted. Your assignment is due at the beginning of class, unless otherwise indicated and should be uploaded directly to ELMS via the relevant assignment link. If there are extenuating circumstances (e.g., personal illness, death in the family) that make it impossible to turn in an assignment, please let the instructor know (i.e., well before the assignment is due) so that appropriate accommodations can be made. The general policy is that late work will have 10% of its total grade deducted per calendar day, starting on the same day that it is due. Accepting late work and assigning late penalties is at the instructor's discretion.

CourseEvalUM:

At the end of each semester, the University of Maryland asks you to help evaluate each course you take including this one. This is a part of your responsibility as a member of the University of Maryland community. More importantly, by completing this evaluation you will help the instructor and the iSchool learn more about how to improve the course, what worked well, and what did not work well. I am appreciative of feedback about what you liked about the class as well as what you did not like. All the feedback you provide is confidential and valuable. Your input will help improve teaching and learning at the iSchool, at the University as well as helping to evaluate the instructor for the tenure and promotion process. Also know that all instructors and academic administrators can only view whatever feedback you submit after grades have been entered. The CourseEvalUM will be open for fall semester classes in December at http://www.courseevalum.umd.edu. Students with no "Pending" evaluations in their Evaluation Dashboard will have access to the aggregate results of other course evaluations online.

Acknowledgements

The materials for this course were compiled drawing from previous iterations of the course taught by Leah Findlater and CS 6750 taught by Jim Foley at Gatech.