

Human-Centered Design – HCC 729, Spring 2014

Instructor: Dr. Shaun Kane

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Course web page: <http://hcc729s2014.wordpress.com>

Meeting time: Thursdays, 4:30-7pm, ITE 458

Course Description

This course is a project-based course. It explores the main factors, methods and processes that underlie the user-centered design of information systems. The course focuses on conceptualizing and understanding the fundamental human-computer interaction issues, as well as user testing and interaction design processes. The course also provides students with the opportunity to apply these concepts through the design, evaluation and implementation of interface prototypes in real-world environments.

Prerequisites and Recommended Background

- HCC 629, IS 303, or equivalent.
- HCC 636
- Prior knowledge of programming is not expected.
- HCC710. While not required, this course will be helpful in this class.
- Statistics course: While not required, this course will be helpful in this class, and is recommended to students interested in UX / Usability careers.

Required Materials

1. UMBC email ID (Please do not use any other email for class correspondence)
2. 8 x 10 (or similar sized) plain paper or notebook; *bring to every class*
3. At least 3 colors of pen/pencil/marker; *bring to every class*
4. Wordpress (or similar) course blog

Objectives

The course builds upon the fundamental human-factors concepts introduced in HCC 629/IS 303, enabling students to apply these in a practical context. By the end of the course, students are expected to have an understanding of:

- The goals of human-centered design and how they relate to usability
- The techniques for understanding user cognition within the context of interaction design
- The techniques for determining interface user needs and requirements
- The approaches for solving interaction design-related problems
- The methods and guidelines in user-centered design
- The collection and analysis of user data

Office Hours (ITE 431)

30 minutes before class, and 20 minutes after (4-4:30 and 7:00-7:20), or by appointment. Please contact me via email if you plan to attend office hours.

Contact Information

It is easiest and preferred to reach me by email. Please use my UMBC email address (skane@umbc.edu) and your official UMBC address for email communication. With the exception of weekends and when traveling, I do my best to respond to student e-mail within 24 hours.

Grading

Expectation of work: Each credit hour is considered equivalent to one hour of in-class time, and two hours of work outside of class. Thus, for a three-credit course, it is expected that you will spend at least **six** hours per week working outside of class.

Grading breakdown: Your grade in this course will be based on the following components:

- *Project assignments (2 projects, 70% of final grade):* There will be 2 large projects over the course of the semester. Assignment 1 is about analyzing and improving an existing design. Assignment 2 will be about designing uses of future technology. These will consist of both weekly deliverables (25% each) and a final report (10% each). These projects may be conducted as a group or alone.
- *Course blog and reading reflections (15%).* Each student will create a blog to organize and share their work from this course as a portfolio. This blog will contain all project deliverables, reading reflections, and UI / UX news articles. If you are working with a partner, you may decide to create a separate project blog; post content to each student's blog, or only one student's blog.
- *Class participation (10%):* Students will be expected to contribute actively to the class both in class and by providing feedback on other students' work. At the end of the semester, students may submit a class participation report (linked on the web site) describing their contributions to the learning environment of this class.
- *Mini-lecture (5%).* Each student will present a 5 to 10 minute talk about a topic of your choosing. The goal is to teach the class something that we wouldn't otherwise cover. This could be a new and emerging technology, the application of course topics to your work or hobby, a new user evaluation technique, or something else. Please talk to the instructor if you need help choosing a topic.

Late assignments: Unless otherwise specified, assignments are due at the start of class on the specified due date (4:30:00pm). Any assignment delivered after the specified due date will be considered late. Unless otherwise specified, late assignments will be accepted for up to one week after the original due date, for **50% credit**. After one week, late assignments will not be accepted.

Grading philosophy: When possible, I try to provide clear grading guidelines for each assignment. However, as this class involves design, writing, and other creative activities, it is not always possible to specify how every point will be assigned. An assignment may meet all points of the assignment description, but not receive a perfect score. As noted in the section "Letter grades", assignments that simply "check all the boxes" will typically receive a B. Grades of A are reserved for assignments that complete the requirements but are also **good** – i.e., well written, thoughtful, and professionally presented. I encourage you to solicit feedback on your work-in-progress from friends, family, and peers, and via the Blackboard discussion board.

Re-grading and resubmission: If you feel that an assignment was incorrectly graded, please come to office hours with the assignment and a written list of any mistakes made during grading, and the assignment will be reevaluated. If you are unhappy with a grade that you receive on an assignment, you may be able to resubmit the assignment for an improved grade. If you are interested in resubmitting, please contact the instructor within 48 hours of receiving your original grade. You will be asked to provide a plan for how you will improve the assignment, and will have one week to complete the resubmission. The opportunity to resubmit an assignment will be at the instructor's discretion. Except in unusual circumstances, no more than one resubmission will be permitted per semester.

Add/Drop

Add/Drop day this semester is Friday, February 7. However, you may be charged for dropping a UMBC course between February 1 and February 7 if you do not replace it with another class. Please see <http://sbs.umbc.edu/tuition-info/drop-and-withdrawal/spring-2014-dropwithdrawal/> for details.

Instructor's Expectations

Satisfactory completion of this course requires meeting the following expectations. Students who are unable to meet these expectations will not receive a passing grade in this course. If you have questions about these expectations, please contact the instructor.

Class attendance: Regular and punctual attendance is expected of all students. Students should notify the instructor in advance if they are unable to attend class, or will be arriving late. It is the student's responsibility to confer with the instructor about the absence and missed course work. If you are unable to attend class, on time, on a regular basis, you should not sign up for this course section.

Class participation: Attending class meetings, and participating in class activities (discussions, student presentations, and lab exercises) are an important part of the course. Students are expected to participate in these activities. Cell phones and other communication devices are to be turned off during class. Students who disrupt the class through talking or using distracting technology will immediately be asked to leave, and will be required to make up any activities that take place after they are dismissed.

Professional-quality work: It is expected that all submitted work will be professionally accomplished and presented. All submitted should be neatly written, stapled, etc., at the level that you would submit for your job or a job application. Assignments that do not meet these criteria will not be accepted; resubmission will be at the instructor's discretion.

Respect for others: It is impossible to discuss design without discussing issues of cultural differences or personal preferences. It is OK to disagree with another student's opinion, but we will not engage in personal attacks or criticisms. Students who make disrespectful comments to others in the classroom, or otherwise behave disrespectfully (e.g. talking during a student's presentation), will be asked to leave for the remainder of the class session.

Notifications and changes: News and updates will be posted on the course web site (<http://hcc729s2014.wordpress.com>). Students are expected to check the course web site before every class meeting for any announcements. Major announcements will be made via email and in class.

Academic Integrity

By enrolling in this course, each student assumes the responsibilities of an active participant in UMBC's scholarly community in which everyone's academic work and behavior are held to the highest standards of honesty and integrity. Cheating, fabrication, plagiarism, and helping others to commit these acts are all forms of academic dishonesty and they are wrong. By participating in this course, it is expected that you have read and understand the official UMBC Academic Integrity Policy, located at http://www.umbc.edu/undergrad_ed/ai/

Student Accommodations

UMBC is committed to eliminating discriminatory obstacles that disadvantage students based on disability. Student Support Services (<http://www.umbc.edu/sss/>) is the UMBC department designated to receive and maintain confidential files of disability-related documentation, certify eligibility for services, determine reasonable accommodations, develop with each student plans for the provision of such accommodations, and serve as a liaison between faculty members and students regarding disability-related issues. If you have a disability and want to request accommodations, contact SSS in the Math/Psych Bldg., room 213 or at 410-455-2459. SSS will require you to provide appropriate documentation of disability. If you require accommodations for this class, make an appointment to meet with me to discuss your SSS-approved accommodations.

Right to Revise

The instructor reserves the right to revise this syllabus during the semester in response to student feedback, schedule changes, or other issues. Any changes to the syllabus will be announced in class. If any changes to the syllabus that affect a student's final grade are made, that student will have the option of choosing the original or revised grading criteria.

References

This syllabus is adapted from HCC 710 Spring 2012 by Peggy Re, HCC 729 2012 by Ravi Kuber, and HCC 729 Spring 2013 by Amy Hurst.

Tentative Schedule: subject to change based on speaker availability.

The latest version of this calendar may be found at the course web site.

| Week | Date | Topics | Assigned | Due |
|-------------|-------------|--|---|--|
| 1 | 1/30 | Syllabus, 629 review | Find domain and (optional) partner | |
| 2 | 2/6 | User / Task / Environmental Analysis | User / task / environmental analysis, 2 personas | Chosen domain and partner (optional) |
| 3 | 2/13 | Heuristic evaluation | Heuristic evaluation | User/task/environmental analysis, 2 personas |
| 4 | 2/20 | Intro to experimental design and think aloud protocol | Evaluate website using think-aloud protocol (3 users) | Heuristic evaluation |
| 5 | 2/27 | Rapid prototyping | Create prototype of improved software (paper or digital) | Evaluate website using think-aloud protocol (3 users) |
| 6 | 3/6 | Additional evaluation techniques, managing bias, survey design | Evaluate redesigned website using think aloud protocol | Create prototype of improved software (paper or digital) |
| 7 | 3/13 | Working with data: quantitative and qualitative analysis | | Evaluate redesigned website using think aloud protocol |
| 8 | 3/20 | Spring Break | Spring Break! | Spring Break!!! |
| 9 | 3/27 | Information architecture | Find partner (optional), choose user / task / environment to focus on | Summative report from Project 1 |
| 10 | 4/4 | Gathering data, contextual inquiry, ethnography | Gather data to create personas | Chose partner and user/ task |
| 11 | 4/10 | Brainstorming, participatory design, Improv | Create stories / ideas with your users | Gather data to create personas |
| 12 | 4/17 | Wizard of Oz prototyping, Video Scenarios | Create video prototype of your concept (first draft) | Create sketches / ideas with your users |
| 13 | 4/24 | Design and testing with diverse populations | Evaluate first draft of video with target users | Create video prototype of your concept (first draft) |
| 14 | 5/1 | Experience prototyping / future technologies | Revise video | Evaluate first draft of video with target users |
| 15 | 5/8 | Project wrap-up | | Summative report and video from project 2 |