IS/HCC 760: Human Computer Interaction

Fall 2011

Instructor Dr. Shaun K. Kane skane@umbc.edu http://userpages.umbc.edu/~skane Office hours by appointment (ITE 431)

Class meetings: Monday, 4:30-7:00pm, ITE 406

Course Description

This course is intended to introduce students to the current literature in HCI, and to prepare students to conduct independent research and design appropriate interaction software.

This is a seminar style class. Students are expected to complete all background reading before class, to make presentations, ask questions, and offer their thoughts on topics being discussed.

Course Objectives

- Students will become familiar with various conferences and journals that serve as key resources within the HCI community. Students will begin to understand how the scope and review process varies between venues and will begin to develop an appreciation of the quality of the venues.
- Students will learn to identify relevant articles given a specific topic within HCI, and to read these articles to identify key results (practical and theoretical), limitations (stated and unstated), and directions for future research (stated and unstated).
- Students will learn to identify, examine, and critique theories and assumptions that serve as the foundation for research within the field of HCI, and to relate these theories and assumptions to the design of effective interactions between people and technology.
- 4. Students will gain experience identifying research questions, refining these questions to form hypotheses, and identifying appropriate research methodologies to investigate these hypotheses.
- 5. Students will explore topics within HCI, understand the current state of knowledge with regard to these topics, and identify open questions to be addressed.

Academic Integrity

Students should be sure to review UMBC's official statements and policies regarding academic integrity which can be found at http://www.umbc.edulprovost/integrity.html

Student Accommodations

UMBC is committed to eliminating discriminatory obstacles that disadvantage students based on disability. Student Support Services (http://www.umbc.edu/sss/html/sss_disab.htm) 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.

Email and Office Hours

I am generally available via email, and will do my best to respond to all email messages within 24 hours. Since I cannot verify ownership of non-UMBC email addresses, official communications must use your UMBC email address. Office hours are by appointment, but I am happy to make an appointment to meet with you to discuss any aspect of the class.

Course Materials

There is no textbook for this course. Instead, students will read peer-reviewed conference and journal articles from the HCI literature. In our first meeting, we'll discuss resources to find papers. However, here are some starting points for finding HCI articles.

- The ACM Digital Library: <u>http://portal.acm.org</u>
- IEEE XPlore: <u>http://ieeexplore.ieee.org/</u>
- HCIBib: <u>http://hcibib.org/</u>
- Google Scholar: <u>http://scholar.google.com</u>

These resources can be accessed on campus, or can be accessed from off campus via the UMBC library: http://aok.lib.umbc.edu/services/remoteaccess.php

A Typical Class Meeting

This course meets once per week. Each class meeting will be devoted to a specific topic area within HCI (e.g., mobile computing, accessibility, theoretical foundations, user modeling, task analysis, value-sensitive design, research methods). Each class meeting will be facilitated by **2 discussion leaders**, who will present the selected papers and lead the class discussion on those papers. Each class will proceed as follows (more or less).

- 1. **One week before class:** Discussion leaders will select 4-6 (but usually 4) papers on their selected topic, and send links to those papers to all students in the course.
- During the week, all students will read the assigned papers. Students who are not presenting will write written summaries and discussion questions for 2 of the assigned papers (see below). Discussion leaders don't need to write up a summary for papers that they are presenting.
- During class, the discussion leaders will present the assigned papers and lead the discussion about those papers. All students are expected to participate in the discussion of the assigned papers.

Grading

Grades will be determined based on the traditional scale (e.g., $A \ge 90$, $90 > B \ge 80$, ...), with individual assignments weighted as described below.

25% Written summaries

Every week, each student will read all of the papers assigned by the discussion leaders. Students will choose 2 of the assigned articles and write a one-page summary of those articles. The summary should highlight the key contributions of the article, the limitations of the work, and directions for future research. Written summaries should be no more than one single-spaced page. In addition to the written summary, you will write down at least 3 questions about the paper to discuss during class. Submit both the one-page summary and discussion by email to the instructor by 4pm on the day of class.

15% Class presentation

Each student will choose a topic in the area of HCI and lead a class discussion on that topic. Presentations will be conducted by a pair of 2 discussion leaders. Each pair of students will select 4-6 articles on their topic, and send them out to the class one week before their presentation. During the class meeting, the discussion leaders will provide a brief presentation of the papers that they assigned (using PowerPoint is optional), and present discussion questions to the class on the assigned readings.

10% Class participation

Given the seminar style of this class, students are expected to come to class prepared (e.g., complete all background reading) and to actively engage in class discussions. Simply attending is not sufficient. Students should come prepared to ask questions about the assigned readings, and to discuss their impressions of those readings (e.g., contributions of the work, limitations of the work, and comparisons between assigned papers).

50% Course project

Each student will complete an individual research project, culminating in a research paper. Students will select a topic, which must be approved by the instructor. Throughout the semester, students must identify and read relevant articles related to their chosen topic, going beyond the assigned articles in class for a deeper understanding of the topic. Students will also conduct a brief formative study (either an observation or an interview) related to their topic. Finally, students will

produce a research paper that summarizes the relevant background research, their formative study, and sketches out a more thorough research study that the student could conduct in the future.

The project consists of several milestones, each building toward the final paper and presentation:

P1 Project proposal (10%, due 9/26). A one-page document describing the research area that you would like to examine for your course project, and one or more ideas for a formative study (see below). Be prepared to talk about your project proposal for 3-5 minutes in class.

P2 Preliminary reference list (10%, due 10/3). A list of ten or more journal articles or conference papers related to your project proposal should be identified with the reference list using the format described in the ACM template.

P3 Formative study plan (10%, due 10/10). As part of the project, you will conduct a small formative study. This could be an observation of potential users in a public place, a small web survey, or an interview with 2-3 informants. On 10/10, you will submit a one-page document sketching out your plan for a formative study. Be prepared to talk about your plan for 3-5 minutes in class.

P4 Formative study results (20%, due 11/14). A 1-2 page document describing the results of your formative study (web survey, observation, interview, or other). Be prepared to talk about your results for 3-5 minutes in class.

P5 Paper draft (10%, due 11/28). You will submit a draft of your final paper. This draft should be as close to the final paper as possible, and is an opportunity to receive feedback and submit an even stronger final paper.

P6 Final presentation (20%, due 12/12). You will give a 5-10 minute presentation covering the major components of your research project (topic area, related work, formative study, future work).

P7 Final paper (20%, due 12/12). The final paper should be no more than 8 pages, including references, and should use the ACM conference format: <u>http://www.chi2011.org/authors/chi2011archivalformat_final.doc</u>

Schedule

Date	Торіс	Discussion leaders	Assignments due
9/12	Class introduction	Shaun; everyone	A1: What is HCI?
		_	Choose presentation dates
9/19			
9/26			P1: Project proposal
10/3			P2: Reference list
10/10			P3: Formative study plan
10/17	Shaun is at UIST 2011 conference; joint class with HCC 629		
10/24	Dr. Amy Hurst at ASSETS 2011 conference; joint class with HCC 629		
10/31			
11/7			
11/14			P4: Formative study results
11/21			
11/28			P5: Paper draft
12/5			
12/12	Final projects due	Everyone	P6: Final paper
			P7: Final presentation