IS/HCC 303: Fundamentals of Human-Centered Computing
Fall 2013

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Office hours By appointment (ITE 450)

Class Info Wednesday, 4:30–7:00pm, ITE 457

Course Description
This is an undergraduate course that provides a survey of human factors and human-centered computing relevant to the design and use of information systems. It describes the contributions of information systems, computer science, psychology, sociology, and engineering to human-centered computing. Emphasis is placed on human factors theories, human information processing concepts, interaction design approaches, and interactive computing technologies. In-class time will be devoted to class discussions with small group exercises that will culminate in a full critique of a website. Students will interact with the material through reading/watching relevant literature and background information, participating in group discussions, and participating in the small group exercises and final project.

Prerequisites and Course Placement
One course in Information Systems or Computer Science (IS 202 or IS300) with a C or better. IS 303 is a requirement for both the Business Technology Administration Bachelor of Arts degree and the Web Development Certificate (WEBC). The course is additionally recommended for the Information Systems Bachelor of Science degree. IS303 is the prerequisite for IS 403.

Course Objectives
1. Appreciate the role of Interaction Design, Technology, and Behavioral Science in the design of information systems.
2. Develop an understanding of basic human factors concepts such as affordances, mental models, mappings, feedback and visibility. Be able to apply those basic concepts to the critical assessment of physical objects and computer systems.
3. Be familiar with the constraints on perception, attention and memory that are critical to a usable design.
4. Appreciate the human factors involved in current HCI areas including computer-supported collaborative work (CSCW), alternate input/output techniques, interaction design, and universal usability.

Course Materials
This class requires students to read from a variety of books, research papers, and articles as well as watch video lectures or other video-based learning materials. All of the materials for this course will be available electronically on Blackboard.

Grading
The major components of this course are:
Individual

1. Reading, Watching, Engaging (30%)
2. Attending, Contributing, Eliciting (20%)

Team

3. Contextualizing (30%)
4. Internalizing (20%)

30% Reading, Watching, Engaging
Each week, there are a number of readings or videos on a thematic topic. **Students are expected to *read* and *engage with* the assigned materials *before* class.** Students should come prepared to answer questions, discuss, and apply the assigned materials. Every class will start with a short quiz on the assigned materials. These are not comprehensive quizzes, but they are a mechanism for me to be sure you are getting what you need to get out of the assigned materials. At the end of the semester I will calculate your score based on your top 10 quizzes.

When you are reading/watching the assigned materials, try to engage with the material by asking yourselves questions like: Why is this important? How would I use this? What are the really important aspects of this week's topic? (This is not an exhaustive list of questions to ask, but simply a starting point for how to *engage* with what you are reading or watching.)

20% Attending, Contributing, Eliciting
This part of the grading rubric refers to in-class discussions as well as attendance. Students should come prepared to discuss the assigned readings (e.g., main ideas, importance, examples, etc.) as well as have prepared questions for the instructor. The first half of each class (~ an hour) will be dedicated to discussion and question answering.

Regular and punctual attendance is expected of all students. In the case of significant events warranting excused absences, it is the student's responsibility to confer with the instructor about the absence and how to make up for the missed class. At the discretion of the instructor, an absence can be considered excused under circumstances with documentation.

30% Contextualizing
The second half of each week's class will be dedicated to in-class application of the concepts discussed. Every week, you and your teammates will critique a website with the knowledge you have gleaned from the week's assigned materials. These critiques will be uploaded to Blackboard at the end of each class. This is a team-based assessment, so each time will only upload one critique.

A critique is a detailed analysis and assessment. This does not mean that you must be negative or find fault. The key here is to evaluate how well the website addresses

the topics we have learned about. This would include a short summary of the concept in question, the identification of aspects of the website that apply to that concept, and then a discussion of how well the designers of that site addressed the concept.

20% Internalizing
The final aspect of your grade is a substantial critique of a website of your team's choosing. You will chose six concepts from the materials covered in class in your critique – two from each of the aspects of HCI: people, technology, and design. The following breakdown covers the stages of this project:

1. You will submit to me by April 16th EOC the website you have chosen and why. This can be done via email by one of the members of the team.
2. You will present your website and your critique to the class on May 14th. These presentations should be no more than 10 minutes each with time afterwards for me and the rest of the class to ask the team questions.
3. You will incorporate the feedback received from the presentations into a final write-up that is to be uploaded to Blackboard by May 21st at 7pm.

Grading Standards
With respect to final letter grades, the University's Undergraduate Catalogue states that:
A: Indicates superior achievement
B: Good performance
C: Adequate performance
D: Minimal performance
F: Failure

There is specifically no mention of any numerical scores associated with these letter grades. Consequently, there are no pre-defined numerical demarcations that determine final letter grades; these can be defined only at the end of the semester when all accumulated points are tallied and compared.

In accordance with the published University grading policy, it is important to understand that final letter grades reflect academic achievement and not effort. While mistakes in the arithmetic computation of grades and grade recording errors will always be corrected, it is important to understand that in all other situations final letter grades are not negotiable and challenges to final letter grades are not entertained. Historical data suggests an "A" may be in the 90-100 range, a "B" may be from 80-89 and "C" grades range from 70-79. All points from assignments and exams are additive for the semester. Each student starts at zero points which is an "F", any other grade must be earned.

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.

Week	Date	Note!	Theme	Topic
0	29-Jan	FIRST DAY		Syllabus, HCC Introduction
1	5-Feb		People	Perception
2	12-Feb			Attention & Memory
3	19-Feb			Metaphors, Mental Models, and Schemas
4	26-Feb			Communication & Coordination
5	5-Mar		Technology	Interaction Styles
6	12-Mar			Input
7	19-Mar	SPRING BREAK		
8	26-Mar			Output
9	2-Apr		Design & Evaluation	The Practice of Design
10	9-Apr			Color, Icons, Fitts Law
11	16-Apr	Send me an email with website for final critique by 7pm		Whitepace, Grid, Navigation
12	23-Apr			Accessibility; Universal Usability
13	30-Apr	CLASS CANCELLED		
14	7-May			Evaluating the Interface
15	14-May			Group Presentations
16	21-May	Submit website critique by 7pm May21st		Enjoy your finals!