

# Computer Science 3053

## Human Computer Interaction

Instructor: Dr. McGovern

Fall 2009

### 1 Learning Objectives

The general/overall learning objectives are:

- Design an appropriate interface for a specific population and task
- Formulate and perform an experiment to evaluate the effectiveness of a given user interface for a specific population
- Critique a user interface in terms of its ability to meet the needs of the user base. This includes both high and low-level aspects of the design (e.g. understanding and application of Gestalt principles of design)
- Explain the impact of the design choices on under-represented populations
- Argue for or against the rights of both truly intelligent machines and for machines that are fully interfaced with humans (when does the human stop being a human?)
- Function effectively in a team
- Communicate ideas clearly to a variety of audiences both in oral and written form

The specific topics we will cover include:

#### Design guidelines

- Usability goals (Ch 1)

- User populations and their needs (Ch 1)
- Eight golden principles of design (Ch 2)
- Implications of design choices (Ch 10 & 11 in Ethics book)

### Design and development

- Requirements analysis (Ch 3)
- Evaluation and analysis (Ch 4)
- Expectations and models of response (Ch 10)
- Being informative (function versus fashion) (Ch 11)
- Appropriate user documentation (Ch 12)

### User interface elements

- Direct manipulation (Ch 5)
- Menus, forms, and dialog boxes (Ch 6)
- Command line and natural language inputs (Ch 7)
- Input devices (Ch 8)
- Collaborative interfaces (Ch 9)

## 2 General Information

**Class time:** Tues/Thursday 12 noon - 1:15pm

**Irregular exam:** Poster session on Dec 11 from 12:30-3pm

**Class location:** Price Hall 3065

**Prerequisites:** You must have received a grade of C or better in CS 2413: Data Structures.

**Required materials:** There are two required books and two optional (but highly recommended) books. The first required book is *Designing the User Interface: Strategies for Effective Human-Computer Interaction* by Shneiderman and Plaisant. Note that we are using the newly released 5th edition. The second required book is *Ethics and Technology: Ethical Issues in an Age of Information and Communication Technology* by Tavani. This book is the same book that you should have used in several previous CS classes.

The optional textbooks will be very useful for the projects and are available in e-book form through the OU library for free. To do this, go to [libraries.ou.edu](http://libraries.ou.edu) and

search for the titles below. Then click on the e-book access link. This will work on campus on any computer. To enable access off-campus, login to the library with your 4x4. In addition, you can go to the engineering library in Felgar Hall and check out a physical copy of the book for 2 hours at a time. The first book is *Beginning iPhone 3 Development: Exploring the iPhone SDK* by Mark and LaMarche and the second book is *Learn Objective-C on the Mac* by Dalrymple and Knaster.

**Instructor:** Dr. McGovern

- *Office:* EL 144A
- *Phone:* 325-5427 (email preferred over voicemail)
- *URLs for class:*  
<http://learn.ou.edu>  
[http://www.cs.ou.edu/~amy/courses/cs5033\\_fall2008/index.html](http://www.cs.ou.edu/~amy/courses/cs5033_fall2008/index.html)
- *Email:* amcgovern@ou.edu
- *Office hours:* Tuesday/Thursday 1:30-3. Also by appointment. Additional appointments for office hours are possible and you just need to email me. Also available irregularly via AIM at *dramymcgovern*. Please note open door policy on my door and stop by if the door is open.

**Teaching Assistant:** Sreekanth Ruthala

- *Office:* EL 156
- *Email:* Sreekanth.Ruthala-1@ou.edu
- *Office hours:* Mondays 10-11, Tuesdays 3:30-4:40, Friday 10:30-11:30.

### 3 Evaluation

What you get out of a course will depend on what you put into it! In order to give you a fair grade at the end of the semester, I will evaluate you on a combination of your project (50%), homework and quizzes (40%), and final exam (10%). Participating in class is one of the best ways to learn so please ask questions and attend class.

**Grade questions:** To maintain fairness in grading, please bring any disagreements to me within a week of the item being returned. Items graded by the TA should be brought to him within a week of the item being returned. Any disagreements with him that can not be resolved can be brought to me for a final decision.

**Online Grade Summary:** Desire2Learn has a grade book that I will use to store all of your grades. It is your responsibility to verify that the grades on D2L are correct. If an error is found, bring the document to me and I will correct Desire2Learn.

**Borderline grades:** Borderline final grades will be decided by your class participation which means that being an active participant in class can push you over a grade boundary.

**Final Examination:** The final examination is Monday December 14 from 1:30-3:30pm. No final examinations can be given early, except as required by University policy.

**Due dates:** To be fair to everyone and to minimize disruption to class, homeworks and projects are due at the beginning of class, 12 noon on the day listed in the schedule. Assignments will drop 10% of the grade per day that it is late with no assignment being accepted beyond 72 hours after the original due date. In addition, you have one “slack” day to spend however you choose during the semester. This will entitle you to turn in **one** assignment *or* project up to one day late with no penalty. Keep in mind that you only get one of these so use it wisely.

**Projects:** Your final project will be due the last week of classes. Per university policy, you may turn this project in prior to pre-finals week if you have completed the project. Please contact me if you wish to present prior to pre-finals week as well.

## 4 Course Policies

The following set of rules will help keep us all on the same page all semester and help to ensure fair treatment for all students.

**Academic Misconduct:** Academic misconduct hurts everyone but particularly the student who does not learn the material. All work submitted for an individual grade should be the work of that single individual and not her friends. It is fine to ask a fellow student for help as long as that help does not consist of copying any computer code, or solutions to other assignments. Students working on joint projects may certainly help one another and are expected to share code within the project group. However, they may not share beyond the group.

1. Collaboration is encouraged for homework and projects. For the projects, you will work within your groups. For the homework, you may form study groups so long

as each homework is in your own words. Write your study partners' names on your homework when you turn it in.

2. Do not show another student (or group) a copy of your projects or homework before the submission deadline. The penalties for permitting your work to be copied are the same as the penalties for copying someone else's work.

3. Make sure that your computer account is properly protected. Use a good password, and do not give your friends access to your account or your computer system. Do not leave printouts or thumb drives around a laboratory where others might access them.

Upon the first documented occurrence of academic misconduct, I will report it to the Campus Judicial Coordinator. The procedure to be followed is documented in the University of Oklahoma Academic Misconduct Code<sup>1</sup>. In the unlikely event that I elect to admonish the student, the appeals process is described in <http://www.ou.edu/provost/integrity-rights/>.

**Project code:** Your project code and writeups must be written exclusively by you or your group. **Use of any downloaded code or code taken from a book (whether documented or undocumented) is considered academic misconduct and will be treated as such.** Exceptions from this policy (such as a project that builds on an existing open-source project) may be granted but you **MUST** speak with me first.

**Classroom Conduct:** Disruptions of class will not be permitted. Examples of disruptive behavior include:

- Allowing a cell phone or pager to repeatedly beep audibly.
- Playing music or computer games during class in such a way that they are visible or audible to other class members.
- Exhibiting erratic or irrational behavior.
- Behavior that distracts the class from the subject matter or discussion.
- Making physical or verbal threats to a faculty member, teaching assistant, or class member.
- Refusal to comply with faculty direction.

In the case of disruptive behavior, I may ask that you leave the classroom and may charge you with a violation of the Student Code of Responsibilities and Conduct.

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<sup>1</sup><http://www.ou.edu/studentcode>

**Class Web Page:** Login to the Desire2Learn website using your 4+4 (first four letters of your last name followed by the last four digits of your student number), using your standard OU password. If you have difficulty logging in, call 325-HELP. This software provides a number of useful features, including a list of assignments and announcements, an electronic mailing list, newsgroups, and grade book. All handouts are available from Desire2Learn. You should check the site daily. When I update the site, I will post an announcement telling you what has been added and where it is located. You are responsible for things posted on the site with a 24 hour delay.

**Class Email Alias:** Urgent announcements will be sent through email. It is your responsibility to:

- Have your university supplied email account properly forwarded to the location where you read email.
- Make sure that your email address in Desire2Learn is correct, and forwards email to the place where you read it. I'll send out a test message during the first week of class. If you do not receive this message, it is your responsibility to get the problem resolved immediately.
- Have your email program set up properly so that replying to your email will work correctly the first time. You can send email to yourself and reply to yourself to test this.

If you need assistance in accomplishing any of these tasks, contact 325-HELP.

**Newsgroups and Email:** The newsgroup on Desire2Learn should be the primary method of communication, outside of class. This allows everyone in the class to benefit from the answer to your question. If you email me a question of general interest, I may post your question and my answer to the newsgroup. Matters of personal interest should be directed to email instead of to the newsgroup, e.g. informing me of an extended personal illness. Posting guidelines for the newsgroup are available on Desire2Learn.

**Religious Holidays:** It is the policy of the University to excuse the absences of students that result from religious observances and to provide without penalty for the rescheduling of examinations and additional required classwork that may fall on religious holidays.

**Incompletes:** The grade of I is intended for the rare circumstance when a student who has been successful in a class has an unexpected event occur shortly before the end of the class. I will not consider giving a student a grade of I unless the following three

conditions have been met. 1. It is within two weeks of the end of the semester. 2. The student has a grade of C or better in the class. 3. The reason that the student cannot complete the class is properly documented and compelling.

**Accommodation of Disabilities:** The University of Oklahoma is committed to providing reasonable accommodation for all students with disabilities. Students with disabilities who require accommodations in this course are requested to speak with the professor as early in the semester as possible. Students with disabilities must be registered with the Office of Disability Services prior to receiving accommodations in this course. The Office of Disability Services is located in Goddard Health Center, Suite 166, phone 405/325-3852 or TDD only 405/325-4173.