IRLS575 USER INTERFACE & WEBSITE DESIGN (3) 010

2011-2012 Summer I

Wed, 05/18/2011 - 15:22 — Trevor T Smith
Instructor: Trevor T Smith

This virtual class will meet online through d2l and will begin in Summer I and conclude at the end of Summer II. Students are expected to log in regularly.

(39631)

COURSE SYLLABUS

Course Prerequisites:

Prerequisite: IRLS 504 or consent of the instructor.

Course Description:

We all know the simple joy of finding a website, application, or device that just works—no need to click around or spend time reading instructions to figure it out. The academic discipline of Human-Computer Interaction (HCI) studies exactly what makes this possible. HCI itself addresses the problem of designing composite systems, of humans and computers, which are functional, safe, and efficient. This is an extremely important problem because everybody has become a user. (30 years ago, computers could have all sorts of interface shortcomings because only experts used them and the experts could use their skills to overcome the difficulties. But now we are all users, and we have very little patience for difficulty!)

Four considerations of HCI are prominent:

- **Human capabilities.** These include physical and cognitive issues: what folks can do with their hands, eyes, and brains. Humans are highly variable, and have cognitive strengths and weaknesses (for example, humans have poor memories yet good abilities to recognize patterns in a visual scene).

- **The technical features of the computing machines.** Principally what the computer presents and receives by way of input and output; and the style of the interaction between the user and the computer. For example, take input only from a keyboard, and give output only to a printer—in which case, hurr to a dialog or conversation (these days the possibilities are far richer with multimodal input and output devices).

- **The tasks being undertaken.** For example, there is a world of difference between typing a word processing document, and producing some architectural drawings using a CAD package. Additionally, a modern single-interface to group work and multitasking (for example, computers are used extensively now in the cockpits of commercial aircraft and in that setting there is a team of humans interacting with several computer systems).

- **The environment.** What is the work, or task, setting? What are its physical and socio-cultural characteristics? (For example, it is unwise to use sound input or output in a noisy setting; it is unwise to expect children to spell keywords perfectly for a search in an OPAC in a library.)

The academic backdrop of HCI

HCI is concerned with the design, evaluation, and implementation of interactive computer systems, and with the major phenomena surrounding their use. Many academic disciplines including cognitive psychology, social psychology, organizational psychology, computer science, ergonomics, linguistics, artificial intelligence, philosophy, sociology, and anthropology, have a role to play in the theories behind HCI and Web site design.

Web Site design

Web site design applies and extends the principles of HCI in a special case. Stand-alone computer programs are part of a network and usually present information that has been calculated; the design of web sites must put an emphasis on the organization of information, on information management of information. The design of web sites brings into play traditional library science strategies and extends them to the digital world.

This course offers instruction in the theory and application of
User Interfaces in Information Systems
- Human Computer Interaction
- The design and evaluation of web sites

Course Objectives:
Successful completion of this course will help students achieve the A3 competency outlined http://sirls.arizona.edu/about/studentCompetencies. More specifically, by the end of the semester, students will be able to:
- Identify and articulate important human factors (e.g., human limitations) that affect human-computer interactions
- Understand user-computer interaction styles
- Describe typical input, output, and interaction-style features of computer systems
- Evaluate user interfaces (UI)
- Make informed design decisions
- Critique UI designs of others
- Compare methods of computer mediated communication of information
- Construct an example of an effective web UI

Required Course Materials:

Textbook:
Be sure to get the 5th edition!
The bookstore should have copies by the first week of classes, but you might want to look at the major online sites and compare price and availability.

Internet Access:
Students will need a reliable computer and online access. High speed internet such as broad band cable or DSL is required (many of the lectures have an audio-video component). If you do not have broadband, consider using information commons, or even a public library computer center.

U-System Account:
You will need to have a U-System account for several of the individual homework assignments. If you have not already done so, you must request this account be created for you (it is not automatically created when you get your UA NetID). Go to https://account.arizona.edu/ and follow the "Create your U of A Email and other UITS computer accounts" link. Request a U-System Computing account. The process can take 24 hours or longer, so try to have any trouble contact the UITS helpdesk at http://uits.arizona.edu/departments/the247.

Course Requirements:
1. Coursework
2. Mid-term Exam
3. Final Individual Project (optional/extra credit for 475 students)

The coursework will consist of four Unit assignments, each worth 200 points (475) or 150 points (575), for a total of 80% (475) or 60% (575) of your final grade. These assignments will require you to post information on the discussion boards, answer essay questions, provide a link to something you found online or created, evaluate or construct a UI, and/or write up the result of a "hands-on" exercise. While study groups, either in-person or virtual, are encouraged, the unit assignments should be your own work. In other words, you can talk to each other about the assignments but do the exercises and write-up the results independently.
The midterm exam will be worth 200 points or 22% of your semester grade; it will consist of multiple-choice, true/false, and short-answer questions.
The final project will be worth 200 points or 20% of the semester grade for 575 students (it can be completed by 475 students for extra credit). It will be fully detailed around the mid-point of the course.

Course Grading:

Course Policies:
Academic Code of Integrity
Students are expected to abide by The University of Arizona Code of Academic Integrity. "It is that a student's submitted work must be the student's own." If you have any questions reg
this Code, please ask an Instructor.

Accommodating Disabilities

The University has a Disability Resource Center. If you anticipate the need for reasonable accommodation of this course, you must register with the Disability Resource Center and request that the DRC notify you of your accommodation needs as soon as possible. Please plan to meet with me to discuss accommodations and how my course requirements and activities may impact your a

Assignment Policies

- **How to submit assignments:** All unit assignments must be submitted in the D2L drop-box (either D2L or my external email) only if there are technical problems with the drop-box: a required format (for example, .doc, .rtf, or .html). If the required format is .html, it means you cannot use your word processor to “save-as” an HTML file. Any HTML assignments; if you don’t have an HTML editor, check out NVU or Kompozer, both are major PC operating systems. If a unit assignment asks you to make a contribution to a discussion group, please cut-and-paste what you posted into your drop-box submission. If you have any graphics or other objects referenced in your HTML, make sure you submit all the files and use a relative link to objects from the same directory.

- **Assignment due dates:** The Course Schedule will list specific due dates for assignments, and reminders will be posted in D2L. In general, late assignments will not be routinely accepted. I understand that emergencies and problems can occur in the course of the semester, so please contact me as soon as you find you may not be able to submit your work on time. To avoid technical problems remember my digital mantra, “save early, save often!”

- **Writing style:** Be sure to include your name at the top of every submission. Clear and concise writing consistent with upper-division undergraduate and graduate course-work is expected on all assignments. I am not a stickler for precisely following a style manual (it can be almost impossible to create some things like “hanging indents” in HTML), but be certain to properly attribute the quotes, work, and ideas of others with citations--check out APA and Citation Machine.

Incompletes

The current Catalog reads

The grade of I may be awarded only at the end of a term, when all but a minor portion of the course work has been satisfactorily completed. The grade of I is not to be awarded in place of a failing grade or when the student is expected to repeat the course; in such a case, a grade other than I must be assigned. Students should make arrangements with the instructor to receive an incomplete grade before the end of the term...

If the incomplete is not removed by the instructor within one year the I grade will revert to a f