CMSI 670

Topics in Interaction Design

http://myweb.lmu.edu/dondi/fall2007/cmsi670

Fall 2007 — Doolan 222
R 6:30pm–9:30pm, 3 semester hours
Office Hours: TR 3–6pm or by appointment

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Course Objectives

To learn the art and science of interaction design, and to learn how to develop a research project in this field. Students will be exposed to the first principles and metrics behind human-computer interaction, while gaining working knowledge of how computer science research in interaction design is initiated and reported upon.

Course Requirements

Mastery of object-oriented programming; expert knowledge of data structures and algorithms; willingness to participate in class discussions. Some familiarity with computer system organization, operating systems, and Web technologies is helpful.

Materials and Texts

- Ben Shneiderman and Catherine Plaisant, *Designing the User Interface: Strategies for Effective Human-Computer Interaction*, Fourth Edition, Addison Wesley, 2004.
- Jakob Nielsen, *Usability Engineering*, Morgan Kaufmann, 1994.
- Donald A. Norman, *The Design of Everyday Things*, Basic Books, 2002.
- Assorted handouts, articles, and sample code to be distributed throughout the semester.

Additional information is also available on the Web; do not hesitate to look for further sources of information regarding the concepts, techniques, tools, and paradigms that we will discuss.

Course Work and Grading

Course work consists of homework (25%), 1 annotated bibliography (25%), 1 research project proposal (25%), and 1 research project presentation (25%). Letter grades are determined as follows: ≥ 90% gets an A– or better; ≥ 80% gets a B– or better; ≥ 70% gets a C– or better. I may curve grades upward based on qualitative considerations such as degree of difficulty, effort, class participation, time constraints, and overall attitude throughout the course. Grades are never curved downward.

Homework

Homework consists of questions, exercises, and reading or programming assignments to be given throughout the semester. Homework is where you can learn from your mistakes without grading penalty: if you do the work and submit it on time, you will get full credit, regardless of correctness. What goes around comes around: the effort you put into your homework pays off in the other course work. The homework submission deadline is always the beginning of class on the designated due date; the due date is encoded in the homework number. Submissions after the deadline receive half credit, period. Extra credit homework may be assigned; fulfilling this is counted on top of the 25% allocation of homework to your final grade.

Tests

Due to its research focus, this course does not have traditional tests. In terms of timing, the annotated bibliography fills in for a midterm, and the research project presentation corresponds to the final exam.

Annotated Bibliography

A large part of this course consists of readings from current interaction design literature; such readings, regardless of subject matter, form the foundation of all successful research. An *annotated bibliography* documents these readings, and you shall write one as part of your course work. The annotated bibliography is equivalent to a midterm exam; it is due on October 11. Late annotated bibliographies will not be accepted.

Research Project Proposal

The lectures, reading, analysis, and discussion on interaction design are meant to lead you into a research project in the field. Unlike other graduate courses, however, this course is meant to cover the

research process in greater detail. Thus, instead of a *complete* research project, the final artifact for this course is a project *proposal*.

This proposal is meant to be more in-depth and formal than other project proposals or prospectuses that you may have submitted in other courses — more akin to formal proposals for masters theses, doctoral dissertations, or research grants.

Like many other formal documents in the academe, your proposal is to be written using LaTeX and placed under version control. The research project proposal is due on December 13. Late proposals will not be accepted.

Research Proposal Presentation

Alongside the written project proposal is a spoken presentation of that proposal. Again, this is in line with common research practice, where work may be communicated both verbally and in writing.

The research proposal presentation shall be made, and its presentation materials submitted, on December 13, during the time normally reserved for the final exam. Late presentations and presentation materials will not be accepted.

Proposal and Project Grading Criteria

1. *Content (40%):* What is the quality of the work? Is the background material of sufficient breadth and depth? How compelling is the proposed research?
2. *Organization (30%):* Is the text structured well? Are its ideas and flow easy to follow? Are distinct sections or topics clearly identified?
3. *Writing (20%):* Are statements clear and easy to follow? Is the language precise and grammatically correct? Is the paper's tone appropriate?
4. *Polish (10%):* Is the content properly proofread? Are there any misspellings, typos, or other formatting faux pas?

For the presentation, "writing" refers to your verbal delivery, tone, and clarity.

Use of CVS

Version control is an indispensable component of today's computer science landscape in industry, the academe, and the open source community. The Keck Lab provides each user with individual version control depots via CVS (Concurrent Versions System). We will make heavy use of CVS in this course: all digital artifacts are to be turned in via CVS. Specific instructions and guidelines on CVS use will be provided. Until then, you are encouraged to read up on CVS on your own, particularly if you've never used it before.

Attendance

I am not a stickler for attendance, but I like having a full class. Note that the add/drop with 100% refund deadline is August 31. The withdrawal or credit/no-credit status deadline is November 2.

University Policy on Academic Honesty

Loyola Marymount University expects high standards of honesty and integrity from all members of its community. Applied to the arena of academic performance, these standards preclude all acts of cheating on assignments or examinations, plagiarism, forgery of signatures or falsification of data, unauthorized access to University computer accounts or files, and removal, mutilation, or deliberate concealment of materials belonging to the University Library.

Course Schedule

This schedule may change based on the actual ebb and flow of the class, with the exception of deadlines and university dates (italicized).

August/ September	HCI guidelines, principles, and theories; user interface APIs
August 31	*Add/drop deadline for full refund*
October	Interaction styles; usability evaluation; survey of IxD topics
October 11	*Annotated bibliographies due*
November	Selected IxD and HCI readings
November 2	*Withdraw/credit/no-credit deadline*
November 22–23	*Thanksgiving; no class*
December 13	*Proposal presentations, 6:30pm; written proposals due*

You can view the class calendar on the Web at *http://ical.mac.com/dondi/LMU*. If you have an iCalendar-savvy client (i.e., Mozilla Calendar, Ximian Evolution, KOrganizer, Apple iCal, etc.), you can subscribe to the class calendar at *webcal://ical.mac.com/dondi/LMU.ics*. On-the-fly updates and adjustments to the class schedule will be reflected in this calendar.