

CMSI 370

INTERACTION DESIGN

<http://myweb.lmu.edu/dondi/fall2009/cmsi370>

Fall 2009 — Pereira 211

TR 1:35–2:50pm, 3 semester hours

Office Hours: TR 9-10:30am, R 3–6pm, or by appointment

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Objectives and Outcomes

Long after the course concludes, my hope is that you will:

- remember and understand the art and science of interaction design, particularly its first principles and key metrics,
- apply this knowledge by studying, comparing, and evaluating the user interfaces of actual systems, and
- know the fundamentals behind programming and implementing user interfaces, with working knowledge of user interface technologies such as Java's Swing, XHTML/CSS/JavaScript, and OpenGL's GLUT.

While there are no absolute prerequisites to this course, intermediate to advanced programming proficiency in any language will be helpful. Some of the material in this course also carries directly into CMSI 371 Computer Graphics.

Materials and Texts

- Ben Shneiderman and Catherine Plaisant. *Designing the User Interface: Strategies for Effective Human-Computer Interaction*, 5th Edition, Addison Wesley/Pearson, 2009.
- 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.

The following text is recommended and not required — but it will fill in some details:

- Ray Toal and John David N. Dionisio, *The JavaScript Programming Language*, Jones & Bartlett Publishers, 2009.

In addition, do not hesitate to look for further information regarding the concepts, techniques, tools, and paradigms that we will discuss.

Course Work and Grading

Course work consists of homework (20%), 1 mid-term (20%), 1 design poster (10%), 1 term portfolio (25%), and 1 final exam (25%). Numeric grades $\geq 90\%$ get an A– or better; $\geq 80\%$ get a B– or better; $\geq 70\%$ get 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 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 tests, the poster, and the portfolio. 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 20% allocation of homework to your final grade.

Tests

The midterm is initially scheduled for October 13. The final exam is scheduled for December 17. All tests are open-paper-everything; no sharing. “Open computer” might also be allowed. You may neither solicit nor give help during exams. Late and/or missed tests are handled on a case-to-case basis; in all instances, talk to me about them.

Design Poster

Near the end of the semester, you will be asked to render one of your assignments as a poster, for possible display in Doolan Hall. The poster is credit/no-credit (like homework), and is due on December 10. Late posters will not be accepted.

Term Portfolio

At the end of the semester, you will be asked to resubmit some assignments in a *term portfolio* — a showcase of sorts for your newfound interaction design skills. Unlike homework, the portfolio will be graded more closely; presumably, by semester's end, you will know this stuff better, and will be able to improve your prior work.

Written work will be graded along these criteria:

1. *Content (40%)*: Includes the requested information; substantive, not shallow
2. *Organization (30%)*: Structures information well; ideas flow smoothly from one to the other
3. *Writing (20%)*: Precise language, proper tone, clear statements, correct grammar
4. *Polish (10%)*: Evidence of proofreading and multiple reviews; no misspellings nor typos; care given to presentation and formatting

Technical work will be graded along these criteria:

1. *Design (30%)*: Clarity, flexibility, and ease of maintenance; elegance and innovation; applies proper separation of concerns; satisfies the “one change, one place” property
2. *Functionality (30%)*: Works as intended; produces correct answers/results; performs in a reasonable amount of time; includes tests that demonstrate correct behavior
3. *Naming (20%)*: Clarity and consistency; names correspond to roles, types, or actions
4. *Documentation (15%)*: Presence of README or overview material; abundance of comments in code; genuinely useful information
5. *Version control (5%)*: Sufficient frequency; informative commit log

The term portfolio is due on December 17. Late portfolios will not be accepted.

Version Control

Version control is an indispensable part of today's computer science landscape in industry, the academe, and the open source community. We use CVS (Concurrent Versions System) heavily in this course: most deliverables will be turned in via CVS.

Attendance

Attendance at all sessions is expected, but not absolutely required. If you must miss one or more class sessions, it is your responsibility to keep up

with the course. The last day to add or drop a class without a grade of W is September 4. The withdrawal or credit/no-credit deadline is November 6.

LMU has published H1N1 flu prevention guidelines that are applicable to this course:

<http://www.lmu.edu/resources/emergency/status/H1N1.htm>

Special Accommodations

Students with special needs who need reasonable modifications, special assistance, or accommodations in this course (such as a documented disability [physical, learning, or psychological]) should contact the Disability Services Office (Daum Hall, Room 224, x84535, <http://www.lmu.edu/dss>) as early in the semester as possible. All discussions will remain confidential. In addition, please schedule an appointment with the instructor early in the semester to discuss any accommodations for this course for which you have been approved.

University Policy on Academic Honesty

Loyola Marymount University expects high standards of honesty and integrity from all members of its community. All students are expected to follow the LMU honor code, as stated in the *LMU Undergraduate Bulletin 2008-2010*, pp. 58–59 (online at <http://www.lmu.edu/Page13245.aspx#honorcode>).

Topics and Important Dates

Specifics may change as the course progresses; university dates (*italicized*) are less likely to change.

September	Guidelines, principles, and theories; introduction to Swing, dynamic HTML, and GLUT
<i>September 4</i>	<i>Last day to add or drop a class without a grade of W</i>
October	Menus, forms, and dialogs
October 13	Midterm
November	Direct manipulation
<i>November 6</i>	<i>Withdrawal/credit/no-credit deadline</i>
<i>November 25–27</i>	<i>Thanksgiving; no class</i>
December	Miscellaneous IxD topics
December 10	Design posters due
<i>December 17</i>	<i>Final exam, 11am; term portfolios due</i>

You can view these dates on the web at <http://ical.me.com/dondi/LMU>, or via iCalendar at <webcal://ical.me.com/dondi/LMU.ics>.