

CMSI 182

INTRODUCTION TO COMPUTER SCIENCE

<http://myweb.lmu.edu/dondi/fall2008/cmsi182>

Fall 2008 — Doolan 219
TR 1:35–2:50pm, 3 semester hours
Office Hours: TR 3–6pm or by appointment

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Course Objectives

This course is built upon L. Dee Fink's *taxonomy of significant learning*, as applied to computer science "for the rest of us." Long after the course concludes, my hope is that you will:

- remember and understand the central ideas of computer science, including algorithms, abstractions, and how to discover, describe, and implement them,
- easily recognize computer science concepts in your daily life,
- readily relate current events and new products to applicable computer science concepts,
- see yourself as capable of handling computer science material,
- care about the ethical use of computer science and technology, and
- value the content and relevance of computer science as a field of study, in everyday situations, and in your own individual discipline.

Materials and Texts

- J. Glenn Brookshear, *Computer Science: An Overview*, Tenth Edition, Addison Wesley, 2008.
- 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 a lot of details in case you're interested:

- David Harel with Yishai Feldman, *Algorithmics: The Spirit of Computing*, Third Edition, Addison Wesley, 2004.

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

Graded coursework consists of homework (25%), 1 midterm (25%), 1 term portfolio (25%) and 1 final exam (25%). Letter grades are determined as follows: $\geq 90\%$ gets an A– or better; $\geq 80\%$ gets a B– or better; $\geq 70\%$ gets a C– or better. The instructor 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, programming assignments, and reflections 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 and the portfolio. Plus, assignments with reflection components allow you to take stock of how the course is going for you.

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

The midterm is initially scheduled for October 2. The final exam is scheduled for December 11. All tests are open-paper-everything; no sharing. "Open computer" might also be allowed depending on the scope, subject matter, or circumstances. You may neither solicit nor give help while the exam is in progress. Late and/or missed tests are handled on a case-to-case basis; in all instances, talk to me about them.

Term Portfolio

Due to the nature of many of the homework assignments that you will get, you may feel that if you “had another go” at the work, you can do much better than in the initial submission. For this course, you *can* have this “other go:” at the end of the semester, you will be asked to resubmit a subset of these assignments in a *term portfolio* — a showcase of sorts for your newfound computer science skills. *This* will be graded more closely; presumably, by the end of the semester, you will know this stuff better, and will be able to clean up and 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 requested; 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 (20%)*: Presence of README or overview material; abundance of comments in code; genuinely useful information

The term portfolio is due on December 11. Late portfolios will not be accepted.

Attendance

Attendance at all sessions is not absolutely required, but if you must miss class, it is your responsibility to keep up with the course work. Note that the add/drop/withdraw-with-100%-refund deadline is August 30. The withdrawal or credit/no-credit status deadline is October 31.

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; deadlines, exams, university, and national dates (italicized) are less likely to change than course topics.

August/ September	Algorithms and puzzles; introduction to programming
<i>August 30</i>	<i>Last day to add or drop a class without a grade of W; last day to withdraw from the semester for a 100% refund</i>
October	Today’s computers: bits and chips; operating systems
October 2	Midterm
<i>October 20</i>	<i>California voter registration deadline: http://www.sos.ca.gov/elections/elections_vr.html</i>
<i>October 31</i>	<i>Withdraw/credit/no-credit deadline</i>
November	Networking and the Internet; artificial intelligence
<i>November 4</i>	<i>Election day — go out and vote!</i>
<i>November 26–28</i>	<i>Thanksgiving; no class</i>
December	Other computer science subfields
<i>December 11</i>	<i>Final exam, 11am; term portfolios due</i>

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.