SYLLABUS
CSC 412 Topics in Computer Science (2 units)
Fall 2012
Advanced Programming (a.k.a. Programming Contest Training)

Meeting place/time: RS 13, TR, 11:00-11:50 a.m.

Instructor: Dr. McKinstry

Office hours: Rohr Science 216; phone: (619) 849-2269; email: jeffmckinstry@pointloma.edu

Monday	8:30 – 9:45 a.m. and 11:00 – noon
Tuesday	9:30 – 10:50 a.m.
Wednesday	8:30 – 9:45 a.m. and 11:00 – noon
Thursday	9:30 – 10:50 a.m.
Friday	8:30 – 9:45 a.m. and 11:00 – noon

Software: C++/Java Compiler of your choice.

Text: Skiena, S and Revilla, M. Programming Challenges: The programming contest training manual. Springer, New York, 2003. (Not available in the bookstore. You will have to order it online.)

Objectives of the course: To increase the student's problem solving and programming expertise by writing a number of programs, and to learn and practice applying new problem solving techniques, such as dynamic programming and numerical methods, to enable the student to solve a wider range of computing problems.

Reading requirements: See Weekly schedule. It is **assumed that students will read and understand the assigned chapters**.

Programming assignments: Select one programming project from the end of each chapter covered. Programs will be submitted to the website server described in the book and must be accepted by the online judge for full credit. To receive credit, students will log on to their online judge account and show the professor that the programs were accepted by the judge. Partial credit may be given if the program does not work.

Class time: Lectures will be Tuesdays to prepare students for the next week's assignments which will be due the following Thursday during the lab time. During lab time, students are expected to show the professor the program that is due at the beginning of the lab, and to begin to work on the lab for the next week. Students may not leave the lab early. This is time for the professor to provide help, and also to verify that you are working on the problems.

Weekly schedule (subject to change):

	Monday	Tuesday Lecture	Wednesday	Thursday **Lab**	Friday
8-27				Overview	
9-3	**Labor day**	Chapter 2 lecture by McKinstry		**Chapter 1 program due.** Begin chapter 2 program	
9-10		Chapter 3 lecture by _____		Chapter 2 program due. Begin chapter 3 program.	

9-17		Chapter 4 lecture by _____		Chapter 3 program due. Begin chapter 4 program.	
9-24		Chapter 5 lecture by _____		Chapter 4 program due. Begin chapter 5 program.	
10-1		Chapter 6 lecture by _____		Chapter 5 program due. Begin chapter 6 program.	
10-8		Chapter 7 lecture by McKinstry		Chapter 6 program due. Begin chapter 7 program.	
10-15		Chapter 8 lecture by McKinstry		Chapter 7 program due. Begin chapter 8 program.	**Fall Break**
10-22		Chapter 9 lecture by McKinstry		Chapter 8 program due. Begin chapter 9 program.	
10-29		Chapter 10 lecture by McKinstry		Chapter 9 program due. Begin chapter 10 program.	
11-5		Chapter 11 lecture by McKinstry		Chapter 10 program due. Begin chapter 11 program.	
11-12		Chapter 12 lecture by McKinstry		Chapter 11 program due. Begin chapter 12 program.	
11-19		Chapter 13 lecture by McKinstry	**Thanksgiving**	**Thanksgiving**	**Thanksgiving**
11-26		No class		Chapter 12 program due. Begin chapter 13 program.	
12-3		No class		Chapter 13 program due. Begin program from this year's programming contest. (waived if you went to the contest)	
12-10 **Finals week**		Program from this year's programming contest due during final exam time (by 12:30 p.m.). (waived			

		if you went to the contest)			

Grading:

Course grade will be weighted as follows:
10% Weekly attendance
10% Chapter presentation to the rest of the class.
80% Completing the programming assignment at the end of each chapter covered.

Late work is penalized by 30%. Work overdue more than 1 week will not be accepted.

The standard grading scale will be used:

93-100%	A
90-92%	A-
87-89%	B+
83-86%	B
80-82%	B-
77-79%	C+
73-76%	C
70-72%	C-
67-69%	D+
63-66%	D
60-62%	D-
0-59%	F

Cheating: You must write your own programs. Copying programs from the internet is cheating. Do not do it. If you are unable to complete the assignment, ask for help. There are hints for many problems at the end of the chapter. It is better to take partial credit for solutions attempted than to get an A by cheating.