SYLLABUS

I.   <u>Title</u>: CSC422 Theory of Computation

II.   <u>Time and Place</u>: Spring Semester 2013,
                         WF 1:30-2:20 p.m. (RS 14);
                         Final exam, Wednesday, May 1st, from 1 to 3 p.m.

III.   <u>Credit</u>: Two units

IV.   <u>Instructor</u>: Dr. McKinstry, Professor of Computer Science

V.   <u>Office Hours</u>: Rohr Science 216, (619) 849-2269; email: jeffmckinstry@pointloma.edu

Monday:	11:00-11:50 a.m., 2:30-3:30 p.m.
Tuesday:	9:30 a.m.- 11:50 a.m.
Wednesday:	11:00-11:50 a.m., 2:30-3:30 p.m.
Thursday:	9:30 a.m.- 11:50 a.m.
Friday:	11:00-11:50 a.m.

VI.   <u>Text</u>: Sipser, M. *Introduction to the theory of computation*. 2nd Edition. PWS Publishing Company, Boston, 2006.

VII.   <u>Objectives of the course</u>: An introduction to the theory of computation. Topics include finite automata and regular expressions, context-free grammars and push-down automata, Turing machines, decidability and reducibility.

VIII.   <u>Learning outcomes</u>:
Students will understand the theory of algorithms and computation.
Students will understand the interaction between hardware and software.

IX.   <u>Course Organization</u>: The Course Schedule provides an outline with dates for some of the important activities of the course. Class time will be used for lecture, discussion and group work, labs, exams.

X.   <u>Student Evaluation</u>:

Homework/classwork	25%
Exams (2 midterms+final, 25% each)	75%
Total	100%

Grades will be determined as follows:

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

XI.   <u>Course Schedule (subject to change)</u>.
Jan. 7: Regular languages (chapter 1)
Jan. 14: Regular languages (chapter 1)
Jan. 21: Regular languages (chapter 1)
Jan. 28: Regular languages (chapter 1)

Feb. 4: Context-free languages (chapter 2)
Feb. 11: Context-free languages (chapter 2)
Feb. 18: Context-free languages (chapter 2) (**Chapter 1 & 2 Exam on Friday**)
Feb. 25: The Church-Turing Thesis (chapter 3)
Mar. 4: **Spring Break**
Mar. 11: The Church-Turing Thesis (chapter 3)
Mar. 18: The Church-Turing Thesis (chapter 3)
Mar 25: Decidability (chapter 4) (**Easter recess Friday.**)
April 1: Decidability (chapter 4)
April 8: Decidability (chapter 4)
April 15: (**Chapter 3 & 4 Exam on Friday)**
April 22: Reducibility (chapter 5)
April 29: **Cumulative Final exam**, **Wed. 1:00 p.m – 3:00 p.m.**