CMPE 16  
Applied Discrete Mathematics  
Summer 2013 (June 24 – August 16)

Description: Introduction to applications of discrete mathematical systems. Topics include: logic, propositions, proofs using propositional equivalences; sets and set operations; predicates and quantifiers; rules of inference and mathematical proof methods; functions and relations, sequences and summations; divisibility, modular arithmetic, prime numbers and Euclid’s algorithm; mathematical induction; recursive definitions and recurrence relations, solving recurrence relations; counting arguments, pigeonhole principle, permutations and combinations; discrete probability; Boolean algebra and circuits; modular arithmetic.

Time and Place: MWF 10:00-11:40am  E2 194  
Class Webpage: http://ic.ucsc.edu/~ptantalo/cmpe016/Summer13/

Instructor: Patrick Tantalo  
http://users.soe.ucsc.edu/~ptantalo/
Email: ptantalo@soe.ucsc.edu
Office: E2  257
Office Hours: M 3:30-4:30, TTh 2:00-4:00, or by appointment
Phone: 831-459-3898

Summer Session Tutor: Soph Anya Lundeberg (alundebe@ucsc.edu)
LSS Tutor: Jack Robbins (jrobbin@ucsc.edu)

Required Text: Discrete Mathematics and its Applications by Kenneth H. Rosen, 7th edition, published by McGraw-Hill 2012 (ISBN 9780073383095). The Bay Tree Bookstore has for a reduced price, a custom edition that includes only the sections we will be using in this course (ISBN 9781121564503). We will cover sections 1.1, 1.3-1.7, 2.1-2.5, 4.1, 4.3, 5.1-5.3, 6.1-6.5, 7.1-7.2, 8.1-8.2, 12.1-12.3. It is possible to use an earlier edition. When doing so however, it is entirely the students’ responsibility to compensate for changes in section, page and problem numbers.

Coursework and Evaluation: 
Homework will consist of written assignments taken from the exercises at the end of each section. Written homework will be from the problems at the end of each section. Its purpose is to prepare students for quizzes and the final exam. Quizzes will be held during the last 20 minutes of class starting Friday July 5 then every Friday thereafter through Friday August 9. A complete schedule of quizzes is posted on the webpage. The Final Exam will be held on the last day of class Friday August 16, 10:00am - 12:30pm.

Coursework will be weighted as follows:

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<tr>
<td>Homework</td>
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<td>Quizzes</td>
<td>50%</td>
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<td>Final Exam</td>
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The grading scale for the class will be approximately: A+: 97%-100%, A: 93%-96%, A-: 90%-92%, B+: 87%-89%, B: 83%-86%, B-: 80%-82%, C+: 76%-79%, C: 70%-75%, D: 60%-69%, F: 0%-59%. Letter grade boundaries may be lowered at my discretion in order to eliminate some borderline cases.
Accommodations for Students with Disabilities
If you qualify for classroom accommodations because of a disability, please submit your Accommodation Authorization Letter from the Disability Resource Center (DRC) to me during my office hours or by appointment, preferably within the first week of the Summer Session. Contact DRC by phone at 831-459-2089 or drc@ucsc.edu for more information.

Academic Honesty:
The Baskin School of Engineering has a zero tolerance policy for any incident of academic dishonesty. If cheating occurs, consequences may range from getting zero on a particular assignment to failing the course. In addition every case of academic dishonesty is referred to the students’ college Provost who sets in motion an official disciplinary process. Cheating in any part of the course may lead to failing the course, suspension or dismissal from the Baskin School of Engineering, or from UCSC. What is cheating? In short, it is presenting someone else’s work as your own. Examples would include copying another student's written homework assignment, or allowing your own work to be copied. You may discuss homework problems with fellow students, but your collaboration must be at the level of ideas only. Legitimate collaboration ends when you "lend", "borrow", or "trade" written solutions to problems, or in any way share in the act of writing your answers. If you do collaborate (legitimately) or receive help from anyone, you must credit them by placing their name(s) at the top of your paper. Please go to http://www.ucsc.edu/academics/academic_integrity/ to see the full text of the University's policy on Academic Integrity.