CMPE 16
Applied Discrete Mathematics
Summer 2012 (June 25 – August 17)

Topics: 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; 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.

Prerequisites: Eligibility to enroll in Mathematics 19A (completion of Mathematics 2B or 3 or Mathematics Placement Exam score of 40 or higher) or completion of Mathematics 19A or 11A, or Applied Mathematics and Statistics 11A, or Economics 11A.

Time and Place: MWF 10:00-11:45am Jack Baskin Engineering 372
Class Webpage: http://ic.ucsc.edu/~ptantalo/cmpe016/Summer12/

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

LSS Tutor: Christopher Taylor chataylo@ucsc.edu
LSS online tutor sign-up: https://eop.sa.ucsc.edu/OTSS/tutorsignup/

Required Text: Discrete Mathematics and its Applications by Kenneth H. Rosen, 7th edition, published by McGraw-Hill 2012 (ISBN 0073383090). 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 9781121519411). We will cover sections 1.1, 1.3-1.7, 2.1-2.5, 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 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 6 then every Friday thereafter through Friday August 10. A complete schedule of quizzes is posted on the webpage. The Final Exam will be held on the last day of class Friday August 17, 10:00am - 12:30pm.

Coursework will be weighted as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Homework</td>
<td>10%</td>
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<tr>
<td>Quizzes</td>
<td>50%</td>
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<tr>
<td>Final Exam</td>
<td>40%</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.