CMPE 16
Applied Discrete Mathematics
Summer 2010 (June 21 – August 11)

Description:
Introduction to applications of discrete mathematical systems. Topics include sets, functions, relations, graphs, trees, switching algebra, first order predicate calculus, mathematical induction, permutations, combinations, summation, and recurrences. Examples drawn from computer science and computer engineering.

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.

Time and Place:  MW 10:30-1:10  E2 194
Class Webpage:  http://ic.ucsc.edu/~ptantalo/cmpe016/Summer10/
Class Webforum:  http://forums.soe.ucsc.edu/

Instructor:  Patrick Tantalo (http://www.soe.ucsc.edu/~ptantalo/)
Email:  ptantalo@soe.ucsc.edu
Office:  E2 257
Office Hours:  MW 2:00-3:30, Th 1:30-3:30, or by appointment
Phone:  831-459-3898

Required Text: Discrete Mathematics and its Applications by Kenneth H. Rosen, 6th edition, published by McGraw-Hill (2007). We will cover sections 1.1-1.7, 2.1-2.4, 3.4-3.5, 4.1-4.3, 5.1-5.5, 6.1-6.2, 7.1-7.2, 8.1, 8.3, 8.5, 11.1-11.2. If time permits, we may also cover selected topics from sections 6.3-6.4, 7.5-7.6, 8.6, and 11.3-11.4.

Coursework and Evaluation:
Homework will consist of written assignments taken from the exercises at the end of each section. Written homework will be graded only as to its completeness, not correctness. Its purpose is to prepare students for quizzes and the final exam. The first of six Quizzes will be held on Wednesday June 30, then every Wednesday thereafter, up through Wednesday August 4. Quizzes will be held during the last 20 minutes of class. A complete schedule of quizzes will be found on the webpage. The Final Exam will be held on the last day of class Wednesday August 11, 10:30am - 1:30pm.

Coursework will be weighted as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>5%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>55%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>40%</td>
</tr>
</tbody>
</table>

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%, C-:60%-69%, D: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 get an Accommodation Authorization from the Disability Resource Center (DRC) and submit it to me in person outside of class (i.e. during office hours) within the first two weeks of the quarter. Contact DRC at 459-2089 (voice), 459-4806 (TTY), or http://drc.ucsc.edu for more information on the requirements and/or process.

**Academic Honesty:**
In recent years, there has been an increased number of cheating incidents in many UC campuses, and unfortunately, UCSC is no exception. The Baskin School of Engineering has a zero tolerance policy for any incident of academic dishonesty. If cheating occurs, consequences within the context of the course 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. Although you may discuss problems with fellow students, 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.