CMPE 16
Applied Discrete Mathematics
Summer Session 2005: June 20 – August 12

Description:
An introduction to applications of discrete mathematical systems. Topics include sets, functions, relations, graphs, trees, Boolean algebra, propositional logic, predicate calculus, mathematical induction, permutations, combinations, summation, and recurrences. Examples are drawn from computer science and computer engineering.

Prerequisites:
Eligibility to enroll in Mathematics 19A (completion of MATH 2B or 3 or mathematics placement exam score of 40 or higher) or completion of either Mathematics 19A or 11A.

Time and Place: WF 10:00 – 12:25 E2 192
Class Webpage: http://www.soe.ucsc.edu/classes/cmpe016/Summer05/

Instructor: Patrick Tantalo (http://www.soe.ucsc.edu/~ptantalo/)
Email: ptantalo@soe.ucsc.edu
Office: E2 157
Office Hours: TTh 2:00 – 4:00
Phone: 831-459-3898

Required Text: Discrete Mathematics and its Applications by Kenneth H. Rosen, 5th edition, published by McGraw-Hill (2003). We will cover sections 1.1-1.8, 2.4, 3.1-3.4, 4.1-4.5, 5.1, 6.1-6.2, 6.5, 10.1-10.4. If time permits, we may also cover selected topics from sections 2.6, 5.2, 6.4, 6.5, 7.1, 7.3, 7.5, and 7.6.

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 Friday July 1, then every week thereafter. A complete schedule of quizzes and solutions will be found on the webpage. The Final Exam will be held on Friday August 12, 10:00-1:00. Please make arrangements now to be available at that time.

Coursework will be weighted as follows:

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

The following is from the Spring 2005 Schedule of classes under General Information:

**Academic Integrity**
All members of the UCSC academic community have an explicit responsibility to present as their original work only that which is truly their own. Cheating, plagiarism, and other forms of academic dishonesty are contrary to the ideals and purposes of a university and will not be tolerated. Note that plagiarism includes the deliberate misrepresentation of someone else's words and ideas as your own, as well as paraphrasing without footnoting the source. Students and faculty are jointly responsible for assuring that the integrity of scholarship is valued and preserved.

To view the full text of the new policy on academic integrity on the Web, see:
http://www.ucsc.edu/academics/academic_integrity/

**Due Process**
Students charged with academic dishonesty have the right to due process through established policies and regulations concerning student conduct and discipline. Copies of these policies and regulations can be found in the Rule Book (http://www2.ucsc.edu/judicial) which is available at the offices of each college provost, the dean of graduate studies, and the Vice Chancellor of Student Affairs.