

CMSC 250 - Discrete Structures (Summer 2006) - Syllabus

Prerequisites and Description

Prerequisite: CMSC131 with a grade of C or better; MATH141; This course is about the fundamental mathematical concepts related to computer science, including finite and infinite sets, relations, functions, and propositional logic. Introduction to other techniques, modeling and solving problems in computer science. Introduction to permutations, combinations, graphs, and trees with selected applications.

Teaching Team

- Instructor: Carlos Castillo (carlos@cs.umd.edu)
- Teaching Assistant: Kin-Keung (Martin) Ma (kkma@cs.umd.edu)

The office hour schedule will be provided in a separate handout shortly.

Lectures and Discussion

Lectures will be MTWTh from 9:30 to 10:50 in CSI 2120. Discussion Sections will be on Friday from 9:30 to 10:50 in CSI 2120.

Grading

The final course grade will be made up of the following components:

- **Homework (10%):** There will be weekly written assignments to give you an opportunity to practice the material we will go over during lecture.
- **Quizzes (20%):** There will be a short (15 minute) quiz every friday at the end of the discussion section.
- **First Midterm (20%):** The first midterm will be Monday, June 26th during the normal class period. The first midterm will include the material covered up to that point.
- **Second Midterm (20%):** The second midterm will be Monday, July 17th during the normal class period. The second midterm will include the material covered up to that point, but will focus on material not evaluated in the first midterm.
- **Final Exam (30%):** There will be a comprehensive final. The final will be the last day of class: Friday, July 28th during the normal class period.

Textbook and Contents

The textbook for the course is:

- **Discrete Mathematics with Applications**, by Susanna Epp, Third Edition, 2004. ISBN 0-534-35945-0.

We will traverse the textbook in a non-sequential order:

- Chapter 1 and 2. Propositional and Predicate Logic and Circuits. (approx. 2 weeks)
- Chapter 3. Elementary Number Theory & Proof Forms. (approx 1 week)
- Chapter 4. Summations, Recurrences, Mathematical Induction. (approx. 1 week)

- Chapter 5. Sets, Venn Diagrams, Cartesian Products, Power Sets. (approx. 1 week)
- Chapter 7. Functions, Pigeonhole Principle. (approx. 1/2 week)
- Chapter 10. Relations, Reflexivity, Symmetry, Transitivity. (approx. 1/2 week)
- Chapter 6. Counting and Combinations (approx. 1 week)
- Chapter 11. Graphs and Trees (approx. 1/2 week)

Excused Absences and Accommodations

Excused Absences

The absence must be documented to prove that you were unable to attend the class or lab period corresponding to the quiz, homework or exam. If it is a medical excuse it must state the dates you were unable to attend class and it must give contact information for the medical professional so that I can verify the incapacitation. Self documentation form is not sufficient for the documentation of an excused illness. The excuse must indicate the specific dates when you were unable to attend class. The form must contain a phone number to the medical professional for verification purposes.

It is the University's policy to provide accommodations for students with religious observances conflicting with exams, but it is the student's responsibility to inform the instructor in advance of intended religious observances. Notice must be given when the exam is announced or confirmed, prior to the end of the schedule adjustment period.

Students with Disabilities

Students with disabilities who have been certified by Disability Support Services as needing any type of special accommodations should see the instructor during the first week.

All arrangements for special exam accommodations as a result of disability must be made and arranged with the instructor at least a week prior to the exam.

Random Administrative Concerns

- **Class web page:** The class web page is: <http://www.cs.umd.edu/class/summer2006/cmsc250/>. You are expected to check the class web page for updates on course information.
- **Homeworks:** Homework will be handed out in class and collected in class. Homework is due at the beginning of the class as indicated on the homework assignment. (In the beginning means that it must be turned in within the first 10 minutes). Submitting it any later without valid documentation will result in a 0 for that homework. You must work alone on your homework, and homework answers must be written legibly, single-sided on your own paper with the answers clearly labeled and in sequential order as assigned (read further rules on homework description). You must put your name, your university ID, and the name of your TA and the time of your lecture and discussion section in the upper right-hand corner of the first page of your homework answers. If you have multiple pages, staple them together, and be sure that your name is on every sheet. Be sure to always write your homework in pencil.
- **Worksheets:** Worksheets will be done during the second half of class on Wednesdays. These worksheets are an in-class exercise and will not be collected, graded, or available at other times. The contents of the worksheet should be very similar in scope and in difficulty to the quiz on Friday (and the homework for that week).
- **Quizzes:** Quizzes will be given every Friday during your discussion section. Makeup quizzes will not be given, but if you provide a valid documented excuse (as described above), your quiz grade will be calculated using only your other quizzes. Your one lowest quiz grade for the semester will be dropped - if you oversleep once you are still fine, don't make a habit of it.