

Online syllabus: Throughout the entire semester, this syllabus will be online at the URL

<http://www.mgnet.org/~douglas/Classes/discrete-math/2007s-notes/syllabus.pdf>

University rules allow the syllabus to be changed during the semester as long as adequate warning is given to the class. Due to the unexpected change of professors just before the class began and confusion over the textbook (edition, etc.), the University Ombud, Dr. Joel Lee, has offered to help any student withdraw without a W appearing on his or her transcript. Please contact Dr. Lee if this option is of interest.

Course Description: Topics in discrete math aimed at applications in Computer Science. Fundamental principles: set theory, induction, relations, functions, Boolean algebra. Techniques of counting: permutations, combinations, recurrences, algorithms to generate them. Introduction to graphs and trees.

Prerequisites: MA-113 and CS-115.

Classrooms: CB 246 (TR, 9:30-10:45), 001: RGAN 203 (W, 1:00-1:50), 002: RGAN 207 (W, 2:00-2:50)

Class web page: <http://www.mgnet.org/~douglas/Classes/discrete-math/2007s-index.html>

TA: Ramakanth (Rama) Kavuluru, kvnramakanth@yahoo.com

Office hours:

- Craig Douglas: Tuesday 11:00-12:00 and Wednesday 10:00-11:00. Call 257-2438 before coming to 514H RMB (Robotics building).
- Rama Kavuluru: Monday and Fridays 1:00-2:30 in the MultiLab (203 EE Annex, 257-5256).

Textbook: K. H. Rosen, Discrete Mathematics and Its Applications, 5th edition, McGraw Hill, Boston, 2003.

Suggested Reading:

- K. H. Rosen, Discrete Mathematics and Its Applications, 6th edition, McGraw Hill, Boston, 2007. ISBN-10: 0072880082, ISBN-13: 9780072880083.
- R. P. Grimaldi, Discrete and Combinatorial Mathematics, 5th edition, Addison Wesley, Boston, 2004. ISBN-10: 0201726343, ISBN-13: 9780201726343.

Homework: There will be homework from Rosen's 5th edition book and simple programming assignments related to the material. Each assignment is due at latest when stated on the class homework web page, which you are responsible for checking on Tuesdays and Thursdays at a minimum. Late work will not normally be accepted unless arrangements have been made in advance.

Exams: The final for this course is scheduled for May 3, 8:00-10:00 AM. Dates of in term exams will be posted on the class web page and will be (approximately) February 2, March 1, March 27, and April 17. You are responsible for bringing a copy of Rosen's 5th edition to the *open textbook* exams.

Grading: 100% of the grade will come from the exams and the homework. The exact formula is $G = (65 * (\text{your exams total} / \text{exams possible total}) + 35 * (\text{your homeworks total} / \text{homeworks possible total}))$. Your G score should be *no more than* 15, 30, 35, or 40 in order to guarantee an A, B, C, or D. However, if you turn in none of the homework, you will receive an E.

Cheating Policy: Getting caught cheating or plagiarizing will result in a grade of E and possibly much worse, including expulsion from the university and legal proceedings against you. I have zero tolerance for cheaters. I will enforce whatever the latest university policy is. When in doubt, ask me first.

Class Evaluation Special Topics: This class has taught me how to

37. how to construct proofs by mathematical induction
38. how to apply laws of set algebra
39. how to apply elementary logic
40. how to enumerate combinatorial objects
41. how to solve recurrence relations
42. to understand the relevance of discrete mathematics to CS curriculum