COMBINATORIAL ANALYSIS
MATH 6473
SPRING 2009: TR 5:30-6:45; Boyd 304

Instructor: Dr. Landman
Office: 310 Boyd
Office Hours: T,Th 4:15-5:30, or by appointment
Phone: (678) 839-6489
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Prerequisite: Math 3003 or equivalent

Topics:
1. Permutations and combinations – Chapter 2
2. The pigeonhole principle – Chapter 3
3. Binomial coefficients – Section 5.2
4. The inclusion-exclusion principle – Sections 6.1-6.5
5. Ordinary and exponential generating functions - Section 7.2-7.3
6. Recurrence relations – Sections 7.1, 7.4, 7.5
7. Partitions – Section 8.3
8. Block designs – Sections 10.2 – 10.3
9. Special sequences – Sections 8.1 – 8.2

Homework: Homework will be assigned on most days. These will not be graded and do not count toward your course grade, but we will go over these in class. It is very important for your success in the course that you do the homework regularly and on time.

Take-Home Assignments: Approximately every two weeks a take-home assignment of problems will be given. These will be graded. Your work on these assignments is to be your own. Late papers will not be accepted; if for some
reason you are absent on the day they are due, then I must receive your work BEFORE they are due.

**Tests**: There will be two in-class tests, and a cumulative final exam. No make-up tests will be given. If you must miss one of the two in-class tests, your grade on the corresponding portion of the final exam will be used in its place. If both tests are missed, a grade of F will be given for one of them, and the other will be replaced by the corresponding portion of the final exam.

**Grading Procedure**

**For your grade in the course, the grade will be determined as follows:**

- Tests 40%
- Take-Home Assignments 35%
- Final Exam 25%

- An overall average of 85-100 earns a grade of A
- An overall average of 70-85 earns a grade of B
- An overall average of 55-70 earns a grade of C
- An overall average below 55 earns a grade of F

**Other**: It is strongly recommended that you allow at least 6-7 hours outside of class, each week, for homework and study (more would be better).

If you find yourself confused about a topic, please do not wait more than a day or two to come see me or email me to get the confusion cleared up.

**Important Dates:**

- February 18, Thursday: Test 1
- March 2, Monday: Last day to withdraw with grade of W
- April 8, Thursday: Test 2
- May 5, Tuesday: Final Exam (5:30 – 7:30 p.m.)