Math 232 - 50453 - Elements of Discrete Mathematics
Syllabus - OSU - Spring 2011

Instructor: Filix Maisch                        e-mail: maischf@math.oregonstate.edu
Meetings: MWF 10 - 10:50 AM                  phone: 541-737-7127
Room: Owen 101                                office: Kidder 332
off. hrs: MWF 11 - 11:50 AM, Thurs. 1 - 1:50 PM, or by appt. (Thurs. in MLC).
Web: people.oregonstate.edu/~maischf/

Attendance: Regular attendance will be expected, but roll will not be taken.

Honor Code: Students are expected to be familiar with Oregon State University’s Statement of Expectations for Student Conduct. Please review this statement at the following web link:
http://oregonstate.edu/admin/stucon/achon.htm

Accommodations: Accommodations are collaborative efforts between students, faculty and Disability Access Services (DAS). Students with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term. Students who believe they are eligible for accommodations should contact DAS immediately at 737-4098.

Course Description: Proofs, combinatorics, algorithms and complexity, probability, graphs and trees.

Schedule: See web for tentative term schedule.

Evaluation: Your grade is determined by homework quizzes, one midterm and a final. Here is the point breakdown:

- Homework quizzes - 70 (8 quizzes worth 10 points each, but only the top seven count.)
- Midterm - 80 (Friday, April 29th, during regularly scheduled class.)
- Final - 100 (Monday, June 6th, 2 - 3:50 PM)

Grades will not be harder than:
225 - 250 A/A-, 200 - 224 B+/B/-, 175 - 199 C+/C, 150 - 174 D, 0 - 149 F.

I do not use blackboard. A “keep track of my own grade” sheet is included at the end of this syllabus.

Resources: The Math Learning Center is in Kidder 108H and is a great place to drop in for help. It is open from 9 AM to 4 PM, Monday through Friday, from the second week onward. I will be in there on Thursdays.

Tests: Quiz dates and the midterm/final exam dates are on the tentative term schedule. You are allowed one 3x5 inch handwritten note card for the midterm and for the final exam.

Homework: Homework is suggested. It will not be collected, but you are expected to do it. Some random problems from the homework will be put on each of the homework quizzes. There will also be a problem that is similar, but not identical, to homework on each homework quiz. See the homework schedule on the web. I will take it on your honor that you do not discuss the quiz with a student who has a later recitation time than you.
Specific Learning Outcomes:
1. Understand and construct direct proofs, including proofs using the Principle of Mathematical Induction.
2. Construct simple proofs using contradiction and contraposition.
3. Demonstrate an understanding of the logical foundation of some simple algorithms.
4. Use the Sum Rule and Product Rule in combinatorial arguments.
5. Construct complete explanations for solutions to counting problems.
6. Demonstrate a basic understanding of discrete probability.
7. Understand and apply Bayes’ Theorem.
8. Understand and use the matrix representation of finite graphs.
9. Use graphs to model systems.
10. Use at least one algorithm for finding a minimal spanning tree in a connected graph.

Write down your scores!

(1) Homework quiz 1: ......out of 10
(2) Homework quiz 2: ......out of 10
(3) Homework quiz 3: ......out of 10
(4) Homework quiz 4: ......out of 10
(5) April 29th Midterm: ......out of 80
(6) Homework quiz 5: ......out of 10
(7) Homework quiz 6: ......out of 10
(8) Homework quiz 7: ......out of 10
(9) Homework quiz 8: ......out of 10
(10) June 6th Final: ......out of 100