Math 231 - 35129 - Elements of Discrete Mathematics  
Syllabus - OSU - Winter 2011  

Instructor: Filix Maisch  
e-mail: maischf@math.oregonstate.edu  
Meetings: MWF 4 - 4:50 PM  
Room: Weniger 116  
off. hrs: MWF 11 - 11:50 AM, Tue 2 - 2:50 PM, or by appt. (Tue 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: Elementary logic, mathematical induction, sets, relations and functions, recurrence equations, algorithms.  

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, February 4th, during regularly scheduled class.)  
  - Final - 100 (Thursday, March 17th, 2 - 3:50 PM)  

Grades will not be harder than:  
225 - 250 A/A-, 200 - 224 B+/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 Tuesdays.  

Tests: Quiz dates and the midterm/final exam dates are on the tentative term schedule. You are allowed one 3x5 inch handwritten notecard 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. Apply basic set operations and DeMorgan’s Laws. Apply propositional calculus.
2. Negate compound and quantified statements. Form contrapositives.
3. Construct direct proofs (from definitions) of simple statements.
4. Apply the Principle of Mathematical Induction.
5. Demonstrate an understanding of the construction of proofs by contradiction and contra-position.
6. Understand and use the graphical and matrix representations of binary relations.
7. Understand and use equivalence relations.
8. Understand and use asymptotic notation.
9. Use inductive arguments to construct and solve models based on first- order and second-order linear constant coefficient difference equations.

**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) Feb. 4th 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) March 17th Final: ......out of 100