Math 231 - 34555 - Elements of Discrete Mathematics (4)
Syllabus - OSU - Winter 2013

Instructor: Filix Maisch
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Meetings: MWF 4 - 4 : 50 PM
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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.

Prerequisites: Placement in MTH 251
Schedule: See web for tentative term schedule.

Evaluation: Your grade is determined by recitation quizzes, unannounced in-class true-false discussion quizzes, one midterm, and a final. Here is the point breakdown:

- T/F Quizzes - 30 (4 quizzes worth 10 points each, but only the top three count.)
- Recitation quizzes - 70 (8 quizzes worth 10 points each, but only the top seven count.)
- Midterm - 100 (Feb 8th, 2013, in class.)
- Final - 150 (March 19th, 8 – 9 : 50pm , location: TBAD.)

Grades will not be harder than:
315 - 350 A/A-, 280 - 314 B+/B/B-, 245 - 279 C+/C, 210 - 244 D, 0 - 209 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.

Tests: The midterm/final exam dates are on the tentative term schedule. You are allowed one 3x5 inch handwritten note card for the midterm and one 4x6 inch handwritten note card for the final exam. No calculators are allowed nor needed.

T-F Quizzes: No resources are allowed on the unannounced in-class true-false discussion quizzes, but you are intended to discuss your reasoning with your fellow students. No make-ups are allowed unless you have a verifiable and documented emergency.
Recitation Quizzes: There is a list of strongly suggested homework exercises on the web. Homework will not be collected, but you are expected to do it. Every week except weeks 1 and 6 your TA will put some random problems from the suggested homework on that week’s recitation quiz. No notes or completed homework is allowed on these quizzes.

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 contraposition.
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) Recitation quiz 1: ......out of 10

(2) Recitation quiz 2: ......out of 10

(3) Recitation quiz 3: ......out of 10

(4) Recitation quiz 4: ......out of 10

(5) Recitation quiz 5: ......out of 10

(6) Recitation quiz 6: ......out of 10

(7) Recitation quiz 7: ......out of 10

(8) Recitation quiz 8: ......out of 10

(9) Best 7 of 8 homework quizzes: ......out of 70

(10) True-false quiz 1: ......out of 10

(11) True-false quiz 2: ......out of 10

(12) True-false quiz 3: ......out of 10

(13) True-false quiz 4: ......out of 10

(14) Best 3 of 4 true-false quizzes: ......out of 30

(15) Midterm: ......out of 100

(16) Final: ......out of 150