Instructor: Filix Maisch  
Meetings: MWF 10 - 10:50 AM  
Room: KEAR 212  
Off. hrs: MW 11 - 11:50 AM (KIDD 332)  
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, unannounced in-class true-false discussion quizzes, one midterm exam, and a final. Here is the point breakdown:
• Homework quizzes - 70 (8 quizzes worth 10 points each, but only the top seven count.)
• True-False quizzes - 30 (4 quizzes worth 10 points each, but only the top three count.)
• Midterm - 100 (Friday, May 4th, during regularly scheduled class.)
• Final - 150 (Tuesday, June 12th, 6 - 7:50 PM)  
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. I encourage you to come to my office hours if you do not know how many points you have accumulated. At the end of this syllabus you have a page on which you can record your scores.  
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 Fridays.  
Tests: You are allowed both sides of one 3x5 inch handwritten note card for the midterm and both sides of one 4x6 inch handwritten note card for the final exam.
Homework: Homework is suggested and can be found on the web page. It will not be collected, but you are expected to do it. Starting with the second week’s recitation, you will take one homework quiz per week, except for the week after the midterm. Some random problems from each of the numbered homework assignments will be put on each of the corresponding homework quizzes. There will also be one problem that is similar, but not identical, to homework on each homework quiz. 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. You cannot use your written homework to take the quiz, rather you must be able to reproduce the solutions.

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.

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) Midterm: ......out of 100

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