

## Math 209, Section 1 - Spring 2012 Syllabus

Professor: Dr. Andy Felt Office Hours: M, T, R, F 11:00 – 11:50 a.m. or by arrangement	Office: SCI B333 Phone: 346-4207 email: <a href="mailto:afelt@uwsp.edu">afelt@uwsp.edu</a>
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**Class Meetings:** M, W, R, F, 2:00–2:50, Science A210 (TR), CCC 111 (MF).

**Text:** *Discrete Mathematics and Its Applications*, 6th ed., by Rosen, ISBN 978-0-07-288008-3, available from UWSP Text Rental.

**Course Web Page:** <http://www4.uwsp.edu/math/afelt/teaching/M209.html>

**Calculators and Computers:** A calculator will not be necessary in this course, but you may find one useful once or twice.

**Prerequisites:** Math 109 and concurrent registration in CIS 120

**Fundamental Skills to be Learned:**

- Recognizing real life situations where mathematical models apply.
- Translating the real life situations into mathematical models.
- Solving the mathematical model.
- Interpreting the solution in the context of the real life situation.

**Grading:**

Homework Assignments	130 points	This many points gets you	⇒	at least this grade
Class Participation	20 points	552 (92%)	⇒	A,
3 Exams	300 points	540 (90%)	⇒	A–,
Final Exam (Comprehensive)	150 points	528 (88%)	⇒	B+,
Total	600 points	492 (82%)	⇒	B, etc.

**Homework:** Assignments should have the following format:

- Looseleaf paper only (no spiral schnibbles)
- Name, section, assignment, date on first page
- Stapled, each assignment separately

The grade for each assignment will include 20% based on accuracy and quality of written communication. Examples on this topic are given in Assignment 0. *No late homework is accepted for any reason.* Usually, there will be a class day between the day homework is assigned and the day it is due. Assignments are due at the beginning of class on the day they are due.

**Help:** Everybody needs help at some point. The key is to *get help right away* when you need it. Here are some ways to get help:

- ask a question in class;
- ask me during office hours;
- ask me in an email;
- the Math Room (SCI A113A) provides help for students in this course;

**Disability Accommodations:** Reasonable accommodations are available for students who have a documented disability. Please notify the instructor during the first week of class of any accommodations needed for the course. All accommodations must be approved through Disability Services, located at 103 Student Services Center or <http://www.uwsp.edu/special/disability/>.

### General Course Policies:

- Exams must be ONLY your own work. You may work together on homeworks (unless otherwise specified), but the material you turn in must be *your own*. Please see <http://www.uwsp.edu/admin/stuaffairs/rightsandresponsibilities.aspx> to read about your rights and responsibilities as a student, and <http://www.uwsp.edu/admin/stuaffairs/rights/rightsChap14.pdf> to read about Wisconsin's academic misconduct code.
- Use of calculators will not be allowed on exams.
- Pagers and cell phones should be turned off during class and exam times.
- Everyone becomes ill sometimes. When you become ill, I expect you to make a reasonable effort to come to class. When illness or other emergencies require absence from class, I expect you to contact me immediately, preferably by email. I expect you to keep up with what is being taught by following in your book and doing the homework. Either have a friend bring your homework, or slide it under my office door. To account for illness and other emergencies, at least three homework scores will be dropped.

### Tentative Calendar

Week of	Approximate Coverage
Jan 23	1.1 Propositional logic 1.2 Propositional equivalences
Jan 30	2.1 Sets 2.2 Set operations 2.3 Functions
Feb 6	3.1 Algorithms 3.2 The growth of functions
Feb 13	3.3 Complexity of algorithms 4.4 Recursive algorithms 5.1 The basics of counting
Feb 20	Exam I 5.3 Permutations and combinations 5.4 Binomial coefficients
Feb 27	5.5 Generalized permutations and combinations 6.1, 6.2 Probability theory
Mar 5	10.2 Applications of trees 10.3 Tree traversal
Mar 12	10.4 Spanning trees 10.5 Minimum spanning trees
Mar 26	9.1 Graphs and graph models 9.2 Graph terminology 9.5 Euler and Hamilton paths

Week of	Approximate Coverage
Apr 2	9.6 Shortest path problem Applications Exam II
Apr 9	9.8 Graph coloring 8.1 Relations and their properties 8.2 $n$ -ary relations and their applications
Apr 16	8.5 Equivalence relations 8.6 Partial orderings
Apr 23	11.1 Boolean functions 11.2 Representing Boolean functions
Apr 30	11.3 Logic gates 11.4 Minimization of circuits Exam III
May 7	12.1 Languages and grammars 12.2 Finite-state machines with output 12.3 Finite-state machines with no output
Finals	Thursday 17 May Final Exam 8:00–10:00