

Math 209, Section 1 - Fall 2009 Syllabus

Professor: Dr. Andy Felt Office Hours: M, T, W, R 1:00 – 1:50 p.m. or by arrangement	Office: SCI B333 Phone: 346-4207 email: afelt@uwsp.edu
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Class Meetings: M, T, R, F, 12:00–12:50, Science Hall A225 (T, R) and A107 (M, F).

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://www.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;
- the Tutoring and Learning Center (below the library) has two kinds of help available; there may be a small (\$10 per semester) fee involved:
 - weekly tutoring sessions with a student who aced this course, and
 - drop-in tutoring with the same student at the TLC.

More information on TLC help will become available after the semester begins.

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/rights/rightsCommBillRights.pdf> 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
2 Sep.	1.1 Propositional logic 1.2 Propositional equivalences
8 Sep.	2.1 Sets 2.2 Set operations 2.3 Functions
14 Sep.	3.1 Algorithms 3.2 The growth of functions
21 Sep.	3.3 Complexity of algorithms 4.4 Recursive algorithms 5.1 The basics of counting
28 Sep.	Exam I 5.3 Permutations and combinations 5.4 Binomial coefficients
5 Oct.	5.5 Generalized permutations and combinations 6.1, 6.2 Probability theory
12 Oct.	10.2 Applications of trees 10.3 Tree traversal
19 Oct.	10.4 Spanning trees 10.5 Minimum spanning trees
26 Oct.	9.1 Graphs and graph models 9.2 Graph terminology 9.5 Euler and Hamilton paths

Week of	Approximate Coverage
2 Nov.	9.6 Shortest path problem Applications Exam II
9 Nov.	9.8 Graph coloring 8.1 Relations and their properties 8.2 n -ary relations and their applications
16 Nov.	8.5 Equivalence relations 8.6 Partial orderings
23 Nov.	11.1 Boolean functions 11.2 Representing Boolean functions
30 Nov.	11.3 Logic gates 11.4 Minimization of circuits Exam III
7 Dec.	12.1 Languages and grammars 12.2 Finite-state machines with output 12.3 Finite-state machines with no output
Finals	Monday, 14 Dec. Final Exam 14:45–16:45