

MATH 201 Section B / SPRING 2008 / SYLLABUS

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OFFICE HOURS:
MWF 9:20-9:50, 2-3,
or by appointment.

The idea of a PROOF is fundamental to mathematics, but many students find it to be difficult. The goal of this course is to teach you to read, write, and understand proofs. In many mathematics courses, such as Math 301 (abstract algebra), Math 317 (theory of linear algebra), and Math 414 (introductory real analysis), many of the assignments will be proofs, rather than “exercises” or problems. That is why Math 201 is a prerequisite to these courses. The topics in Math 201 include basic mathematical logic, proofs of theorems about integers, and proofs of theorems about real numbers and calculus. A variety of additional topics, problems, puzzles, and so forth will be included from time to time to develop reasoning skills and mathematical writing skills.

TEXTBOOK: Ted Sundstrom, *Mathematical Reasoning, Writing, and Proof*, second edition, Pearson Prentice Hall, 2007. . This book will be used for about the first third of the course. After that, most of the material needed for the course will be placed on the web page. (Be sure that you have this book, and not the book for Math 201 Section A.)

WEB PAGE: The web page for this course will be
http://orion.math.iastate.edu/jmurdock/Math_201B_S08/main.htm.

The web page will contain the homework assignments, reading assignments, exam dates, occasional solutions, and other information (including a copy of this syllabus).

HOMEWORK AND ATTENDANCE POLICIES: Regular attendance is essential in this class, because many important ideas will be introduced in class that are not in the textbook, especially in the second two thirds of the class. There will be a written assignment due each day (with a few exceptions). Attendance will be taken automatically by collecting the assignment. If you do not have the assignment ready, you must hand in a blank sheet of paper with your name on it to register your attendance. Except in the case of excused absences, late homework will not be accepted. To ask for an excused absence, send an email to jmurdock@iastate.edu with the subject line “Math 201 absence” giving the reason for the absence. I will send an email back to you when I grant the excused absence. If possible, bring the late homework to my office in time for me to grade it before the next class. (Slide it under my door if I am not there.)

GRADING: Grades will be based on homework, two in-class exams, and a final exam. Homework will be graded on a point system, with the number of points depending on the difficulty of the problem. When the assignment is a proof, there may be points for each essential logical step in the proof and points for writing quality. The format of the exams will be announced later.