

# MATH 187-001, Fall 2009

## Discrete and Foundational Mathematics I

MTWF 9:40 a.m.-10:30 a.m. MG 120

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**Core Outcomes:** MATH 187 is a core course. Several of the desired outcomes listed in the university's "Core Philosophy and Goals Statement" will be assessed during the semester. By the end of the course students of this course should have the following competencies:

1. Apply the technique of counting a collection of objects in two different ways to give a combinatorial proof of an equation.
2. Use modus ponens and "unpacking of basic definitions" to construct a mathematical proof of a logical implication.
3. Use the principle of mathematical induction to construct a mathematical proof.
4. Distinguish hypotheses from derived facts; identify the strategy used to derive facts from hypotheses.
5. Write logically correct, complete explanations of mathematical information.

Write clearly: Work should be legible, intelligible and substantiated. Illegible, unintelligible or unsubstantiated work will not earn credit. See the assignment policy for the course.

**Textbook:** E.R. Schneierman, *Mathematics: A discrete introduction* (2nd Edition), Thomson Brooks/Cole, 2006'

**Course web-site:** <http://diamond.boisestate.edu/~liljanab/MATH187Fall09/index.htm>.  
Homework assignments, due dates, exam study guides, tentative schedule and other information will be posted at this web-site.

**Homework:** Homework will be assigned on a weekly basis. However, not all assigned homework will be collected for grading. To be on time homework must be handed in at the beginning of the class when it is due. No late homework will be accepted. Some of the homework problems will be on topics not yet covered in class. The purpose of these assignments are to prepare for the upcoming class. Some of these may be collected for grading.

**Office hours:** MTF 10:30 a.m. - 11:30 a.m. or by appointment, drop-ins welcome.

**Attendance policy:** You are responsible for attending the class. You are also responsible for making up any work you may have missed by failing to attend class, even if the absence was approved by the university, necessitated by illness, or necessitated by a personal emergency.

**Term exams:** There will be two midterm examinations. The tentative dates for these are:

**Exam 1:** September 25, 2009

**Exam 2:** November 6, 2009

These should be taken when scheduled. Under exceptional circumstances supported by acceptable substantiation given at least a week before the scheduled test, a make-up test can be arranged. However, make-up tests will be more difficult than the regularly scheduled tests. The date and time of the final examination is non-negotiable. There will be no make-up final examination offered.

**Final exam:** Not taking the final exam will result in failing the course. The final exam cannot be rescheduled. The date for the final exam is December 14, 10:30 a.m. - 12:30 p.m.

**Each student for each exam should hand in a blue book a week before the exam. The blue book should be of standard 8"x11" format and contain the student's name on the cover page. The tests and the final exam will be answered in these blue books. No paper will be provided during the examinations.**

**Grade scale:** Your grade will be based on your performance in homework assignments, two midterm examinations and a final examination. The percentages available for these are as follows:

- Homework: 30%
- Term exams: 40%
- Final exam: 30%

The letter grade scale will be as follows:

A- : 90% - 92%; A: 93% - 96%; A+ : 97% - 100%

B- : 80% - 82%; B: 83% - 86%; B+ : 87% - 89%

C- : 70% - 72%; C: 73% - 76%; C+ : 77% - 79%

D- : 60% - 62%; D: 63% - 66%; D+ : 67% - 69%

F: Below 59%

**Academic Dishonesty:** All work (assignments, tests and final examinations) are required to be the student's own work. The university policy and procedures will be applied to all cases of academic dishonesty that occurs in this class. Please familiarize yourself with the university policy and guidelines about academic dishonesty. The university policy on such activities can be found in sections 18A and 18B of the *Student Code of Conduct* which can be obtained at <http://www.boisestate.edu/osrr/scp/studentcode.html>.