

## STT 441: Probability and Statistics I: Probability

**Time and Place:** M-W-F, 12:40–1:30PM; C207 Wells Hall

**Instructor:** Dr. Yimin XIAO

**Office:** A-437 Wells Hall

**Phone Number and E-Mail:** 432-5411      xiao@stt.msu.edu

Office hours: M W F 3:00–4:00PM, or by appointment.

**Text:** Sheldon Ross, **A First Course in Probability**, 7th Edition, Pearson & Prentice Hall, 2006.

**Coverage:** We intend to cover selected parts of Chapters 1–8.

**Prerequisite:** MTH 234 or MTH 254H or LBS 220.

The purpose of this course is to teach the students basic probability principles and techniques. This is an important prerequisite for several statistics classes and a required course for a number of technical disciplines. The basic components of the course include combinatorics, basic probability concepts, conditional probabilities, discrete and continuous random variables, classical probability distributions, joint probability distributions, expected values, laws of large numbers and the central limit theorem (normal approximation).

**This course is demanding and requires a great deal of work. Students are responsible for all material covered in class. Students are expected to attend each class period and to bring their textbook.**

**Homework:** Homework will be assigned regularly in the lecture. Students are expected to complete the homework on time. It is absolutely essential to keep up with the homework assignments.

**Quizzes:** There will be six 15-minute-quizzes given during this semester. The quizzes are designed to practice the material taught in the lecture and help you to develop problem-solving skills. **There will be no make up quizzes. The lowest quiz score will be dropped.** The quizzes will be given in class on the following Fridays:

January 30, February 13, February 27, March 20, April 3, April 17

### Exams:

- The mid-term will be given in class on Friday, March 6, 2009.
- The final is a 2-hour exam and will be **comprehensive**. It will be given during 12:45–2:45 p.m. on Tuesday May 5, 2009.

The final grade will be determined from your mid-term exam, final exam, quizzes and homework. The relative weighting is: Midterm exam, 30 %; Final Exam, 40 %; Quizzes, 15 %; Homework, 15%.

The grades will be given roughly according to the following scheme:

Percentage (%)	92–100	86–91	80–85	73–79	67–72	60–66	51–59	50 ↓
Grade	4.0	3.5	3.0	2.5	2.0	1.5	1	0

### Important Dates:

- January 12                      First day of classes
- January 16                      Close of online add period
- January 19                      Martin Luther King Day (No classes)
- February 6                      End of 100% tuition refund
- March 4                          Middle of the semester, last day to drop with no grade
- March 9–13                      Spring Break
- May 1                              Last day of classes
- May 4–8                          Final Exams

**ADA Statement** The Americans with Disabilities Act requires that reasonable accommodations be provided for students with physical, sensory, cognitive, systemic, learning, and psychiatric disabilities. Please contact me at the **beginning** of the quarter to discuss any such accommodations for the course.