

# STAT:4100 (22S:153) Mathematical Statistics I

**Instructor:** Ruitao Liu

## **Contact Information:**

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**Time & Location:** 11:30A - 12:20P MWF 112 MH

**Department Information:** Department of Statistics and Actuarial Science, 241 Schaeffer Hall, Phone: 335-2082

**Departmental Executive Officer:** Luke Tierney, 241 SH, Phone: 335-0712.

**Course Prerequisite:** The course prerequisites are the mathematics courses 22M:027 and 22M:028, or equivalents: undergraduate calculus including linear algebra. Undergraduate students often complete 22S:120 or 22S:130 prior to taking 22S:153.

**Required Textbook:** Introduction to Mathematical Statistics, 6th ed., Hogg, McKean and Craig, (Prentice Hall). We will cover chapters 1-4.

**Office Hours:** Monday, Wednesday and Friday: 4:00-5:00 pm or by appointment.

## **Course Website**

I will post announcements, homework problems, lecture notes, and other course information on ICON site.

## **Course Description and Objectives**

This is a course in mathematical statistics intended for upper-level undergraduate students in the mathematical sciences as well as for graduate students in all disciplines. The goal is to provide a solid foundation in the theory of random variables, probability distributions, and convergence in probability and distribution.

## Grading

Your semester grade will consist of the following components:

Homework	10%
Quizzes	20%
Two Midterm Exams	40%
Final Exam	30%
<hr/> Total	<hr/> 100%

A plus-minus grading system will be used. As a **rough** guide: >98%, A+; 91-98%, A; 87-91%, A-; 85-87%, B+; 80-85%, B; 76-80%, B-; 73-76%, C+; 65-73%, C; 58-65%, C-; 50-58%, D; <50%, F.

- **Homework** Homework will be assigned on Fridays and due on the following Friday at the beginning of the class. Unless prior arrangements are made for reasons judged to be acceptable by me, late homework will receive zero credits.

- **Exams** There will be two 50-minute midterms and one two-hour final exam. Calculators may be used for exams, and any necessary statistical tables will be provided. Two 8.5"x11" formula sheets (both sides) may be used for each exam. If an exam is missed, a make-up exam will be permitted only if the circumstances of missing the exam satisfy university policies.

1. *Midterm One:* **11:30 am, Friday, March 1**
2. *Midterm Two:* **11:30 am, Friday, April 5**
3. *Final:* **TBA**

- **Quizzes** There will be five close-book 15-minute quizzes at the end of class period. Calculators may be used for Quizzes, and any necessary statistical tables will be provided.

1. *Quiz One:* **Friday, February 8**
2. *Quiz Two:* **Friday, February 22**
3. *Quiz Three:* **Friday, March 15**
4. *Quiz Four:* **Friday, April 19**
5. *Quiz Five:* **Friday, May 3**

## Attendance

Attendance is required.

## College of Liberal Arts and Sciences: Policies and Procedures

**Administrative Home of the Course** The College of Liberal Arts and Sciences is the administrative home of this course and governs matters such as the add/drop deadlines, the second-grade-only option, and other related issues. Different colleges may have different policies. Questions may be addressed in 120 Schaeffer Hall or see the CLAS Student Academic Handbook:

[www.clas.uiowa.edu/students/academic\\_handbook/index.shtml](http://www.clas.uiowa.edu/students/academic_handbook/index.shtml)

**Electronic Communication** University policy specifies that students are responsible for all official correspondences sent to their standard University of Iowa e-mail address (@uiowa.edu). Students should check this account frequently. (Operations Manual, III.15.2. Scroll down to k.11.)

**Academic Fraud** Plagiarism and any other activities when students present work that is not their own are academic fraud. Academic fraud is a serious matter and is reported to the departmental DEO and to the Associate Dean for Undergraduate Programs and Curriculum. Instructors and DEOs decide on appropriate consequences at the departmental level while the Associate Dean enforces additional consequences at the collegiate level. See the CLAS Student Academic Handbook.

**Making a Suggestion or a Complaint** Students with a suggestion or complaint should first visit the instructor, then the course supervisor, and then the departmental DEO. Complaints must be made within six months of the incident. See the CLAS Student Academic Handbook.

**Accommodations for Disabilities** A student seeking academic accommodations should first register with Student Disability Services and then meet privately with the course instructor to make particular arrangements. [www.uiowa.edu/~sds/](http://www.uiowa.edu/~sds/)

**Understanding Sexual Harassment** Sexual harassment subverts the mission of the University and threatens the well-being of students, faculty, and staff. All members of the UI community have a responsibility to uphold this mission and to contribute to a safe environment that enhances learning. Incidents of sexual harassment should be reported immediately. See the UI Comprehensive Guide on Sexual Harassment at [www.uiowa.edu/~eod/policies/sexual-harassment-guide/index.html](http://www.uiowa.edu/~eod/policies/sexual-harassment-guide/index.html) for assistance, definitions, and the full University policy.

**Reacting Safely to Severe Weather** In severe weather, class members should seek appropriate shelter immediately, leaving the classroom if necessary. The class will continue if possible when the event is over. (Operations Manual, IV.16.14. Scroll down to e. h. and i.)