

Mathematical Statistics I, 22S:153, Fall 2005

August 22, 2005

Instructor: Jun Yan

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M–F 8:30a–12:00p, 1:00p–4:30p

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Lectures:

- Section 3: 12:30p–1:20p MWF 130 SH
- Section 2: 1:30p–2:20p MWF 14 SH

Office Hours: TTh 5:00–6:00p (or by appointments)

Problem Session: SH 3, M: 5:00–6:00p

ICON: <http://icon.uiowa.edu/>

- Log in using your Hawk ID and Hawk ID password.
- Please do *NOT* submit homework through ICON.
- Please do use discussion tool to discuss any topics relevant to the course with me and other class members.

Course Description: Completion of undergraduate calculus (including linear algebra) is a prerequisite. This is a course in mathematical statistics which is taught at a higher level than 22S:130 and 22S:131 but lower than 22S:193 and 22S:194. Undergraduate students often complete 22S:120 or 22S:130 prior to taking the course (but not required); the latter stresses conditional distributions and functions of random variables.

These topics will be covered: Probability, conditional probability, random variables, distribution and density functions, joint and conditional distributions, mgf (moment generating function) technique for sums, convergence in distribution, convergence in probability, central limit theorem.

Textbook: Hogg, McKean, and Craig (2004), *Introduction to Mathematical Statistics*, 6th Edition, Pearson Prentice Hall. ISBN 0-130-085-073.

Chapters 1 to 4 of the textbook will be covered in this course.

Grading: Assessment of the subject will be based on the following four components with weights shown in parenthesis:

Homework (10%) Homework will be assigned weekly and must be turned in at the beginning of the class on the following Wednesday. Please do not merely write down answers, but clearly show how you got your results.

Only the best 10 homework will count toward your grade.

Late homework will not be accepted. You are encouraged to discuss homework problems, but you must write up the solutions independently. No credit will be given to assignments that are substantially similar.

Quizzes (20%) There will be four 15 minutes in-class quizzes. They will be on weeks 2, 6, 10, and 14 (The week of Thanks-giving recess is excluded).

Only the best 3 quizzes will count toward your grade.

Missed quizzes cannot be made up.

Midterm exams (40%) There will be three midterm exams in week 4, 8, and 12, respectively. These are 90-minute exams arranged in Thursday evenings.

Only the best 2 midterms will count toward your grade.

Missed midterm exams cannot be made up.

Final exam (30%) There will be a comprehensive two-hour final exam (date TBA).

If you have two exams scheduled for the same period or more than three exams scheduled for the same day, you may file a change of schedule at the Registration Center (meeting the deadline is your responsibility).

You will be allowed to consult one single-sided 8.5×11 notes during each quiz, two single-sided 8.5×11 notes during each midterm exam, and four single-sided 8.5×11 notes during the final exam.

Grading scale will be close to (but may be slightly adjusted): A (85–100), B (70–84), C (50–69), D (35–49), and F (0–34). Final grades will include +/–.

Important Dates: Please mark your calendar.

Date	Event
Friday, 9/2	Quiz 1
Thursday, 9/15	Midterm 1
Friday, 9/30	Quiz 2
Thursday, 10/13	Midterm 2
Friday, 10/28	Quiz 3
Thursday, 11/10	Midterm 3
Friday, 12/2	Quiz 4
Friday, 12/16	Final

University Policies:

- Course policies are governed by the College of Liberal Arts and Sciences.
- University policies regarding Student Rights and Responsibilities can be found at http://www.clas.uiowa.edu/students/academic_handbook/.
- I would like to hear from anyone who has a disability which may require some modification of seating, testing, or other class requirements so that appropriate arrangements may be made. Please see me about this as soon as possible.

Notes:

- A student is expected to spend a minimum of two hours outside of class for each class period to successfully learn the course material. Some may need more. When you do not put time, you will not learn.
- Do not wait until the night before the due date to start doing your homework.
- Come to the problem session.
- Working exercises is THE major way to assess your understanding and to solidify concepts. You cannot learn how to solve problems by merely watching someone else do them — you must solve problems on your own. Doing all the exercises is recommended.
- A list of independent tutors can be found at <http://www.stat.uiowa.edu/courses/tutors.html>.
- Speak English in an academic environment.
- Bring any difficulties to me promptly.