

STAT:5120 (22S:190)      Mathematical Methods for Statistics  
Spring, 2020

1. Instructor: Kung-Sik Chan    SH 241    335-2849    [kung-sik-chan@uiowa.edu](mailto:kung-sik-chan@uiowa.edu)  
office hours: Th 1:30-2:20pm; WF 2:30-3:20pm, or by appointment.
2. Department: Statistics and Actuarial Science  
DEO contact information (Kung-Sik Chan, 241 SH, 335-2849,  
[kung-sik-chan@uiowa.edu](mailto:kung-sik-chan@uiowa.edu))
3. Time and location of class: 1:30pm-2:20pm MWF 61 SH

4. Textbooks:

WALTER RUDIN (1976), *Principals of Mathematical Analysis*, 3rd Edition, McGraw-Hill Education.

A. N. KOLMOGOROV & S. V. FOMIN (1970), *Introductory Real Analysis*. New York: Dover

I plan to cover chapters 2–5, 7–9 and 11 of Rudin, and the corresponding chapters in Kolmogorov and Fomin. We will follow a set of lecture notes slightly revised from that originally written by Professor Luke Tierney. Each class will cover one lecture in the notes. Please read the lecture notes and the related sections in the two textbooks before the class, so we can focus on the basic ideas and work out some problems in class. The goal of this course is to provide you a solid foundation on advanced mathematical concepts and methods useful in statistical research.

Lecture notes, homework assignments and other announcements will be posted in the icon page of the course.

5. Course requirements:

	date	percent
Homework		30%
Exam 1	2/26 (Wednesday)	20%
Exam 2	4/8 (Wednesday)	20%
Final Exam	TBA	30%

Homework problem will generally be assigned on Mondays and due the next Monday at the beginning of the class. Discussion with fellow students on the homework problems is allowed, but each student must write their own solutions. The homework with the lowest score will be dropped from the grade determination. No late homework will be accepted. Exams are closed book. No crib sheet is allowed. No make-up examinations are allowed except for reasons allowed by the University policy <https://clas.uiowa.edu/faculty/examination-policies-and-best-practices#makeup>

6. Grading policy: Your grade for this course will be assigned according to the following *approximate* scale:

90	to	100	A
80	to	89	B
70	to	79	C
60	to	69	D
0	to	54	F

This scale is not absolute, and the cutoff points may vary depending on the difficulty of the exams. Also, borderline cases may receive a + or -. The College and EPC ask that the A+ grade be used only in extraordinary situations.

## 7. Miscellaneous:

**Absences and Attendance** Students are responsible for attending class and for contributing to the learning environment of a course. Students are also responsible for knowing their course absence policies, which will vary by instructor. All absence policies, however, must uphold the UI policy related to student illness, mandatory religious obligations, including Holy Day obligations, unavoidable circumstances, or University authorized activities (<https://clas.uiowa.edu/students/handbook/attendance-absences>). Students may use this absence form to aid communication; the instructor will decide if the absence is excused or unexcused (<https://clas.uiowa.edu/sites/default/files/ABSENCE%20EXPLANATION%20FORM2019.pdf>).

**Academic Integrity** All undergraduates enrolled in courses offered by CLAS have, in essence, agreed to the College's Code of Academic Honesty. Misconduct is reported to the College, resulting in suspension or other sanctions, with sanctions communicated with the student through the UI email address (<https://clas.uiowa.edu/students/handbook/academic-fraud-honor-code>).

**Accommodations for Disabilities** UI is committed to an educational experience that is accessible to all students. A student may request academic accommodations for a disability (such as mental health, attention, learning, vision, and physical or health-related condition) by registering with Student Disability Services (SDS). The student is then responsible for discussing specific accommodations with the instructor. More information is at <https://sds.studentlife.uiowa.edu/>.

**Administrative Home of the Course** The College of Liberal Arts and Sciences (CLAS) is the administrative home of this course and governs its add/drop deadlines, the second-grade-only option, and related policies. Other colleges may have different policies. CLAS policies may be found here: <https://clas.uiowa.edu/students/handbook>.

**Communication and the Required Use of UI Email** Students are responsible for official correspondences sent to the UI email address (uiowa.edu) and must use this address for all communication within UI (Operations Manual, III.15.2).

**Complaints** Students with a complaint about an academic issue should first visit with the instructor or course supervisor and then with the Chair of the department or program offering the course; students may next bring the issue to the College of Liberal Arts and Sciences. For more information, see <https://clas.uiowa.edu/students/handbook/student-rights-responsibilities>.

**Final Examination Policies** The final exam schedule is announced around the fifth week of classes; students are responsible for knowing the date, time, and place of a final exam. Students should not make travel plans until knowing this information. No exams of any kind are allowed the week before finals. Visit <https://registrar.uiowa.edu/final-examination-scheduling-policies>.

**Nondiscrimination in the Classroom** UI is committed to making the classroom a respectful and inclusive space for all people irrespective of their gender, sexual, racial, religious or other identities. Toward this goal, students are invited to optionally share their preferred names and pronouns with their instructors and classmates. The University of Iowa prohibits discrimination and harassment against individuals on the basis of race, class, gender, sexual orientation, national origin, and other identity categories set forth in the University's Human Rights policy. For more information, contact the Office of Equal Opportunity and Diversity ([diversity.uiowa.edu](https://diversity.uiowa.edu)).

**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 must uphold the UI mission and contribute to a safe environment that enhances learning. Incidents of sexual harassment must be reported immediately. For assistance, please see <https://osmrc.uiowa.edu/>.