

The University of Iowa
Department of Statistics and Actuarial Science
STAT:5120 MATHEMATICAL METHODS FOR STATISTICS
Spring Semester 2023 3:30PM - 4:20PM MWF 51 SH

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Office Hours: 1:45–3:15 PM Tuesday and Thursday, or by appointment
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CLAS is the home of this course, and CLAS governs the policies and procedures for its courses. Graduate students, however, must adhere to the [academic deadlines set by the Graduate College](#).

The goal of the course is to provide students with a firm foundation of real analysis and advanced calculus tools useful for probability and statistics. The **required textbook** is Walter Rudin (1976) *Principles of Mathematical Analysis*, 3rd edition, McGraw-Hill (this book has been translated into 13 languages). The emphasis is on Chapters 2 to 8, 11.

For your homework, you may discuss general issues and approaches with your fellow students. You may also seek hints from your T.A. However, your work must be your own. You should be able to defend every step in your solution. If you use any references, including the web and solutions prepared by other students, you should cite and credit your sources. You are encouraged to type up your solutions. Attending lectures and participating in discussions are expected.

There is a midterm examination on Tuesday, March 21, 6:30 to 8:30 pm, in 118 MLH. Tentatively, the final grade will be calculated as follows: Homework 15%, Midterm exams 35%, Final exam 50%.
F[0, 40); D–[40, 45); D[45, 50); D+[50, 55); C–[55, 60); C[60, 65); C+[65, 70); B–[70, 75); B[75, 80); B+[80, 85); A–[85, 90); A[90, 95); A+[95, 100]

Our university has a contract with Springer. There are many useful textbooks that you can download without charge. Below are some examples.

Basic Real Analysis

<https://link.springer.com/book/10.1007/978-1-4939-1841-6>

Understanding Analysis

<http://link.springer.com/book/10.1007/978-1-4939-2712-8>

Introduction to Calculus and Classical Analysis

<http://link.springer.com/book/10.1007/978-3-319-28400-2>

A Concise Approach to Mathematical Analysis

<http://link.springer.com/book/10.1007/978-0-85729-347-3>

Foundations of Mathematical Analysis

<http://link.springer.com/book/10.1007/978-0-8176-8292-7>

Real Mathematical Analysis

<http://link.springer.com/book/10.1007/978-3-319-17771-7>

Introduction to Mathematical Analysis

<http://link.springer.com/book/10.1007/978-3-0348-0636-7>

Mathematical Analysis I & II

<http://link.springer.com/book/10.1007/978-3-662-48792-1>

<http://link.springer.com/book/10.1007/978-3-662-48993-2>

A Problem Book in Real Analysis

<https://link.springer.com/book/10.1007/978-1-4419-1296-1>

Infinite Dimensional Analysis: A Hitchhiker's Guide

<https://link.springer.com/book/10.1007/3-540-29587-9>

Academic Honesty and Misconduct

All students in CLAS courses are expected to abide by the [CLAS Code of Academic Honesty](#). Undergraduate academic misconduct must be reported by instructors to CLAS according to [these procedures](#). Graduate academic misconduct must be reported to the Graduate College according to Section F of the [Graduate College Manual](#).

Student Complaints

Students with a complaint about a grade or a related matter should first discuss the situation with the instructor and/or the course supervisor (if applicable), and finally with the Director or Chair of the school, department, or program offering the course.

Undergraduate students should contact [CLAS Undergraduate Programs](#) for support when the matter is not resolved at the previous level. Graduate students should contact the CLAS [Associate Dean for Graduate Education and Outreach and Engagement](#) when additional support is needed.

Drop Deadline for this Course

You may drop an individual course before the deadline; after this deadline you will need collegiate approval. You can look up the [drop deadline for this course](#) here. When you drop a course, a “W” will appear on your transcript. The mark of “W” is a neutral mark that does not affect your GPA. Directions for adding or dropping a course and other registration changes can be found on the [Registrar's website](#). Undergraduate students can find policies on dropping and withdrawing [here](#). Graduate students should adhere to the [academic deadlines](#) and policies set by the Graduate College.

Date and Time of the Final Exam

The final examination date and time will be announced by the Registrar generally by the fifth week of classes and it will be announced on the course ICON site once it is known. **Do not plan your end of the semester travel plans until the final exam schedule is made public. It is your responsibility to know the date, time, and place of the final exam.** According to Registrar's final exam policy, students **have a maximum of two weeks after the announced final exam schedule** to request a change if an exam conflict exists or if a student has more than two exams in one day.

College of Liberal Arts and Sciences (CLAS) Course Policies

Attendance and Absences

University regulations require that students be allowed to make up examinations which have been missed due to illness or other unavoidable circumstances. Students with mandatory religious obligations or UI authorized activities must discuss their absences with me as soon as possible. Religious obligations must be communicated within the first three weeks of classes.

Exam Policies

Communication: UI Email

Students are responsible for all official correspondences sent to their UI email address (uiowa.edu) and must use this address for any communication with instructors or staff in the UI community.

University Policies

[Accommodations for Students with Disabilities](#)

[Basic Needs and Support for Students](#)

[Classroom Expectations](#)

[Exam Make-up Owing to Absence](#)

[Free Speech and Expression](#)

[Mental Health](#)

[Military Service Obligations](#)

[Non-discrimination](#)

[Religious Holy Days](#)

[Sexual Harassment/Misconduct and Supportive Measures](#)

[Sharing of Class Recordings](#)