

## Math 444, Section C13, Fall 2020

**Mode of Instruction:** Online. Lectures asynchronous. Exams will be online at specified times.

**Learning Management System:** <https://learn.illinois.edu>

If you have registered for the course and do not yet have access, email the instructor.

**Instructor:** Dr. Karen Mortensen, Department of Mathematics, [kmortens@illinois.edu](mailto:kmortens@illinois.edu)

**Office hours/Help Sessions:** Held several times weekly via Zoom; schedule to be determined after students are surveyed.

**Exam Dates (times to be determined):**

Wednesday, Sept. 16 – Test #1

Wednesday, Oct. 7 – Test #2

Wednesday, Oct. 28 – Test #3

Wednesday, Dec. 2 – Test #4

Optional Final Exam – date and time to be determined

**Course Goals:** Students will gain a rigorous understanding of the fundamental concepts of real analysis and will improve their ability at reading and writing mathematical arguments.

**Academic Calendar:** This is a 3 credit hour course that can count for either undergraduate or graduate credit. The course is 15 weeks long (not counting finals week) and consists of 14 weekly units and one review week. You should dedicate at least 8 hours per week or more. Actual time commitments will vary depending on your input, needs, and personal study habits.

**Required Text:** Introduction to Real Analysis by Robert G. Bartle and Donald R. Sherbert, 4th edition, Wiley. Hardcopy and ebook versions of the textbook are available. [The University of Illinois library](#) has paper and electronic copies. There will be readings from the textbook assigned each week and the course will follow the textbook closely, covering most of the first eight chapters.

**Course Components:** This course will consist of the following components:

**Weekly Units:** Each weekly unit begins with an overview and the learning goals you are expected to achieve. These goals should guide your study through the unit. Every unit consists of a homework assignment, a definitions/theorems exercise, lectures, quizzes, readings and additional exercises to support these goals.

**Homework Assignments:** Each week contains a homework assignment consisting of several exercises. Assignments will be submitted as a pdf file. Assignments are due by 5:00pm Central Time on the due date, normally every Monday. You will get feedback and a grade for your homework.

**Definition/Lecture Worksheets:** Each week, you will also submit a definition/lecture worksheet for the week's material. These are also due by 5:00pm Central Time on the due date, normally every Monday. You will get feedback and a grade on your worksheets.

**Lectures and Quizzes:** Each unit contains a list of recorded lectures. There is also a pdf with notes for each lecture, which you may use as a supplement or a substitute if bandwidth prevents you from accessing the recorded lecture. There are 6-10 lectures each week, adding up to approximately 150 minutes.

There is a short quiz after most lectures to help you stay motivated and to check your understanding. The quizzes are graded and you have several attempts for each quiz. When you have difficulty with a quiz question, review the lecture, the lecture notes, the reading, and/or ask for help from your instructor.

**Readings and Exercises:** Each unit contains assigned readings and additional exercises. You are responsible to complete these items. Lectures cover major topics from the readings but do not necessarily include all information from the readings. The additional exercises are not submitted for a grade.

**Discussion Forums and Help Sessions:** Each unit contains a discussion forum that can be used when you have questions about the assignment, quiz, or content of the unit. There will be several help session opportunities each week, where you can discuss course material, exercises, and homework problems with the instructor and with other students.

**Exams:** This course includes 4 midterm exams and an optional final exam. If you choose to take the final exam, the score will replace the lowest of your four midterm exams.

**Absences and Late Work:** If you miss an assignment, quiz, or exam due to illness or other excused absence, you must contact the instructor **in advance** to make arrangements to either be excused from the item or to make it up. Approval is at the discretion of the instructor (subject to university policy) and documentation may be required.

**Accommodations:** To obtain disability-related academic adjustments and/or auxiliary aids, students should contact both the instructor and the Disability Resources and Educational Services (DRES) as soon as possible. You can contact DRES at 1207 S. Oak Street, Champaign, (217) 333-1970, or via e-mail at [disability@illinois.edu](mailto:disability@illinois.edu). Students are encouraged to use all accommodations to which they are entitled.

**Academic Integrity:** Academic dishonesty will not be tolerated. Examples of academic dishonesty include the following: cheating; helping another student to cheat; plagiarism, bribes, favors, and threats; academic interference; letting someone else take an exam for you or do an assignment for you; grade tampering.

Should an incident arise in which a student is thought to have violated academic integrity, the incident will be processed under the disciplinary policy set forth in the [Illinois Academic Integrity Policy](#) in the Student Code.

## Grading Distribution

	#	Percentages	Points	Total Points
<b>Homework</b>	14	35%	25 points each homework	350
<b>Definition/Theorem Sheets</b>	14	9.8%	7 points each sheet	98
<b>Help Session /Forum</b>		5.1%	3 points each substantive participation, up to 51 points (max 9 points per week)	51
<b>Quizzes</b>	102	10.2%	1 point each	102
<b>Midterm Exams</b>	4	each 10%	100 points each	400
<b>Optional Final Exam</b>	1	Replace one midterm exam grade		
<b>Course Total</b>		100.1%		1001

\*No "dropped" grades in this course.

Points	970-1001	930-969	900-929	870-899	830-869	800-829
Course grade	A+	A	A-	B+	B	B-

Points	770-799	730-769	700-729	670-699	630-669	600-629	0-599
Course grade	C+	C	C-	D+	D	D-	F