

Syllabus for Math 447 B13 (32136) and C13 (32138) Fall 2021

Time and place: B13: MWF 12-12:50, 245 Altgeld; C13: MWF 2-2:50, 1060 Lincoln.

Instructor: Timur Oikhberg. *Office:* CAB 33. *e-mail:* oikhberg@illinois.edu

When writing an email, please use your *illinois.edu* account; indicate your course and section.

Moodle page: <https://learn.illinois.edu/course/view.php?id=62013>

Office hours: *MW 3:15-4:30*, or by appointment.

Course description: This course builds a foundation of real analysis, for those who plan to take graduate courses in math.

Prerequisites: MATH 241; junior standing; MATH 347 or MATH 348, or equivalent courses.

Textbook: Kenneth Ross, *Elementary Analysis: The Theory of Calculus*, 2nd edition (2013), Springer.

Ebook is available at the UI library: <https://link.springer.com/book/10.1007%2F978-1-4614-6271-2>.

We will skip some sections; we can also cover some material not in the textbook. Lecture notes will be provided; however, be prepared to take notes as well. The information discussed in class will be part of the examination material.

Campuswire page: <https://campuswire.com/c/G26D51626/feed> (for discussion on course material).

Midterms: There will be two midterm exams: **October 6** and **November 10** (*Wednesdays*). The weakest midterm score will be worth **15%** of the total grade, the strongest one - **25%**. The midterms are given in our usual classroom, during the regular class time.

Final: The comprehensive final (worth **40%** of the course grade) will be given during the finals week (**Dec 10-17**). **Please do not make plans to leave town** until the date is finalized. Conflict exam will be offered. Guidelines for exam conflict resolution are set out in the Student Code (<https://studentcode.illinois.edu/article3/part2/3-201/>).

Homeworks: Homework will be assigned on Wednesday every week, except for the weeks of the exams, and the first and last weeks. Usually they will be collected on Wednesday the following week. The two weakest homework scores will be dropped. Only the 8 best scores will be used to compute the grade for the course; each one of these will be worth 2.5% of the total course grade (20% for all homeworks).

Homework assignments will consist primarily of writing mathematical arguments and proofs; the validity of the mathematical reasoning and the quality of the exposition will both count toward the grade. Work out the problems, and justify your answers. Be sure your homework is neat and legible.

Homeworks will be turned in online (uploaded into Moodle). Common file formats, such as pdf, word, or jpg will be accepted. Usually, the deadline will be one minute before midnight.

Not all homework problems will be given the same weight. Bonus problems will be included in some homework assignments.

Grade components: *Homeworks:* $8 \times 2.5\% = 20\%$. *Midterms:* 15% and 25%. *Final:* 40%.

Letter grades: 90% guarantees an A, 75% - a B, 60% - a C, and 50% - a D. An upward “curve” may be given (depending on overall performance of the class, the level of difficulty of tests, and the distribution of scores), but this will not be decided until end of the semester.

Course format: Most of the class meetings will be lectures. Usually, part of the class preceding an assignment submission date will be devoted to a discussion on the homework problems. For instance: the problems from Homework 2 (due Wednesday, Sep 15) will be discussed on Monday, Sep 13. There will be reviews before tests.

Policies

Excused assignments and make-ups: To make up a test, or to have a homework excused, you need to present a valid reason for missing the assignment (such as an illness, a death or serious illness in the family, a religious observance, or an out-of-town job interview). Travel and leisure plans, even for family events, are never a legitimate reason for missing an assignment.

Evidence of a valid reason for missing an assignment must be presented as soon as possible (if a conflict can be predicted in advance, let me know at least one week in advance). In case of religious observances, complete the form <https://odos.illinois.edu/community-of-care/resources/students/religious-observances/>

Calculators: You may occasionally need a calculator for a homework. Even then, you would not need a fancy graphing calculator. A basic model will do.

Exams will not require lengthy computations. **Calculators or other electronic devices will be prohibited on exams.**

Collaboration: You can work with other students on homework problems. However, you should write the solutions on your own. No collaboration on tests is permitted.

Cheating or plagiarism may result in a failing grade. Please review the academic integrity policies at <https://studentcode.illinois.edu/article1/part4/1-401/>.

Academic deadlines: Information about academic deadlines, and about the class schedule, can be found at <https://registrar.illinois.edu/academic-calendars/fall-2021-academic-calendar/> or at <https://senate.illinois.edu/ep/Props/1415/FINAL/EP15.09final.pdf>. Some important dates:

- Deadline to drop the course without grade of W: Fri Oct 15 (for most courses).
- Last day of instruction: Wed Dec 8.

Note that these are University-wide deadlines. Individual schools and departments may have more stringent sets of rules.

Students with disabilities who require special accommodations should see me as soon as possible. For exams, accommodations are arranged by [Disability Resources and Education Services](#) (DRES). Please contact DRES at least one week prior to the exam by phone (217-333-4603) or by email (disability@illinois.edu).