

# Math 432 - Set Theory and Topology - Spring 2021

**Instructor:** Professor Alexander Tumanov

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**Class Meetings:** By Zoom - Tuesday and Thursday at 11:00 am for up to 80 min. Lecture notes will be posted. Please study them in advance to get prepared for the meetings so you can participate. Videos of class meetings will be posted.

**Office Hours:** By Zoom - Monday and Wednesday at 1:00 pm or by appointment.

**Text:** Irving Kaplansky, *Set Theory and Metric Spaces*, 2nd Edition, 1977. The textbook will be used as a source of examples and homework assignments.

**Course Material:** Set theory is language of mathematics, and it is routinely used in every area of mathematics. Some of the facts are beautiful and surprising. I hope you will enjoy learning them. We will cover Chapters 1-5 of the textbook and part of of Chapter 6 if time permits.

**Homework:** Weekly homework assignments will be posted. Homework will NOT be collected or graded. You do your homework to learn the subject and prepare for exams and quizzes. Solutions will be posted.

**Quizzes:** Weekly quizzes will be given every Thursday in the beginning of the class period (11 am) except for the first week and except when an exam is scheduled for that week. As a rule, each quiz will cover material of the previous week. Quizzes will be about 15-20 minutes long. No make-up quizzes will be given. I will drop the lowest quiz when calculating your final grade (a dropped quiz may be a zero).

**Exams:** There will be three midterm exams on Thursdays (TBA) during regular Zoom class meetings. The final exam (TBA) will also take place during a Zoom session. They will be open book exams. No make-up exams will be given. In case of documented illness or emergency, a midterm exam may be dropped.

**Grading:** Your course grade will be based on three midterm exams, quizzes, and the final exam. Each midterm exam is worth 17.5%, quizzes altogether - 17.5%, and the final exam - 30%. Tentative curve:

A(+/-): 86-100%; B(+/-): 72-85%; C(+/-): 57-71%; D(+/-): 40-56%.

I may slightly adjust the curve later to see it fit.

**Academic integrity:** According to the Student Code, "It is the responsibility of each student to refrain from infractions of academic integrity, from conduct that may lead to suspicion of such infractions, and from conduct that aids others in such infractions." It is my responsibility as an instructor to uphold the academic integrity policy of the University, which can be found here: [http://studentcode.illinois.edu/article1\\_part4\\_1-401.html](http://studentcode.illinois.edu/article1_part4_1-401.html)

**Concluding Remarks:** This course is somewhat special in the undergraduate program because there are no calculations. You will have to understand and produce proofs of mathematical results. Learn the ideas. Express yourself clearly. Start working early. Get prepared for every class meeting so you can participate. Your grade and satisfaction will depend on your effort.

**Start working today. Tomorrow may be too late.**

**Good Luck!**