MATH-UA.0325-004 : Analysis

Instructor: Ioakeim Ampatzoglou

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Class Hours: Monday/Wednesday 09:30AM-10:45AM
Class Room: CIWW 102

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Recitation: Friday 9:30AM-10:45AM , 02:00PM-3:15PM
Class Room: 19W4 102, CIWW 202

Textbook

"Basic Analysis I", by Jiri Lebl, Version 5.6. The book is available for free online and you can find it here

Course Description

This is a proof based introductory Analysis class on the real line. The plan is to cover most of the topics of the book (Chapters 1-7) during the semester. Being a proof based class, deep understanding of the definitions and how to apply them is of fundamental importance.

Homework

There will be approximately 8 Homework assignments that you will be submitting on Gradescope. I encourage you to work together on the assignments, but you need to write down your own solutions. You are also welcome to discuss the problems with the TA to obtain a better insight. The assignments will be posted on the course webpage (Brightspace), and the worst grade will be dropped. Submissions past the deadline will not be accepted.

Exams

There will be one midterm exam, which will take place during class time, and a final exam at the end of the semester (the exact dates to be announced accordingly). Exams will be taken only in person.

Grades

The grades will be assigned according to the weight scheme: Homework (30%)+Midterm 1 (20%)+Midterm 2 (20%)+Final (30%).

Course schedule

A tentative outline of the topics that will be covered in class is given below. Adjustments might be made as needed.

- Sets and real numbers (Chapters 0,1)
- Sequences and series (Chapter 2)
- Continuity (Chapter 3)
- Midterm 1 TBA
- Differentiation (Chapter 4)
- Integration (Chapter 5)
- Midterm 2 (TBA)
- Sequences of functions (Chapter 6) or Metric Spaces (Chapter 7)
- Final Exam (TBA)

Academic Integrity

Guidelines regarding cheating and plagiarism are laid out in the College of Arts and Sciences guidelines available online at http://cas.nyu.edu/page/academic integrity, and they will be adhered to strictly. Collaboration is permitted, in fact encouraged, for home and class assignments; however, all submitted assignments must be written up independently and represent the student's own work and understanding. Always submit your best of work even if you are not able to fully solve a problem, effort will be rewarded.

Student Accessibility

New York University is committed to providing equal educational opportunity and participation for students with disabilities or accessibility concerns. It is the University's policy that no qualified student with a disability or accessibility concern be excluded from participating in any University program or activity, denied the benefits of any University program or activity, or otherwise subjected to discrimination with regard to any University program or activity. The Henry and Lucy Moses Center for Students Accessibility (CSA) determines qualified disability status and assists students in obtaining appropriate accommodations and services. CSA operates according to an Independent Living Philosophy and strives in its policies and practices to empower each student to become as independent as possible. Their services are designed

to encourage independence, backed by a strong system of support. Any student who needs a reasonable accommodation based on a qualified disability or accessibility issue is required to register with the CSA for assistance.