MATH-UA.0325-005: Analysis
NYU, Fall 2018

Lectures: Mondays & Wednesdays 15:30-16:45 in WW 202
Problem sessions: Fridays 15:30-16:45 in WW 312

Instructor: Scott Armstrong (WWH 530, scotta@cims.nyu.edu)

Recitation leader: Benjamin McKenna (bam575@nyu.edu)

Office Hours: Mondays and Wednesdays 14:30-15:20 in WWH 530 or by appointment (Armstrong) and Fridays 14:00-15:00 in WWH 605 (McKenna).

Textbook: Jiří Lebl, *Basic Analysis I*. The book is available for free online and Google can find it. You can also buy a paper copy on Amazon for $13.20.

Overview of the course: The plan is to cover roughly the entire book (Chapters 1-7) during the semester with hopefully some time left over for some supplementary topics.

Homework: Homework problems will be assigned weekly and due on Mondays at the beginning of class. The assignments will be posted on the course webpage (NYU Classes).

Quizzes: A short quiz will be given weekly on Fridays at the beginning of the recitation session. They will be graded on a scale of 0-2, roughly 2=correct solution, 1=incorrect solution, 0=blank or didn't show up.

Exams: A midterm exam will be held in class on October 31. The final exam will be held on December 19 from 4:00-5:50pm (location TBA). Students ***must attend*** both exams (the exams cannot be rescheduled except for emergencies and make-ups will not be given).

Grade determination: Homework 20%, Quizzes 20%, Midterm 25% and Final 35%.

Tentative schedule for the course: There will be 27 lectures. Here is the plan for them.

- Sets and Real Numbers (chapters 0 and 1): Sept 5, 10
- Sequences and Series (chapter 2): Sept 12, 17, 19
- Continuity (chapter 3): Sept 24, 26, Oct 1, 3
- Differentiation (chapter 4): Oct 9, 10, 15, 17
- Integration (chapter 5): Oct 22, 24, 29
- Midterm Exam: Oct 31
- Sequences of Functions (chapter 6): Nov 5, 7, 12
- Metric spaces (chapter 7): Nov 14, 19, 26, 28
- More on sequences of functions (not in book): Dec 3, 5, 10.
- Review Day: Dec 12
- Final Exam: Dec 19 (16:00-17:50)