

Syllabus for Math 425a.

Fundamental Concepts of Analysis

Fall 2024

Instructor: Claire Levaillant. Class meets MWF 9-9:50AM in KAP 148.

Office Hours: M 8-9AM, WF 10-11AM in KAP 248.

Teaching Assistant: Han Cao, caohan@usc.edu, Office hours TBA by TA and in Math Center. Recitation is on Thursday at 4PM in KAP 147 and the homeworks assigned on Wednesdays will always be due during recitation.

Textbooks: W. Rudin, Principle of Mathematical Analysis, 3rd Edition and C.C. Pugh, Real Mathematical Analysis, 2nd Edition.

Exams and Homeworks: there will be a midterm exam and a final exam. There will be homeworks which will be assigned each time we have covered enough new material. Your final grade will be based on attendance, participation, homeworks and exams. Grade percentages: Homeworks 30%, Midterm 30%, Final: 40%.

Course Description: we will cover topics such as the construction of the real numbers, complete metric spaces, compact metric spaces, connected metric spaces, sequences and series of functions.

Course Modalities: In order to be successful in this class you should attend each lecture, take notes, review your notes, ask questions etc. Because I won't be following any of the two textbooks exactly, those textbooks should be regarded as support or complements to the class.

You are encouraged to work together on homeworks as long as you write solutions individually in your own words.

If you have questions about the class, it is preferable to see me after class or during office hours, instead of emailing me. I receive a too big flow of emails from the students and can't answer each of them. Thus, I won't answer any email which could have been treated in person. If it happens that you cannot make it to class, please do not email me. Each of you should get to know a classmate on whom you can rely for missing notes, homework assignments etc. It is your responsibility to catch up if you miss a class, including getting all the information from your classmates.

Disability Services: Any student requesting accommodations based on a disability is required to register with the Office of Student Accessibility Services (OSAS) each semester. Their email address is OSASFrontDesk@usc.edu and their phone is (213) 740-0776.