

MAT 512, INTRODUCTION TO REAL ANALYSIS

Spring Semester 2018

Course Description: MAT 512 is the second in a two semester sequence on the foundations of analysis that begins with MAT 412. These two courses revisit many of the topics that are first introduced in a basic calculus course – continuity, differentiability, limits, and the Riemann Integral – but the emphasis here is on supplying full mathematical rigor. Students will also continue to learn writing proofs.

MAT 512 is required for the B.S. degree in mathematics. It is also a popular choice for a minor in mathematics, not only because it counts toward the minor but also because it is a prerequisite for many 500 level mathematics courses.

Text: *Introduction to Real Analysis*, 4rd Edition, by W. Wade.

I plan to cover chapters 5-7, and perhaps a bit of 8, if time permits.

Professor: Yuan Yuan (Carn 313F).

Office Hour: Monday and Wednesday 9:30-10:30 or by appointment.

Class time and location: Monday, Wednesday, Friday 10:35-11:30 Carg 114

Grading: Grades for the course will be based on the total number of points accumulated on two in-class mid-term exams, the final examination, homework and quizzes. The mid-term exams will each count 20%, homework 25%, quizzes 5% and the final exam 30% toward your grade. There will be no make-ups exams. If you miss an exam for a valid reason, the corresponding portion of the final will be used to make up the missing score. The following grading scale will be applied to produce the final letter grade: 92.5-100 A, 90-92.5 A-, 87.5- 90 B+, 82.5-87.5 B, 80-82.5 B-, 77.5-80 C+, 72.5-77.5 C, 70-72.5 C-, 60-70 D, Below 60 F.

Exams: The tentative Schedule of mid terms are: Test 1, February 21, 2018; Test 2, March 28, 2018. The final exam is from 3pm to 5pm on May 3, 2018 at Carg 114.

Homework: In order to learn this material it is absolutely vital that you do the problems. Time will be allotted at the beginning of most class periods to discussing the homework assignments. The exams will have a very large overlap with homework, although it is important to have also studied the material covered in class.

Class Attendance and Participation: You are expected to attend and participate in class. Missing class is the most common reason for poor performance in the course. If you must miss a class, you are responsible for obtaining notes for that class from a student who attended. It is also your responsibility to find out about any announcements made in class.

Academic Integrity: The Syracuse University Academic Integrity Policy holds students accountable for the integrity of the work they submit. Students should be familiar with the Policy and know that it is their responsibility to learn about instructor and general academic expectations with regard to proper citation of sources in written work. The policy also governs the integrity of work submitted in exams and assignments as well as the veracity of signatures on attendance sheets and other verifications of participation in class activities. Serious sanctions can result from academic dishonesty of any sort.

Learning Goals and Expectations: Students are expected to master the basic notions of probability and to acquire the skills necessary for the application of these notions to the further study of probability and/or statistics.

Disabilities: Students who may need academic accommodations due to a disability are encouraged to discuss their needs with the instructor at the beginning of the semester. In order to obtain authorized accommodations, students should be registered with the Office of Disability Services (ODS), 804 University Avenue, Room 309, 315-443-4498 and have an updated accommodation letter for the instructor. Accommodations and related support services such as exam administration are not provided retroactively and must be requested in advance. For more information contact the Office of Disability Services.

Office of Disability Services: Office of Disability Services, 804 University Avenue Room 309, Syracuse, New York 13244-2330 (315) 443-4498 TDD: (315) 443-1371 e-mail: odssched@syr.edu

Religious Observances Policy: SU religious observances policy recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty and staff to observe religious holidays according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to a religious observance provided they notify their instructors before the end of the second week of classes. For fall and spring semesters, an online registration is available through MySlice (Student Services -> Enrollment -> My Religious Observances) from the first day of class until the end of the second week of classes.