

# **MAT 512, INTRODUCTION TO REAL ANALYSIS**

## **Fall 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.

**Text:** *Introduction to Real Analysis*, 4<sup>th</sup> 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 10:30-11:30 or by appointment.

**Class time and location:** Monday, Wednesday 12:45-2:05 Carn 119

**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, October 1, 2018; Test 2, November 5, 2018. The final exam is from 10:15 to 12:15 on December 14, 2018 at Carn 119.

**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.

**Students with disabilities:** If you believe that you need academic adjustments (accommodations) for a disability, please contact the Office of Disability Services (ODS), <http://disabilityservices.syr.edu>, located in Room 309 of 804 University Avenue, or call (315) 443-4498 or TDD: (315) 443-1371 for an appointment to discuss your needs and the process for requesting academic adjustments. ODS is responsible for coordinating disability-related academic adjustments and will issue students with documented Disabilities Accommodation Authorization Letters, as appropriate. Since academic adjustments may require early planning and generally are not provided retroactively, please contact ODS as soon as possible.

**Academic Integrity:** Syracuse University's Academic Integrity Policy reflects the high value that we, as a university community, place on honesty in academic work. The policy defines our expectations for academic honesty and holds students accountable for the integrity of all work they submit. Students should understand that it is their responsibility to learn about course-specific expectations, as well as about university-wide academic integrity expectations. The policy governs appropriate citation and use of sources, the integrity of work submitted in exams and assignments, and the veracity of signatures on attendance sheets and other verification of participation in class activities. The policy also prohibits students from submitting the same work in more than one class without receiving written authorization in advance from both instructors. Under the policy, students found in violation are subject to grade sanctions determined by the course instructor and non-grade sanctions determined by the School or College where the course is offered as described in the Violation and Sanction Classification Rubric. SU students are required to read an online summary of the University's academic integrity expectations and provide an electronic signature agreeing to abide by them twice a year during pre-term check-in on MySlice.

**Religious observances policy.** Syracuse University's 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 holy days 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 no later than the end of the second week of classes. For fall and spring semesters, an online notification process is available through MySlice (Student Services -> Enrollment -> My Religious Observances) from the first day of class until the end of the second week of class.