

MAT 602 Fundamentals of Analysis

Spring 2019

TuTh 3:30pm - 4:50pm, 100 Carnegie Hall

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Office hours: Tu 2:00-3:00, Th 2:00-3:00, and by appointment.

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Textbook: *A First Course in Analysis*, by John B. Conway. ISBN 9781316779811.

Course Description: This course is a continuation of MAT 601. We will cover Chapters 5-7 in the text including metric spaces, the space of continuous functions, Stone-Weierstrass Theorem, differentiation in higher dimensions, Implicit Function Theorem, integration in higher dimensions, Change of Variables.

Prerequisites: MAT 601 or graduate standing in mathematical sciences.

Schedule and Grading:

Midterm Exam: Tuesday, March 5. 30%

Spring Break (no classes), Sunday, March 10 - Sunday, March 17

Last day of classes: Tuesday, April 30.

Final Exam: Tuesday, May 7, 12:45 – 2:45. 40%

Homework: 20%

Quizzes: There will be occasional quizzes on the homework problems. 10 %

Midterm Exam will be on the first half of the material. Final Exam will be on the remaining part. There will be no make-ups for these exams. The exams will consist of solving problems and of theoretical questions on the material. (i.e. definitions of important concepts, relevant examples, statements and proofs of theorems)

Homework:

The key to success in this course is to master the homework. Homework will be collected weekly, usually on Tuesdays. No late homework will be accepted. You are encouraged to discuss the homework problems with your classmates and to work together, but submitted assignments must be written up individually.

Note: You are expected to attend every class. If you must miss a class for some reason, it will be up to you to find out from me or other members of the class what you missed including any announcements concerning homework, or exams that were made during the class. You are highly encouraged to ask questions 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. The Violation and Sanction Classification Rubric establishes recommended guidelines for the determination of grade penalties by faculty and instructors, while also giving them discretion to select the grade penalty they believe most suitable, including course failure, regardless of violation level. Any established violation in this course may result in course failure regardless of violation level. For more information and the complete policy, see <http://class.syr.edu/academic-integrity/>

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.

Tips for success in this course:

1) It is absolutely essential that you understand how to solve all the assigned problems. Once you understand how to solve a problem, write your solution down neatly and in full detail with explanations that make your reasoning clear.

- 2) Don't fall behind! If you are having difficulty, see me immediately to discuss the problem!
- 3) Take advantage of office hours.
- 4) Discussing problems with a classmate is very useful.
- 5) Again, questions in class are strongly encouraged.
- 6) I believe you can be successful in this course! You should expect to work hard. Don't get discouraged if you find some of the material difficult. Be persistent and patient! If you follow the above suggestions, your experience in this course will be a rewarding one.

I look forward to a great semester!