

## **MAT 602 – Fundamentals of Analysis II – Spring 2016**

**Course Description:** Riemann-Stieltjes integration, functional sequences and series, functions of several variables.

**Prerequisite:** MAT 601 and 631 or graduate standing in mathematical sciences

**Instructor:** Prof. JT Cox, 311B Carnegie, [jtcox@syr.edu](mailto:jtcox@syr.edu), 443-1488

**Class Time and Location:** Tues/Thurs 12:30-1:50, Carnegie 111

**Office Hours:** held in Carnegie 311B, TBA

**Text:** *Principles of Mathematical Analysis, 3<sup>rd</sup> Edition, Walter Rudin*. We will cover most of Chapters 6-9 and a few additional topics.

**Homework:** Problems will be assigned regularly. You are encouraged to discuss assigned problems with your classmates and work together. However, you should write up solutions on your own to be sure that you understand them.

**Problem Sessions:** If there is interest we will schedule an evening weekly problem session. These sessions work best when students present their own solutions or partial solutions to be discussed. Questions on any aspect of the course can also be addressed here.

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

**Midterm Exams:** There will be 2 midterm exams, given in class on Tuesday 3/1 and Thursday 4/21, and a comprehensive final exam. *No make-up exams or quizzes will be given.* All exams and quizzes are closed books and closed notes. The final exam is comprehensive, and is scheduled for Fri May 6, 5:15–7:15pm. The exams will consist of definitions, true/false questions, “counter examples”, homework problems, and additional problems based on the material covered in class and from the text.

**Grading:** The following *approximate* grading scheme will be used: quizz total 10%, midterm exam total 55%, final exam 35%.

**Attendance and Participation:** You are expected to attend and participate in every class. If you miss a class, you are responsible for obtaining notes for that class from a student who attended.

**Learning Goals:**

- understanding the nature and role of deductive reasoning in mathematics
- ability to use and understand the usage of standard mathematical notation
- ability to follow proofs and other mathematical discourse
- ability to recognize **incorrect** arguments
- ability to write rigorous proofs of mathematical statements

**Students with Disabilities:** If you believe that you need accommodations for a disability, please contact the Office of Disability Services (ODS), <http://disabilityservices.syr.edu>, located in Room 303 of 804 University Avenue, or call 315-443-4498 for an appointment to discuss your needs and the process for requesting accommodations. ODS is responsible coordinating disability-related accommodations and will issue students with documented disabilities Accommodation Authorization Letters, as appropriate. Since accommodations may require early planning and generally are not provided retroactively, please contact ODS as soon as possible. You are also welcome to contact me privately to discuss your academic needs although I cannot arrange for disability-related accommodations.

**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. For more information and the complete policy, see <http://academicintegrity.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 are religious observance provided they notify their instructors before 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.