MAT 412 – Introduction to Real Analysis I – Spring 2016

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Office Hours: Su, Mo, We 2:30–3:30, Tu 11–12, Th 1–2. You can also see me at other times by appointment, or whenever the office door is open.
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Course Description: Introduction to the foundations of calculus covering topics from the following: the real number system, functions, limits, sequences, infinite series, continuity, and uniform continuity.

Textbook: "Introduction to Real Analysis" (4th ed.) by W. Wade, ISBN 9780132296380. The course material is based on Chapters 1–5.

Class Time and Location: MWF 10:35–11:30, Carnegie 100.

Grading: The grades will be based on homework (25%), quizzes (5%), three midterm exams (15% each), and final exam (25%). The grading scheme will be no stricter than: 93 for A, 90 for A-, 87 for B+, 83 for B, 80 for B-, 77 for C+, 73 for C, 70 for C-, 60 for D.

Homework will be assigned and collected electronically on the website Overleaf.com. You are encouraged to discuss the homework problems with your classmates and to work together, but submitted assignments must be written up individually. Two lowest homework scores will be dropped.

True/False Quizzes will be given at the beginning of class on most days, and will be based on the material of previous class. Two lowest quiz scores will be dropped.

Midterm Exams will be in class on **February 12, March 11,** and **April 13**. The cumulative **Final Exam** is scheduled for **Friday, May 6, 12:45–2:45pm**. Unexcused absence from an exam counts as zero. If the absence is excused, your grade on the relevant portion of the final will be used to replace the missed exam.

Attendance and Participation: You are expected to attend and participate in class. If you 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.

Learning Goals:

- Students will develop ability to think deductively, analyze mathematical statements, and apply mathematical ideas to the solution of new problems.
- Students will learn to write proofs of mathematical statements related to the topics covered in this course.

- Students will understand the nature and role of deductive reasoning in mathematics
- Students will be able to follow proofs and other mathematical discourse
- Students will be able to effectively use mathematical word processing software.

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 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 accommodations. ODS is responsible for 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.

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 regular session classes and by the submission deadline for flexibly formatted classes. Student deadlines are posted in MySlice under Student Services/Enrollment/My Religious Observances/Add a Notification.

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 university 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 written work in more than one class without receiving written authorization in advance from both instructors. The presumptive penalty for a first instance of academic dishonesty by an undergraduate student is course failure, accompanied by a transcript notation indicating that the failure resulted from a violation of academic integrity policy. The presumptive penalty for a first instance of academic dishonesty by a graduate student is suspension or expulsion. 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. For more information and the complete policy, see http://academicintegrity.syr.edu

Summary of AI Expectations http://academicintegrity.syr.edu/know-the-code-sus-ai-expectations/
Full Statement of AI Expectations http://academicintegrity.syr.edu/full-statement-of-sus-ai-expectations/
Academic Integrity Policy http://academicintegrity.syr.edu/academic-integrity-policy/