MAT 512 – Introduction to Real Analysis – Spring 2011

Course Description: Real number system, set theory and elementary topological properties of the real line, continuity and differentiability, sequences and series, uniform convergence, Riemann integration, and improper integrals.

Prerequisite: MAT 412

Instructor: Prof. JT Cox**,** 213B Carnegie, jtcox@syr.edu**,** 443-1488

Class Time and Location: MWF 11:40-12:35, Carnegie 219

Office Hours: held in **Carnegie 213B**
- Tuesday 10:00-11:30
- Friday 1:00-2:30
- At other times by appointment

Text: *Introduction to Real Analysis (3rd ed.)* by Bartle and Sherbert, ISBN 978-0471321484. We will cover most of Chapters 5─8.

Course Webpage: http://jtcox.info (click on Teaching). All assignments and announcements will be posted here.

Quizzes: Short weekly quizzes will be given. They will consist of definitions and/or true/false questions and/or example/counterexample type questions. *No make-up quizzes will be given.*

Midterm Exams: There will be three midterm exams (dates to be announced) and a final exam. *No make-up exams will be given.* The final exam is scheduled for **May 5, 3:00-5:00pm.** The final will be offered at no other time.

Homework: Problems will be assigned regularly, some of which will be submitted for grading. No late homework will be accepted. You are encouraged to discuss assigned problems with your classmates and work together. However, the solutions you submit for grading must be written (completely) by you, and not copied from any source. You must write solutions neatly, literately, and in a logical coherent manner on standard 8.5x11 paper.

Grading: The following *approximate* grading scheme will be used. Homework/quizzes (20%), midterm exams (20% each), final exam (20%).

Attendance and Participation: You are expected to attend and participate i**n 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 write rigorous proofs of mathematical statements

Disability-Related Accommodations: 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 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. You are also welcome to contact me privately to discuss your academic needs although I cannot arrange for disability-related accommodations.

Academic Integrity Statement: 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