

MAT 412 Spring 2010 MW 12:45-2:05 CARN 311

Instructor A. Vogel 229F Physics Building, phone 3-1584, email alvo-gel@syr.edu Office hours: TuTh, 10:00-11:00pm, W, 9:00-10:00pm, and by appointment.

Prerequisites A desire and ability to write and understand proofs, MAT 275, MAT 397.

Book *Introduction to Real Analysis* Bartle & Sherbert, Wiley, third edition.

Course Content Most of Chapters 1-4 and perhaps a section or two from chapter 5. This starts with basic facts and definitions about sets and functions (hopefully a review of MAT 275), then properties of real numbers, sequences and series of real numbers, limits of functions, continuous functions. This course continues in MAT 512!

Grading There will be one semester exam(30%), a final exam(30%), and weekly written homework(25%) and online calculus review homework (15%). The semester exam is on March 10, during class 15, the wednesday before spring break. The final exam will be during the university scheduled time period.

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 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. Making arrangements with ODS takes time. Do not wait until just before the first test.

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://academic integrity.syr.edu>

Learning goals · understanding the nature and role of deductive reasoning in mathematics

- ability to use and understand the usage of mathematical notation
- ability to follow proofs and other mathematical discourse
- ability to write rigorous proofs of mathematical statements