

MAT 412 Fall 2009 MW 12:45-2:05 CARN 219

**Instructor** A. Vogel 229F Physics Building, phone 3-1584, email [alvo-gel@syr.edu](mailto: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 This starts with basic facts and definitions about sets and functions, then properties of real numbers, sequences and series of real numbers, limits and 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 October 21.

**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.

**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>

**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