

**Syllabus for Math 405: Introduction to Real Analysis
Spring 2015**

Course:

Lecture: MW 1:30-2:45 pm Rm. Kreiger 300

Section: F 1:30-2:20 pm Rm. Kreiger 300

Lecturer: Jacob Bernstein

Office: Kreiger 408

Phone: x6-6089

Email: bernstein@math.jhu.edu *Office Hours:* Tu 3-5 pm

Course Assistant: Yakun Xi

Office: Kreiger 211

Phone:

Email: ykxi@math.jhu.edu *Office Hours:* TBA

Course Website: The course website is <http://math.jhu.edu/~bernstein/math405>. All relevant course material will be posted to this site. Blackboard will be used only for grades.

Text: The course text (on reserve in the library) is:

The Way of Analysis, Rev. Ed., by R. Strichartz, Massachusetts: Jones and Bartlett, June 2000

Homework: Weekly homework will be due Wednesday in lecture. The homework will be posted to the course website the previous week. Late work will not be accepted. There will be 10 sets assigned in total. Homework will count for **20%** of the final grade with the lowest grade dropped.

Exams: There will be **two** in class midterm exams. The midterms will each count for **20%** of the final grade. Date of the midterms: **Monday, February 23** and **Monday, April 6**. The final will count for **40%** of the final grade. Date of the final exam: **Wednesday, May 13, 9am-12pm**

Working Together: Working together is allowed and encouraged, however it is essential that each student write up his or her own solutions. Use of sources (i.e. other people, books, the internet) without proper attribution will be considered plagiarism.

Material to be Covered:

The Logic of Mathematical Proofs

Construction and Topology of the Real Line

Continuous Functions

Differential Calculus

Integral Calculus

Sequences and Series of Functions

Course Schedule: A (tentative) schedule may be found on the course website.