

**Math 3210-4/ Honors Foundations of Analysis/Fall 2016  
Syllabus**

Course webpage: [www.math.utah.edu/~bertram/3210](http://www.math.utah.edu/~bertram/3210)

Class meets: MWF 4:35-5:55 in JWB 208

Instructor: Aaron Bertram                      Office: JWB 302

Email: [bertram@math.utah.edu](mailto:bertram@math.utah.edu)

Office Hours: MWF 3:30-4:20

**Text:** Rudin, *Principles of Mathematical Analysis*

**Grading:** Grades will be based on homework and three midterms.

**Homework:** Assigned on Mondays, collected the following Monday. You are encouraged to discuss the problem sets among yourselves and with me at office hours, but the final write-up must be your own work. Each problem set is worth 10 points, and only the top 10 scores count. There will be approximately 12 problem sets in all.

**Midterms:** Three take-home midterms, given out on Wednesdays.

**1st Midterm:** Due Monday, September 26 (50 points)

**2nd Midterm:** Due Monday, October 31 (50 points)

**3rd Midterm:** Due Monday, December 5 (50 points)

**Total:** 10 problem sets + 3 Midterms = 250 points.

**ADA Statement:** The Americans with Disabilities Act requires that reasonable accommodations be provided for each student with physical, sensory, cognitive, systemic, learning, and psychiatric disabilities. Please contact me at the beginning of the semester to discuss whether such accommodations are necessary.

**The Course:** This is a proof-based course in Analysis, which is the rigorous mathematical underpinning of the Calculus courses you took in High School and Freshman year. We will go through the first five chapters of the textbook, including the Real and Complex Numbers, Euclidean Spaces, Topology and Metric Spaces, Sequences and Series, Continuous Functions and Derivatives of Real-Valued Functions. If time permits, we will also study the Riemann Integral. Note that this course continues in the Spring semester, in which the latter half of the book will be covered. Although these topics look familiar, I assure you that you will find the material to be challenging.