

Math 3210 - 3 Foundations of Analysis I August 1, 2010

M, T, W, F, 10:45 - 11:35 AM in WBB 207.

Homepage: <http://www.math.utah.edu/~treiberg/M3214.html>

Instructor: A. Treibergs, JWB 224, 581 - 8350.
Office Hours: 11:45 - 12:45 MWF (tent.) & by appt.
E-mail: treiberg@math.utah.edu

Prerequisites: "C" or better in (MATH 2210 OR MATH 1260 OR MATH 1280)
AND (MATH 2200 OR MATH 2270 OR MATH 2250)

Texts: Joseph L. Taylor, "Foundations of Analysis," (2010)
PDF Notes available for download from
<http://www.math.utah.edu/~taylor/foundations.html>
Anne Roberts, "Basic Logic Concepts," (2005)
<http://www.math.utah.edu/%7Earoberts/M3210-1d.pdf>

Grading

Homework: To be assigned weekly.

Homework will be due Fridays and will be collected in class. Papers turned into the grader's mailbox in the math mail room (JWB 228) by 4:00 PM Fridays before the grader leaves will be regarded as being turned in on time. Homework that is late but not more than one week late will receive half credit. Homework that is more than one week late will receive no credit at all.

Exams: On exams, you will be allowed to bring a "cheat sheet," a single 8.5" x 11" page of notes. Exams will otherwise be closed book: no calculators, laptops, text messengers, other notes or books will be allowed.

Midterms: There will be three in-class one-hour midterm exams on Wednesdays Sept. 7, Oct. 5 and Nov. 9.

Final Exam: Wed., Dec. 14, 10:30 AM - 12:30 PM. Half of the final will be devoted to material covered after the third midterm exam. The other half will be comprehensive. Students must take the final to pass the course.

Course grade: Best two of three midterms 40% + HW 30% + final 30%.

Withdrawals: Last day to drop class is Aug. 31. Last day to register is Sep. 6. Until Oct. 21 you can withdraw from class with no approval at all. After that date you must petition your dean's office to be allowed to withdraw.

ADA: The Americans with Disability Act requires that reasonable accommodations be provided for students with cognitive, systemic, learning and psychiatric disabilities. Please contact me at the beginning of the quarter to discuss any such accommodations you may require for this course.

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Objectives: To cover the theory of one variable calculus and to train the student in essentials of the professional mathematician: logic, proof and how to write a mathematical argument.

Topics: We shall try to cover the following chapters

Chapter 0 - Sets, Logic, Quantifiers, Functions. (Roberts' notes.)
Chapter 1 - The Real Numbers (Taylor's manuscript.)
Chapter 2 - Sequences
Chapter 3 - Continuous Functions
Chapter 4 - The Derivative
Chapter 5 - The Integral
Chapter 6 - Infinite Series