

MATH 411: ADVANCED CALCULUS II

Course Description: This class is the second half of a year long course in the analysis of functions on the real line. This semester will apply the understanding of completeness and its corollaries that was developed in the first semester, to recover and strengthen theorems of calculus, and to deepen our notion of convergence. We will also conduct basic exercises in the context of an arbitrary complete metric space.

Text: *Understanding Analysis*, by Stephen Abbott, Springer-Verlag, 2001. *Principles of Mathematical Analysis*, by Walter Rudin, is also recommended.

Class Meetings: MWF 9:05-9:55, in Jackson 104.

Instructor: E. T. Brown, Roop 122, brownet@math.jmu.edu, 568-8763,
<http://www.math.jmu.edu/~brownet>

Office Hours: Wednesday 12:20-2, Thursday 4:20-6, Friday 2:10-3, and by appointment in Roop 119.

Prerequisite: Math 410 or consent of the instructor.

Assignments: Reading and problems will be assigned each class, and posted on the homework section of the course web site. Reading assignments should be completed before the next class meeting. Problems assigned on Monday are due by 4:30 pm, the Friday of the same week. Problems assigned on Wednesday and Friday are due by 4:30 pm, the Friday of the following week. Late homework is not accepted.

Grading: Semester grades will be based on problem sets ($\frac{2}{11}$), midterm exams ($\frac{2}{11}$ each), and the final ($\frac{3}{11}$). Missed exams will be made up only in cases of what the instructor construes to be legitimate, documented, emergency. Classroom participation may affect a grade by up to 10% in either direction. (In other words, making astute observations or asking good questions will help your grade. Boorish behaviour that interferes with other students' learning will hurt it.)

Special Circumstances: Any student with a physical, mental, or religious situation that requires special arrangements, such as a physical, learning, or psychiatric disability, or a religious holiday not accommodated by the academic calendar, should speak with me as soon as possible to arrange an appropriate accommodation.

Honor Code: Students are expected to conform to the JMU academic conduct code. Standing procedures will be implemented in cases of possible infraction. In this course, collaboration on homework is encouraged and permitted. Copying is not. All work on exams must be strictly individual.