

**MULTIVARIABLE CALCULUS**  
**MATHEMATICS 318**  
**FALL 2005**

This is a rigorous course in multivariable calculus. It will begin with a careful treatment of the real number system, including a construction of the real numbers using only the rational numbers. This material is not covered in our textbook, so printed notes will be distributed as a supplement to the text. The remaining material comes from *Multivariable Mathematics* by Theodore Shifrin. The emphasis of this course is on theoretical understanding, and so there is no advanced syllabus; as much of the text will be covered as time and class comprehension permits. Those parts of the text concerning linear algebra will not be covered in any detail since most of this material is assumed from your prerequisite course on linear algebra.

**Classes:** MWF 10-11 AM, Earth & Planetary Sciences, Room 203

**Instructor:** Lawrence Conlon  
Office: 107A Cupples I  
Telephone: 935-6797  
Email: lc@math.wustl.edu  
Office Hours: TBA

**Prerequisites:** Mathematics 309 or the equivalent and Freshman Calculus

**Homework and Exams:** Homework assigned during a given week is due the first class meeting after that week. There will be no extensions. The homework average will count as 25% of the final grade. There will be an inclass midterm and a final. The midterm will count as 25% of the final grade and the final as 25%. Whichever of the three grades is largest will be doubled for the average grade (i.e., it will count for 50%).

**Grades:** The maximum guaranteed cut-offs are as follows: The A grades ( $\pm$ ) will be  $\geq 90$ , the B grades  $\geq 80$ , the C's  $\geq 60$ , the D's  $\geq 50$ . The actual cut-offs may be lower, but will not be higher. If you are taking the course Pass/Fail, P (or CR) will mean D- or better.