

# Mathematics 430/530    Advanced Calculus I

## Fall 2008

**Prerequisites:** Math 232 and Math 240, or Math 334

**Textbook:** Introduction to Analysis, 5th Edition, by Edward D. Gaughan, Brooks/Cole Publishing Company (1998)

**Syllabus:** The course content is contained in Chapters 0 through 5.

**Instructor Information:** Professor Linda Sons; Office is Watson 362; phone is 815-753-6760; and e-mail address is sons@math.niu.edu  
Office hours are tentatively MWF 10-10:50 a.m.; T 11-11:50 a.m. and by appointment.

**Grading System:** Grades will be based on the accumulation of points out of 700 possible of which 200 points are for homework, 300 points are for the three hour examinations, and 200 points are for the final examination. As a guideline, students should expect to attain 85% of the points for an A; 75% for a B; 60% for a C; and 50% for a D.

Projected dates for the hour examinations are **Sept. 24; Oct. 22; & Nov. 19.**

The final examination is scheduled for **Monday, Dec. 8 , 12 noon to 1:50 p.m.**

Homework is to be of two kinds--regular and graded. Those tagged "graded" will have their scores used for the homework grade noted above; others will be corrected in so far as possible and their completion will be recorded.

### **Course objectives:**

The student should develop the capacities to

- reason rigorously in mathematical arguments;
- communicate mathematics clearly and efficiently;
- think creatively in abstract situations;
- understand the unifying nature of abstract mathematical treatments;
- understand fundamental concepts of the real number system, functions, and the calculus.