Math 414/514, Introduction to Analysis II, Winter 2007

Class Time:	MWF 11-11:50a.m. in 205 Deady Hall
Instructor:	Dr. Marcin Bownik
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Office Hours:	12-1p.m. Mon. and Wed., 9-10a.m. Fri., or by appointment
Textbook:	*Principles of Mathematical Analysis*, by W. Rudin, 3rd ed., McGraw-Hill

1. **Background and Goals.** This course introduces students to the subject of mathematical analysis. Topics include: Riemann-Stieltjes integral, uniform convergence of sequences and series of functions, the Stone-Weierstrass Theorem, Fourier series, the Gamma function, functions of several variables, the inverse and implicit function theorems. The course, which is the second of three in the sequence, covers most of the chapters 6–9 of the textbook.

2. **Exams.** There will be a midterm in-class exam on Wed. Feb. 14 and a final exam on Thu. Mar. 22, 10:15-12:15.

3. **Homework.** Homework problems will be assigned every week and be due in class on Wednesday on the material of the previous week. No late homework will be accepted. Group work on homework is allowed under the following conditions:
   - you must individually write your assignment,
   - you must acknowledge the cooperation by including the name of the person(s).

   Most homework problems consists of proofs. In particular, if a problem asks for an example or counterexample, you must prove that your example has the required properties. Likewise, if a problem asks if something is true, you must not only decide whether it is true, but also provide a proof or counterexample.

4. **Grading.** The grading distribution will be as follows:

Homework:	25%
Midterm Exam:	25%
Final Exam:	50%