

MATH 6320, FUNCTIONS OF A REAL VARIABLE, FALL 2015

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Course times:

- *Lectures:* MWF 10:00-10:50am, C 113
- *Office hours:* Monday 9-9:50am, Wednesday 1:30-2:30pm

Prerequisites: Math 4331 (Introduction to real analysis) or consent of the instructor.

Textbook: The primary textbook is “Real Analysis: Modern Techniques and Their Applications”, second edition, Gerald Folland. As a supplementary text you may also wish to acquire “Real Analysis for Graduate Students” by Richard F. Bass.

Course Description: This course is an introduction to modern real analysis, particularly the study of measures, Lebesgue integration, and L^p spaces. As part of the course, we will encounter elements of functional analysis, Fourier analysis, ergodic theory, and probability theory.

Grading:

Homework	40%	Due in class on Fridays
Midterm test	30%	Wednesday, October 21 (in class)
Final exam	30%	Wednesday, December 16, 11am-2pm (C 113)

Attendance and homework: You are expected to attend every lecture, and are strongly encouraged to participate by asking questions when something I say is not clear to you. I may cover some material in lectures that does not appear in the textbook, and the tests and exams will draw on all material covered in lectures and homework. There will be weekly homework assignments, due each Friday at the beginning of class. **Late homeworks will not be accepted.**

Tests and exams: All tests and exams are closed-book, closed-notes, and no calculators are permitted. **If you miss a test or exam, you will receive a score of zero, and no make-up work will be given.** Exceptions may be made in the case of extreme circumstances, which must be documented. If such circumstances force you to miss a test or exam, you must contact me as soon as possible (*before* the test/exam if at all possible) to notify me of the situation, provide me with documentation, and make alternate arrangements.

Academic honesty and dishonesty: You are expected to follow the Academic Honesty Policy in the Student Handbook. In particular, the following are expected in this course.

- You are permitted and encouraged to work collaboratively with your classmates on homework assignments to discover and understand solutions – working together and teaching each other is one of the best ways to fully learn the material. However, the final write-up of the solutions must be in your own words.
- Academic dishonesty on exams includes but is not limited to copying work and using prohibited materials such as notes, calculators, or cell phones. Cheating on tests or exams will result in disciplinary action both in this course and at the department and college levels.

Special needs: If you have a disability or condition that requires special accommodation, please see me as soon as possible to discuss what steps may be taken.