



maa6616 syllabus

MAA6616 SYLLABUS

Analysis I
Section 3053 Fall 2016

Instructor

Scott McCullough

Course Content and Objectives

This course treats the fundamentals of measure and integration theory, including L_p spaces and the Radon-Nikodym theorem; and an introduction to functional analysis, including Banach spaces, Hilbert spaces, and the theory of linear operators. Other topics that may be included (depending on time and interest) are harmonic analysis and the Fourier transform, the theory of distributions, the spectral theorem, and an introduction to probability.

References

Real and Complex Analysis, by Walter Rudin.

Real Analysis: Modern Techniques and Their Applications, by Gerald B. Folland

Real Analysis, by H. L. Royden.

Measure Theory, by Paul Halmos.

An Introduction to Measure Theory, by Terence Tao.

Suggested Problems

Selected problems from the text will be assigned on a daily basis.

Homework

Homework problems, selected to complement each student's interests and course of study, will be assigned, collected, and graded.

Exams

For those planning to take the PhD qualifying exam in analysis, there will be a midterm and final exam.

Midterm Exam: Friday 21 October.

Final Exam: Friday 16 December, 12:30-2:30 pm.

Grading

Course grades will be based on participation, homework and/or exams. See the current UF policy on assigning grade points.

Attendance

Attendance is recommended.

Additional Information:

Grades.

Grading will be in accord with the UF policy stated at <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Academic Honesty.

The course will be conducted in accordance with the University honor code and academic honesty policy, which can be found in the [student guide](#)

Accommodations for Students with Disabilities.

"Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, <https://www.dso.ufl.edu/drc/>) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester."

Online Evaluations.

"Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu> Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>."

Contact information for the Counseling and Wellness Center.

<http://www.counseling.ufl.edu/cwc/Default.aspx>; 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Tentative weekly schedule

Week 1: Sections 1 and 2.

Week 2: Section 3.

Week 3: Section 4.

Week 4: Section 4.

Week 5: Section 5 and 6.

Week 6: Section 8 and 9.

Week 7: Section 10.

Week 8: Section 11.

Week 9: Section 12.

Week 10: Section 12.

Week 11: Section 14.

Week 12: Section 15.

Week 13: Section 18.

Week 14: Section 18.

Week 15: Section 20.