Analysis I (MAA6616) Fall 2020

Time and Location

MWF 4, online

Office hours: online, TBA

This page will not be updated. Full course information, daily updates, etc. will be maintained on the course Canvas page.

Description and Goals

This course treats the fundamentals of measure and integration theory, including Lp 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 harmoinc analysis and the Fourier transfom, the theory of distributions, the spectral theorem, and an introduction to probability.

Text: There is no required text for this course. A complete set of lecture notes will be posted on the Canvas webpage as the course progresses.

Some standard texts that treat the material covered in this course are:

Real Analysis: Modern Techniques and Their Applications by Gerald B. Folland
Real and Complex Analysis by Walter Rudin
Real Analysis by H. L. Royden
Real Analysis: Measure Theory, Integration, and Hilbert Spaces by Eli Stein and Rami Sharkachi

Measure, Integration and Real Analysis by Sheldon Axler (Links to an external site.) (this is a new book, I have not read it closely but is probably the most similar in content to this course of any of the books above. The book is available for free download at the link provided.)

Some additional references for the second semester of the course (on functional analysis) are:

Functional Analysis by Peter D. Lax

A Course in Functional Analysis by John B. Conway

University policies and resources

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

Honor Code: "UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class."

Class Attendance: "Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:
https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx."

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: https://counseling.ufl.edu/, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.