

# Advanced Calculus I (MAA4211) Fall 2019

Fall 2019: Section 16G0, MWF 2nd hour, Little Hall, room 125

Email: mjury@ufl.edu

Office: Little Hall 484

Office Hours: M 5th, W 7th, F 3rd

Text: There is **no required text** for the course, all the material may be found in the lecture notes which will be posted below as the course progresses. If you want to look at a book, two that may be helpful are

Introduction to Analysis, by Maxwell Rosenlicht, Dover, 1968.

and

Principles of Mathematical Analysis, by Walter Rudin, McGraw-Hill, 1976.

# **Course Content**

A rigorous treatment of the foundations of Calculus including the real numbers; metric spaces; continuity, differentiation; and sequences and series of functions. In addition to mastery of the course content, course objectives include reading, writing, and discovering proofs and constructing proofs and counterexamples in analysis.

During the fall semester I expect to cover Chapters 1-8 in the lecture notes.

### Lecture Notes

Current lecture notes (updated 16 August 2019)

### This week's lectures

Friday August 30 - Regin Section 2

Wednesday August 28 – Finish Section 1.3, homework 2 assigned (If you are rewriting Homework 1, that is also due Wednesday 4 September.)

Monday August 26 - Begin Section 1.3, homework 1 due

#### Past lectures

Friday August 23 – Continue Section 1, through Definition 1.17.

Wednesday August 21 – first meeting, introduction to the course, begin Section 1, through Example 1.5.

## Homework assignments

Homework will be collected and graded roughly once a week; for a total of about 10 to 15 problems. In addition several problems will be assigned each lecture (not to be turned in). Late homework will not be accepted, but the the lowest two homework scores will be dropped.

Homework submissions in LaTeX are encouraged. I will provide a template .tex file for you to use (see below).

All problem numbers refer to the lecture notes posted above.

Homework 2 (due Wednesday 4 September) – Problem 1.6

**Homework 1** (due Monday 26 August) – Problem 1.2 (careful—notice this is **Problem 1.2**, not Exercise 1.2).

#### LaTex

You can find a template .tex file to use for homework assignments at this link:

https://people.clas.ufl.edu/sam/15spring/maa4212/sample-homework/

When submitting homework as a .tex file please

name the file yournamehmknumber.tex (no spaces or parentheses please);

email the file as an attachment;

include your name and homework number in the subject line;

verify that the file compiles by running pdflatex or, if you are using sage math cloud, by using the pdf

option, before submission;

use the homework template below. Feel free to modify this template, except for the documentclass and the included packages and the macro \cc;

for redoes, include the original submission with a \newpage separating the resubmission (first) from the original (second).

Please no spaces or # (or other unusual characters) in the file name.

## Grading policies

The course grade will consist of the homework average (25% of the final grade) and three midterm exams (25% each). Final grades are assigned according to the standard scale: 90-100 A, 87-89 A-, 84-86 B+, 80-83 B, 77-79 B-, etc.

Tentative exam dates are as follows:

Exam 1. Friday September 20 Exam 2. Wednesday October 23 Exam 3. Monday November 25

The (optional) final exam (Thursday, December 12, 12:30–1:30pm) will serve as a make-up.

No notes or books will be allowed during exams.

### 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.



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