

MATH 534A: Advanced Calculus I
Summer 2015 S1 MTWR 2-3:40 GMCS 309

Overview:

This course revisits the main ideas from Calculus I from a theoretical standpoint, expanding upon topics that were previously mentioned briefly, superficially, or not at all. Familiar definitions will be stated precisely, and familiar theorems will be proved rigorously.

Learning Objectives:

Students will carefully state and apply many definitions. Students will determine, with proof, whether definitions do or do not apply in various contexts. Students will prove many, many facts about functions, their derivatives, and their integrals.

Textbook:

Friedman's *Advanced Calculus*, ISBN 0-486-45785-8. We will cover almost all of chapters 1-4. Students are expected to read the textbook carefully. Answers to selected exercises may be found in the back.

Course Mechanics:

Class time will be divided between brief lectures and students working exercises in groups. Both exams will be held in the usual class room at the usual class time.

Important dates:

Mon. May 25	Memorial Day, no class
Tues. June 2	Homework 1 due
Wed. June 10	Homework 2 due
Thu. June 11	Midterm Exam
Tue. June 23	Homework 3 due
Wed. July 1	Homework 4 due, pictures
Thu. July 2	Final Exam, course ends

Collaboration:

Collaboration is highly encouraged on all exercises in this course; however all submitted work will be considered individual and must be done in your own hand.

Homework:

The four homework sets will consist of all exercises worked in class, as well as others, to be assigned periodically. Please hand in clear, legible solutions with the problem numbers clearly marked: problem 3, from section 1.2, should be marked "1.2.3". Not all problems will be graded. Solutions will be given to those problems that are graded; solutions to other problems should be sought from classmates or during office hours.

Attendance:

Students are expected to attend every class, and to get copies of the notes should a class be missed. Makeup exams will be given, and late homework accepted, only under extraordinary circumstances (e.g. hospitalization).

Grading:

During the midterm and final, students will have a choice from either the textbook or one page of notes to use. All grades, including homework grades, will be normalized to lie between 50% (blank but present) and 100% (perfect score). Missing grades will still be 0%. The grading policy is as follows:

A	A-	B+	B	B-	C+	C	C-	D+	D	F
92.0	90.0	88.0	82.0	80.0	78.0	72.0	70.0	68.0	62.0	0

The course grade will comprise 25% homework grade, 25% midterm exam grade, 40% final exam grade, and 10% participation grade. Participation grade will be determined primarily from attendance; each missed class after the first will lower this by 2, out of 10. Tardiness may lower the participation grade as well.

SDS:

If you are a student with a disability and believe you will need accommodations for this class, it is your responsibility to contact Student Disability Services at (619) 594-6473. To avoid any delay in the receipt of your accommodations, you should contact Student Disability Services as soon as possible. Please note that accommodations are not retroactive, and that accommodations based upon disability cannot be provided until you have presented your instructor with an accommodation letter from Student Disability Services. Your cooperation is appreciated.

Professor:

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Office hours: GMCS 511, Mon, Tues, Wed, Thu 1pm-1:45pm, and by appt.