

# Advanced Calculus for Engineers and Physical Scientists I

## MAA 4102, MAA 5104

MWF Period 3, 9:35 - 10:25, Little Hall 127

Spring 2017

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**Instructor:** Michael Catanzaro   **Email:** catanzaro@ufl.edu   **Office Location:** 411 Little Hall  
**Office Hours:** MW Period 4, 10:40 - 11: 30, F Period 5, 11:45 - 12:35

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**Prerequisites** MAC 2313 or MAC 3474, and MAS 4105 or MAS 3114.

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**For whom planned** The fundamental ideas of calculus play an important role in the physical sciences and engineering. For this reason, students in these areas may choose to take this course, even though no particular applications are discussed in the course. Students in mathematics, education, and other areas may also choose to take this course. However, students who intend to pursue graduate study in mathematics should not take this course. These students should take MAA 4211 instead.

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**Description and Goals** The primary goal of the course is to obtain a sound understanding of the basic mathematical concepts of calculus. A secondary goal is to improve the ability to reason carefully and creatively when dealing with mathematical material. We will cover the first four chapters of the text and the first section of chapter 5, as time permits. Topics include functions, sequences, limits, continuity and (possibly) differentiation.

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**Required Text** Kosmala, Witold A.J. **A Friendly Introduction to Analysis.** Second edition. Pearson Prentice Hall, Upper Saddle River, NJ 07458. **A copy of this text is on reserve at the UF library.**

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### Evaluation and Grading

**Homework:** Homework problems will be assigned (roughly) every week. Some of these problems are very difficult and will require a significant amount of time to work. These assignments will be handed in and count towards your grade. Students are expected to do the assignments as part of the preparation for the exams. There are no make-up homework assignments. There will be three (3) dropped assignments for unavoidable situations.

**Exams:** We will have three mid-term exams and a cumulative final exam. Exams will cover all material covered up to that point in class. The exam dates are listed below.

**Friday, February 3:** Exam I

**Friday, March 3:** Exam II

**Friday, April 14:** Exam III  
**Monday, April 24, 7:30 - 9:30 AM:** Final Exam

**Final Grades:** Grades will be computed with the following weights:

Homework 15%,  
 Exams 20% each,  
 Final 25%.

Grading Scale out of 100%									
100-97	<b>A</b>	89-87	<b>B+</b>	79-77	<b>C+</b>	69-67	<b>D+</b>		
96-93	<b>A</b>	86-83	<b>B</b>	76-73	<b>C</b>	66-63	<b>D</b>	59-0	<b>F</b>
92-90	<b>A-</b>	82-80	<b>B-</b>	72-70	<b>C-</b>	62-60	<b>D-</b>		

**Attendance Policy:** I expect you to come to class each day; this is critical for success in a mathematics course. If you must miss class or an exam for a religious observance, you must notify me in writing of participation in this observance at least one week prior to the event. This is consistent with the university policies that can be found here: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

**Course Policy:** The use of calculators on any in-class exam is prohibited in this course. Further, written medical documentation is required for any make-up exam.

**Academic Integrity:** 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, which can be found here <http://www.dso.ufl.edu/sccr/process/student-conduct-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.

**Students with Disabilities:** Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation. The Disability Resource Center can be contacted at (352)-392-8565 or by visiting <https://www.dso.edu/drc/>. Students should provide the DRC with the appropriate documentation as early as possible in the semester.