

## MAA4211 syllabus

Advanced Calculus I  
 Section 16G0 Fall 2015

### Instructor

Scott McCullough

### References

*Introduction to Analysis*, Maxwell Rosenlicht, Dover, 1968.  
*Principles of Mathematical Analysis*, Walter Rudin, 3rd edition.

### Course Content and Objectives

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.

### Suggested Problems

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

### Homework

Twelve or 13 homework problems will be assigned, collected, and graded. Late homework will not be accepted, rather the lowest two homework scores will be dropped. Homework will be worth 100 points total.

### Exams

There will be three exams each worth 100 points based upon the Suggested Problems and Homework. The final exam will serve as a make-up.

Exam 1. Monday 28 September.  
 Exam 2. Friday 30 October.  
 Exam 3. Monday 7 December.

### Grading

A course total will be computed by adding the exam and homework scores. Grades will then be assigned according to a straight scale: 90 – 100 A; 87 – 89 A-; 84-86 B+; 80-83 B; 77-79 B-; etc.

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

*Accommodation for students with disabilities.* 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

August 25 – August 29, Review of sets, set operations and functions (2 homework problems).  
 September 3 – September 10, The real numbers and the least upper bound property (2 homework problems).  
 September 12 – 22, Metric spaces.  
 September 29- October 6, Sequences. (2 homework problems).  
 October 8 – 20, Compact and connected sets (2 homework problems).  
 October 22 – October 27, Continuous functions.  
 November 3 – 12, Sequences of functions (2 homework problems).  
 November 14 – December 1, Differentiation (2 homework problems).  
 December 3 – 5, Flex day, review.

