



maa4212 syllabus

Advanced Calculus II
 MAA4212 Spring 2015

Course Content and Objectives

A continuation of the rigorous treatment of the foundations of Calculus begun in MAA4211. Topics for this second semester include, uniform convergence; differentiation; Riemann integration; sequences and series of functions; the calculus of functions from \mathbb{R}^n to \mathbb{R}^m ; and the inverse and implicit function theorems. Other topics as time permits. In addition to mastery of the course content, course objectives include reading, writing, and discovering proofs and constructing proofs and counterexamples in analysis.

Instructor and Office Hours

Scott McCullough

Office: 490 Little Hall
 Phone: (352)294-2321
 Office hours: M8, W5, F3 and by appointment
 email: sam at ufl dot edu

Suggested Problems

Selected problems will be assigned on a daily basis.

Homework

Between 8 and 11 homework problems will be assigned, collected, and graded. The lowest two or three homework scores will be dropped. Homework will be worth 80 points total.

Exams

There will be three mid-term exams each worth 100 points; and end of course exam worth 20 points. The time for the final exam will be used for make-up exams.

Exam 1 Friday 6 February
 Exam 2 Monday 16 March
 Exam 3 Monday 15 April
 End of Course Exam Monday 20 April
 Make-up exams Thursday 1 May, 10:00-11:00 or 12:30-1:30.

Grading

A course total (out of 400) will be computed by adding the exam scores and best eight homework scores. Grades will then be assigned according to a straight (percentage) scale: 90 A; 87 A-; 83 B+; 80 B; etc.

See the [undergraduate catalog](#) for the UF policy on assigning grade points.

Attendance

Attendance is recommended.

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](#)

(<http://www.dso.ufl.edu/studentguide.html>).

Accommodation for 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.

Course (online) evaluations

In accordance with the universities syllabus policy this syllabus includes the following statement.

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/>.

Course Information

<http://people.clas.ufl.edu/sam/15spring/maa4212>

Tentative weekly schedule

January 7 – January 14, Uniform convergence and the metric space $(C(X), \|\cdot\|)$ (1 homework).

January 16 – January 23, Differentiation (1 homework).

January 26 – February 2, Begin Riemann Integration (1 homework).

February 4 and 6, Review and Exam I.

February 9 – February 13 Riemann Integration (1 homework).

February 15 – February 27, Series (2 homeworks).

March 9 – March 11, Linear Algebra Review (1 homework).

March 13 and 16, Review and Exam II.

March 18 – March 27, Calculus of functions $f: \mathbb{R}^n \rightarrow \mathbb{R}^m$ (2 homeworks).

March 30 – April 13, Inverse and Implicit function theorems (2 homeworks).

April 15, 17, 20, End of Course Exam, Review, Exam III.

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