

MAA 4226.0001 – Advanced Calculus I

Days & Times: MWF 1:30–2:50 in MSB 108
Professor: Jason Swanson
Office: MSB 202E
Office Hours: MW 11–12, or by appointment
Course webpage: <http://math.swansonsite.com/15s4226>
Textbook: Advanced Calculus, Second Edition, Patrick M. Fitzpatrick

Course description: This course provides a rigorous presentation of the fundamental concepts of the calculus of functions of a single variable. Beginning with a set of axioms for the real numbers, we will develop the theory of differentiation and integration, and also cover topics such as sequences, series, and Taylor polynomials. From the textbook, we will cover Chapters 1–4, 6, 8, and 9.

Grading: There will be three in-class tests and a comprehensive final exam. The tests are tentatively scheduled for February 11, March 6, and April 1. The lowest of the three tests will be worth 15% of the overall grade. The other two tests will be worth 27% each. And the final exam is worth 31%. Each in-class test will be 40 minutes long, and will be preceded by a 40-minute review session. Homework problems will be assigned regularly, but not collected. Test problems will be closely related to the assigned homework problems. The required threshold for an A is 90%; for a B, 80%; for a C, 70%; and for a D, 60%. Below 60% is an F. If necessary, however, these thresholds will be lowered to adjust for the difficulty levels of the tests and final exam.

Make-Up Policy: There are no make-up tests. In the case of documented absences due to family emergencies, illness or official university functions, the final exam will be used as a make-up exam.

Writing requirements: In this class, you will write proofs. All proofs must be handwritten on lined paper, with clean, even edges. Proofs must be double-spaced and single-sided. Proofs must be written professionally, using paragraphs, complete sentences, correct grammar and punctuation, and so on. Isolated mathematical symbols and excessive use of logical shorthand is not acceptable. Your proofs will be graded not only for their logical and mathematical content, but also for the quality of your presentation and exposition. If you wish to typeset your proofs, you must obtain prior approval from the professor, and your proofs must be typeset in L^AT_EX.

Blue books: Blue books will be required for every test, as well as the final exam.

Final exam: The final exam is currently scheduled for Monday, May 4, 2015, from 1:00 pm to 3:50 pm, in MSB 108.

Attendance: If you must miss a class, it is your responsibility to find out all information from the class you missed, including any announcements that were made.