

Course Syllabus

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Math 291-3: Intensive Linear Algebra & Multivariable Calculus, Spring 2018

Textbook and Course Content

Vector Calculus, 4th edition by Susan Colley

We will aim to cover the rest of Chapter 4 and Chapters 5 through 8 of Colley, with some topics being covered in a slightly different order than how they are presented in the book. Specific topics include: optimization, Riemann integration in higher dimensions, change of variables, vector fields and differential forms, curves and surfaces, line and surface integrals, and the fundamental theorems (Green's, Stokes', Gauss's) of vector calculus. We will place a heavy emphasis on theory and proofs, with a side goal of the entire year-long sequence being to help prepare students for the more abstract mathematics they would see in certain 300-level courses.

Exam Dates

Midterm 1: Thursday, May 3 in discussion

Midterm 2: Thursday, May 31 in discussion

Final: Monday, June 11, 12-2pm

These dates and times are set in stone so make sure you plan accordingly. If you have a conflict please see me as soon as possible.

Assignments and Quizzes

Homework will (usually) be due on Fridays. You are welcome (and encouraged!) to work together on problem sets but each student must hand in their own assignment in their own writing. If you do work with others, please list the names of those with whom you worked on the front page of your homework.

Discussion will be devoted to working on additional problems together as a class and in groups. There will be no quizzes this quarter.

Grades

Final scores will be computed according to the following percentages: 30% Homework, 20% Midterm 1, 20% Midterm 2, 30% Final. The specific percentages which constitute an A, B, etc. will be determined at the end of the course, but they will be no stricter than the standard A = 90-100, B = 80-89, etc. scale. In the end you can expect that the median overall score will be enough for a B+.

University Policies

Any student requesting accommodations related to a disability or other condition must register with AccessibleNU and provide the instructor with an accommodation notification from AccessibleNU, preferably within the first two weeks of class. All information will remain confidential. For more information, see <http://www.northwestern.edu/accessiblenu/> (<http://www.northwestern.edu/accessiblenu/>), or call (847) 467-5530.

Suspected violations of academic integrity will be reported to the Dean's Office. For more information on Northwestern's academic integrity policies, see

<http://www.weinberg.northwestern.edu/handbook/integrity/>
(<http://www.weinberg.northwestern.edu/handbook/integrity/>).

Northwestern University is committed to fostering an environment where students are safe and free from sexual misconduct. Confidential resources are available to those who have experienced sexual misconduct. See <http://www.northwestern.edu/sexual-misconduct/get-help/confidential-support.html> (<http://www.northwestern.edu/sexual-misconduct/get-help/confidential-support.html>). Faculty and instructors are not confidential resources and are required to report incidents of sexual misconduct, whether discussed in your assignments or in person, to the Title IX Coordinator, who can provide information about resources and options. I encourage students who have experienced sexual misconduct to talk with someone to get support. For more information, including how to request interim protective measures and academic accommodations or file a complaint, see the Get Help page at <http://www.northwestern.edu/sexual-misconduct/get-help/index.html> (<http://www.northwestern.edu/sexual-misconduct/get-help/index.html>).

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Course Summary:

Date

Details

[Homework 1](#)