Math 5C: Vector Calculus II
UCSB, Summer 2011

Course Logistics

Lecture: MTWR 12:30-1:35
Phelps 3515

Textbook: Vector Calculus, by Miroslav Lovrić

Instructor: Charles Martin
cmart07 (-at-) math.ucsb.edu (disclaimer: email is not a great way to reach me)
`www.math.ucsb.edu/~cmart07/5C_Sum_2011.html`
Office hours: South Hall 6432F, Mondays 2-4

TA: John Mangual
mangual (-at-) math.ucsb.edu
Office hours TBA in section

Course Overview

This course serves to cover a few topics in advanced calculus that are of great import for other disciplines. In particular, we'll cover the various integrals of vector calculus and the theorems relating them, infinite series, power series, Fourier series, and an introduction to partial differential equations. The relevant sections in the text are those from chapter 5 through the end of the book with a few sections skipped.

Assignments and Grading

There will be a number of different assignments in this class. For computational homework problems WebWork will be used, whereas for theoretical problems there will be traditional written assignments. To encourage section attendance, there will be a section grade, at the TA's discretion. In lieu of a midterm there will be a take-home midterm/project to be done in pairs; details will follow at a later date. There will be a final exam in 2 parts: the take-home portion must be completed individually during the final week of the quarter, and the in-class portion will be held on the last day of class. The relative grade weights are as follows.

- WebWork — 10%
- Written Homework — 10%
- Section — 10%
- Midterm/Project — 30%
- Take-home Final Exam — 20%
- In-class Final Exam (Thursday September 8)— 20%

The final course letter grade is some heretofore unknown monotonically nondecreasing function of the numeric course grade.

How to Succeed in ~~This Class~~ Math

First of all, go to class! This course will deviate from any textbook of which I'm aware, so you'll want the whole story. Also, a major theme of this course is looking at something you know in a new way; one of the most important aspects of class is learning how to think and talk about the topics. The material is dangerously close to painful-to-compute territory, so we'll focus a bit more on theory than your previous classes. Finally, the instructor and TA are valuable resources! We know a number of ways to explain things and a lot of applications to other subjects—we can't touch on everything in class, but we can help outside of the classroom. If we didn't know a bunch about this stuff we wouldn't teach it!