

# Math 31CH Spring 2017: Honors Vector Calculus

MWF 1-1:50pm, 2402 AP&M  
Professor D. Rogalski

## 1. CONTACT INFORMATION

**Prof. Rogalski's Office:** 5131 AP&M

**E-mail:** drogalsk@math.ucsd.edu

**Class web site:** [www.math.ucsd.edu/~drogalsk/31.html](http://www.math.ucsd.edu/~drogalsk/31.html). Check here for announcements, homework assignments, schedule of lectures, and other information.

**Office hours:** M 3-4pm, W 11am-12pm in 5131 AP&M

**TA:** Eric Lybrand

**Eric's Office:** 6446 AP&M

**Section Meeting time:** Tu. 2-2:50pm in 5402 AP&M

**E-mail:** elybrand@ucsd.edu

**Office hours:** Tu 3:30-4:30pm, F 11am-12pm in 6446 AP&M

### • Course description

Math 31CH is the third quarter of UCSD's three-quarter honors calculus sequence, covering multivariable calculus and linear algebra, with proofs. The main topic will be integration in several variables.

• **Prerequisite** The prerequisite is completion of Math 31BH with a B- or above. Please come see me if you have not met this prerequisite. Only in rare instances will it be appropriate for someone who has not successfully completed Math 31BH to enroll in this course.

• **Textbook** The textbook continues to be *Vector Calculus, Linear Algebra, and Differential Forms* by Hubbard and Hubbard, 5th edition.

We will cover selected sections of Chapters 4, 5, and 6. There is a standard syllabus for the course that we will follow as closely as possible. See

<http://www.math.ucsd.edu/~syllabi/>

The material in lectures is meant to complement the book and so will sometimes present a different point of view. You are expected to read the book as well as attending lecture.

### • Homework

Homework will be assigned weekly and is to be submitted on Wednesdays **by 5pm** in the homework box for Math 31 in the basement of AP&M, the first one due on Wednesday April 12 (week 2). The one lowest homework score will be dropped. No late homework will be accepted.

As with all higher mathematics courses, the most important part of the course is the homework. You cannot prepare for the exams properly without working through the homework carefully and completely. It is important to start homework early and work on it over the week.

This quarter, the TA will provide sample solutions to some homework problems. Be aware that if you continue into the mathematics major, not all future courses will provide sample homework solutions, and it is important for you to begin to trust your own independent work.

Note that handing in a homework solution copied directly or paraphrased from an online source, or from a friend's solution, is academically dishonest. The homework you hand in should reflect your own understanding of the problems.

- **Exams**

There will be 2 in-class midterms: on Friday April 28 (week 4) and Friday May 19 (week 7). The final exam will be Thursday June 15 from 11:30am-2:30pm. Please bring your own bluebook to each exam.

This quarter, no books, notes, calculators, phones, or other aids may be used during exams. The final exam will be cumulative. Makeup exams will not be given; please let me know as soon as possible if you believe you have a conflict with a midterm or with the final exam.

- **Office Hours**

Both I and your TAs will have several office hours a week where we will be available for your questions. These will be announced later and posted on the website. If you need to see one of us and can not make a scheduled office hour, please e-mail one of us to set up an appointment.

- **Grading**

Your final average will be calculated using the following grading scheme: Homework 20%, Midterm 1 20%, Midterm 2 20%, Final Exam 40%.

Your final grade will be *at least as good* as the grade given by the following standard scale:

97	93	90	87	83	80	77	73	70	60
A+	A	A-	B+	B	B-	C+	C	C-	D

- **Collaboration and Academic Honesty**

You are welcome to discuss the homework problems with other students at the stage when you are still formulating ideas. This may be especially useful if, for example, you are confused about definitions or what the problem is asking. The write-up you hand in should be your work alone in your own words, however, and should be written while you are by yourself. While it is also OK to seek hints from classmates that have figured out problems on which you are stuck, you will learn the most if you think about these problems hard on your own first and don't give up too quickly. As mentioned above, copying or paraphrasing the finished writeup of a homework problem in whole or in part from a classmate or from any other source such as the internet, and then handing it in as your own work, constitutes academic dishonesty. As usual, copying from or talking with a classmate during an exam, or using books, notes, calculators, phones or any other aids during an exam is also not allowed.