

Vector Calculus (Math 23a)

UCSC, Summer 2015

INSTRUCTOR: Connor Jackman, cfjackma@ucsc.edu

OFFICE HOURS: W 5:00-6:00, Th 5:00-6:00 in McHenry 1292

CLASS LOCATION: T,Th 1:00-4:30 in JB Engineering 152

TA: Jody Ryker, jryker@ucsc.edu, Office hours: M,W 1:00-2:00 in McHenry Cafe

SECTIONS: M,W 12:00-1:00 Earth & Marine B210, Th 8-9pm Social Sciences 1, 145

Attending sections is *strongly* recommended.

DESCRIPTION:

We will extend the derivative from single variable calculus to vector valued functions of several variables and examine extrema.

WARNING:

A summer course moves extremely fast, *a lot* is on you to put in the amount of work to learn the material. Also, as you know, any cheating results in failure.

RECOMMENDED TEXT: Marsden/Tromba: Vector Calculus (On reserve at the UCSC science library)

SCHEDULE: (6/23-7/23)

Week 1	Vectors, functions, coordinate systems	Directional Derivatives
Week 2	Linear Algebra, Differentials HW 1 due	Continuity, Limits
Week 3	Implicit Surfaces, Gradient HW 2 Due	Midterm
Week 4	Taylor Expansion, Extrema HW 3 due	Constrained Extrema, Curves
Week 5	Curl, Div, Review HW 4 due	Final Exam

Homework/class information will be posted on <http://people.ucsc.edu/~cfjackma/>

GRADING:

Homework: 20%

Midterm: 35%

Final: 45%

DRC:

Come talk to me after the first class or at your soonest convenience so that I have time to accommodate your requests well.

MAKE-UP POLICIES:

Late homework can be accepted with partial credit within reason. No make-up exams unless in extreme cases.