

MATH 137-10, Multivariable Calculus, Summer 2016

Instructor: Michael Raney

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Office hours: To be determined

Textbook: Colley, *Vector Calculus*, 4th edition, Pearson Prentice Hall

Course overview: This is a first course in vector analysis and the differential and integral calculus of functions of many variables. Topics include vector analysis in n -space, differentiation of real and vector-valued functions of many variables, the chain rule, extrema of real-valued functions, constrained extrema and Lagrange multipliers, vector fields in 3-space, the divergence and curl of a vector field, conservative fields, double and triple integrals, change of variables in multiple integrals, path and surface integrals, and the theorems of Green, Gauss and Stokes.

Homework: A homework assignment will be given over each section after it is covered in lecture. The assignments are accessible via Blackboard. The assignments will be collected and graded. Each will typically be due two class periods after it has been posted on Blackboard. You are allowed and even encouraged to discuss the assignments with each other, but the work that you hand in must be your own.

Exams: We will have a midterm exam and a final exam. The midterm is scheduled for Tuesday, June 21 during regular class time. The final exam is scheduled for Thursday, July 7 during regular class time.

Grading scheme: Your homework average constitutes 40% of your overall course average. The midterm exam is worth 25%, and the final is worth 35%.