Syllabus for Math50C Multivariable Calculus

Course Information

Semester & Year: Fall 2019
Course ID & Section #: MATH-50C-E7326
Instructor's name: Jackson
Day/Time MWF 11:40-12:55 PM
Location: SC214
Number of units: 4

Instructor Contact Information

Office location: SC 216L
Office hours: TBA
Phone number: 707 476 4219
Email address: steve-jackson@redwoods.edu

Required Materials

Textbook Title: Calculus Early Trancendentals
Edition: Fifth
Author: James Stewart
ISBN: 0-534-39321-7

Catalog Description

The third in the series of three calculus courses. Multivariable Calculus applies the techniques and theory of differentiation and integration to a thorough study of vectors in two and three dimensions, vector-valued functions, calculus of functions of more than one variable, partial derivatives, multiple integration, Green's Theorem, Stokes' Theorem, Divergence Theorem; includes motion in two and three dimensions, curves and surfaces. Note: Extensive computer visualization is an integral component of this course.

Course Student Learning Outcomes *(from course outline of record*

1. Formulate equations of lines and planes including a tangent plane to a surface at a point.
2. Evaluate partial derivatives, and two- and three-dimensional integrals. Apply techniques to real-world problems.
3. Apply vector operations. Differentiate and integrate vector-valued functions.
4. Determine for a function of several variables: the limit at a point, differentiability, local extrema and test for saddle points. Compute arc length. Solve constraint problems using Lagrange multipliers.
5. Find the divergence and curl of a vector field. Apply Green's, Stokes', and Divergence Theorems.

Evaluation & Grading Policy

See next page

Prerequisites/co-requisites/ recommended preparation

Math 50B or equivalent

Textbooks

We will be using Calculus, Early Transcendentals, 5th Edition, Stewart. In addition, there are studentsolutions manuals that accompany the book. The first volume has the solutions that are needed for math 50A and 50B. The second has the solutions for the problems in 50C. If you decide to purchase the solutions manual, MAKE SURE that you get the correct solutions manual.

Also see: http://www.stewartcalculus.com

Calculators:

Your choice.

Homework:

Participation in the course is essential. While participation includes coming to class and joining in the discussion, participation also includes keeping up with the homework. Not keeping up with the homework implies non-participation and as a consequence you may be dropped from the course. Homework is graded on appearance, on whether the work is complete, and on whether the problems are done correctly. Please keep your homework in a journal so that I can check your endeavors from time to time during the semester.

Guidelines for homework:

*) Do your homework in pencil.

*) Make sure your put your name and assignment on the homework.

*) State the original problem and then show all the necessary work that supports your answer(s).

*) Make sure your work is neat. If you wish, typeset your work in *Latex.*

*) Make sure that your work can be easily followed. Remember, you are communicating your mathematical ideas. Have another pair of eyes look at your work and ask for comments.

Professionals do this, why not you?

*) I understand that you may be using the solutions manual as a guide to doing your homework. If you use a solution from the solution manual you need to cite your source. Use the following format: Begin SM <work> End SM.

Visualization: CalcPlot3D

Exams:

There will be 2-3 mid-term exams plus the comprehensive final given this semester.

Please see me before each exam if special arrangements are needed. The final exam will given only at the allotted time on the finals schedule. Make travel plans accordingly.

Quizzes:

There may be several quizzes given throughout the semester. Some of them will be of the in-class variety, some of them take-home. The point value and instructions will vary depending on the material and length of each quiz.

Grading:

Homework 20%

Exams/Quizzes 80%

Grades will be assigned as follows:

93 - 100% A
90 - 92.9% A-
86 - 89% B+
83- 85.9% B
80 - 82.9% B-
76 - 79.9% C+
70 - 75.9% C
60 - 69% D
Below 60% F

The above information is subject to change depending on class circumstances.