Syllabus for: Math 50C	
Semester & Year:	Fall 2013
Course ID and Section Number:	E3887
Number of Credits/Units:	4
Day/Time:	MWF 11:40-12:55
Location:	LRC 105
Instructor's Name:	Bruce Wagner
Contact Information:	Office location: SC 216K
	Office hours: MW 10:30-11:30, Tu 11:30-2:30, Th 11:30-2:00
	Phone: 476-4207
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Course Description (catalog description as described in course outline):
The third in the series of three calculus courses. Multivariable Calculus applies the techniques and theory of differentiation and integration to vector-valued functions and functions of more than one variable. The course presents a thorough study of vectors in two and three dimensions, vector-valued functions, curves and surfaces, motion in two and three dimensions, and an introduction to vector fields.

Student Learning Outcomes (as described in course outline):
1. Apply methods of differentiation and integration to vector-valued functions and functions of more than one variable, and use the theory of vectors as a fundamental problem-solving tool.
2. Apply the mathematics of multivariate functions to solve real-world problems and applications.
3. Use graphing technology to visualize curves and surfaces in two and three dimensions, explore mathematical concepts, and verify results.
4. Use sound mathematical writing and appropriate use of numerical, graphical, and symbolic representations to present solutions of mathematical exercises and applications.

Special accommodations: College of the Redwoods complies with the Americans with Disabilities Act in making reasonable accommodations for qualified students with disabilities. Please present your written accommodation request at least one week before the first test so that necessary arrangements can be made. No last-minute arrangements or post-test adjustments will be made. If you have a disability or believe you might benefit from disability related services and may need accommodations, please see me or contact Disabled Students Programs and Services. Students may make requests for alternative media by contacting DSPS.

Academic Misconduct: Cheating, plagiarism, collusion, abuse of resource materials, computer misuse, fabrication or falsification, multiple submissions, complicity in academic misconduct, and/ or bearing false witness will not be tolerated. Violations will be dealt with according to the procedures and sanctions proscribed by the College of the Redwoods. Students caught plagiarizing or cheating on exams will receive an "F" in the course.

The student code of conduct is available on the College of the Redwoods website at:
http://redwoods.edu/District/Board/New/Chapter5/AP%205500%20Conduct%20Code%20final%2002-07-2012.pdf

Additional information about the rights and responsibilities of students, Board policies, and administrative procedures is located in the college catalog and on the College of the Redwoods homepage.

College of the Redwoods is committed to equal opportunity in employment, admission to the college, and in the conduct of all of its programs and activities.

Math 50C: Multivariable Calculus
Fall 2013
Eureka on-campus section E3887

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Course Homepage: http://msemac.redwoods.edu/~wagner/math50C
Class Sessions: MWF 11:40-12:55 in LRC 105

COURSE DESCRIPTION: Multivariable Calculus is the third in the series of three calculus courses, and is a core course in most math, science, and engineering programs. In this course, we will apply the techniques and theory of differentiation and integration to vector-valued functions and functions of more than one variable. The course presents a thorough study of vectors in two and three dimensions, vector-valued functions, curves and surfaces, motion in two and three dimensions, derivatives and integrals of functions of more than one variable, the use of other coordinate systems (polar, cylindrical, and spherical), and an introduction to vector fields, line integrals, and surface integrals.

PREREQUISITES: Grade of C or better in Math 50B (or the equivalent)

TEXTBOOK: *Calculus (Early Transcendentals)*, 5th edition, by Stewart. Chapters 12-16 will be the focus of this course. You do not need to purchase the textbook. The Math Department has provided copies for you to borrow for the semester (available at the library). It is your responsibility to return the textbook in good condition at the end of the semester.

EXAMS: There will be three midterm exams and one final exam. The final exam will be comprehensive over the entire semester. Dates for the midterms will be announced later on the course homepage. There may also be some quizzes.

Makeup exams will only be given if there is a very good and verifiable reason for missing the exam, such as illness or emergency. Notify me immediately if you cannot take an exam. If you know you are going to be away, then you are expected to arrange to take the exam early.

Calculators will be allowed (and may be necessary) on most quizzes and exams. However, there may be some quizzes and portions of exams on which a calculator cannot be used.

HOMEWORK: There will be daily reading and homework assignments that will be mostly computational and routine, and assigned mostly for practice. You are expected to complete these assignments each day, and come to class prepared to discuss them. You are also required to keep a neatly organized binder with your completed written homework assignments, and I will collect and check these before each exam. However, you are encouraged to submit these daily assignments early, and you will receive extra credit in that case.

In addition, there will be (approximately) weekly homework assignments that will be collected and graded. These assignments will generally be more challenging and will involve more intermediate steps, synthesis of concepts, experimentation, and writing.

In general, the homework will be indicative of the type and difficulty of material that you need to know for the exams. You are expected to turn in homework assignments on time.

GRADING:

Homework, quizzes, and class participation:	250 points
Midterm exams:	50 points each
Final exam:	100 points

Your course grade is guaranteed if you make the grade cutoffs given in the table below.

85-100%	A
70-84%	B
60-69%	C
50-59%	D

USE OF CALCULATORS AND COMPUTERS: A good graphing calculator is required. The calculator must be able to do parametric plots and polar plots in addition to usual plots of functions, and should be able to solve equations numerically. Recommended calculators for students in calculus are the TI-83+, TI-92, TI-89, TI-86, or TI-85. However, brands from other manufacturers can also be used. You will be expected to be able to use your calculator to numerically solve equations, analyze graphs, and work with data in the course of solving some problems.

The TI-89 and TI-92 can do symbolic calculations, including differentiation and integration. While these calculators are powerful and useful tools, I believe that you should be able to both integrate and differentiate without the use of the calculator. Therefore, you will be expected to show all steps on your homework when performing any integration to receive full credit for your work.

Our class will also learn to use Matlab as a computational and visual aid to understanding the course material. We will use Matlab in the classroom, and you may also use it in the computer lab in the Science building to help with homework. However, no prior computer knowledge is required for the course – you will receive initial instructions on how to use Matlab.

COURSE INFORMATION ON THE WEB: Course information will be available throughout the semester on the World Wide Web. You should consult the homepage for this course (listed above) regularly for information on homework assignments, exams, etc.

ATTENDANCE POLICY: Any student who is absent from class for the amount of time equal to two weeks of classes through week 10 will be withdrawn from the course, unless there are extenuating circumstances that are communicated to the instructor in a timely manner. This policy conforms to Mathematics Department guidelines regarding Faculty Withdrawal of students after census day.

DISABILITIES: Any student who feels that s/he may need an accommodation based on the impact of a disability should contact the instructor as soon as possible. The student will also need to visit the Disabled Student Programs and Services office (476-4280) and obtain a DSPS Support Services Agreement. Every effort will be made to meet accommodation requests. However, no retroactive accommodations will be provided.