Multivariable Calculus – Eureka Campus		
Semester & Year	Fall 2017	
Course ID and Section #	Math-50C 043198	
Instructor's Name	Tony Luehrs	
Day/Time	MWF 6:05-7:20PM	
Location	SC214	
Number of Credits	4	
Contact Information	*Office location*	SC216E
	Office hours	M: 10-11am T: 2-2:50pm W: 5-6pm
	Phone number	707-476-4531
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Textbook Information	*Title & Edition*	Calculus: Early Transcendentals (5th Ed.)
	Author	James Stewart
	ISBN	0-534-39321-7

Course 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.

Student Learning Outcomes

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. Perform vector operations. Differentiate and integrate vector-valued functions. Compute arc length. Use the theory of vectors as a fundamental problem-solving tool.
4. Determine for a function of several variables: the limit at a point, differentiability, local extrema and test for saddle points. Solve constraint problems using Lagrange multipliers.
5. Find the divergence and curl of a vector field. Apply Green's, Stokes', and Divergence Theorems.

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 at 707-476-4280.

Academic Support

Academic support is available at Counseling and Advising and includes academic advising and educational planning, Academic Support Center for tutoring and proctored tests, and Extended Opportunity Programs & Services, for eligible students, with advising, assistance, tutoring, and more.

Academic Honesty

In the academic community, the high value placed on truth implies a corresponding intolerance of scholastic dishonesty. In cases involving academic dishonesty, determination of the grade and of the

student's status in the course is left primarily to the discretion of the faculty member. In such cases, where the instructor determines that a student has demonstrated academic dishonesty, the student may receive a failing grade for the assignment and/or exam and may be reported to the Chief Student Services Officer or designee. The Student Code of Conduct (AP 5500) is available on the College of the Redwoods website at: http://www.redwoods.edu/board/Board-Policies/Chapter-5-Student-Services, and scroll to AP 5500. 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 website.

Disruptive Classroom Behavior

Student behavior or speech that disrupts the instructional setting will not be tolerated. Disruptive conduct may include, but is not limited to: unwarranted interruptions; failure to adhere to instructor's directions; vulgar or obscene language; slurs or other forms of intimidation; and physically or verbally abusive behavior. In such cases where the instructor determines that a student has disrupted the educational process a disruptive student may be temporarily removed from class. In addition, he or she may be reported to the Chief Student Services Officer or designee. The Student Code of Conduct (AP 5500) is available on the College of the Redwoods website at: http://www.redwoods.edu/board/Board-Policies/Chapter-5-Student-Services and scroll to AP 5500. 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 website.

Emergency Procedures for the Eureka campus:

Please review the campus evacuation sites, including the closest site to this classroom (posted by the exit of each room). The Eureka **campus emergency map** is available at: (http://www.redwoods.edu/aboutcr/Eureka-Map; choose the evacuation map option). For more information on Public Safety, go to http://www.redwoods.edu/publicsafety. In an emergency that requires an evacuation of the building:

- Be aware of all marked exits from your area and building.
- Once outside, move to the nearest evacuation point outside your building:
- Keep streets and walkways clear for emergency vehicles and personnel.
- Do not leave campus, unless it has been deemed safe by the Incident Commander or campus authorities. (CR's lower parking lot and Tompkins Hill Rd are within the Tsunami Zone.)

RAVE – College of the Redwoods has implemented an emergency alert system. In the event of an emergency on campus you can receive an alert through your personal email and/or phones at your home, office, and cell. Registration is necessary in order to receive emergency alerts. Please go to https://www.GetRave.com/login/Redwoods and use the "Register" button on the top right portion of the registration page to create an account. During the registration process you can elect to add additional information, such as office phone, home phone, cell phone, and personal email. Please use your CR email address as your primary Registration Email. Your CR email address ends with "redwoods.edu." Please contact Public Safety at 707-476-4112 or security@redwoods.edu if you have any questions.

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.

Prerequisites: A passing grade of C in Math-50B

Technology: A graphing calculator is **required** for this course. Calculators are available for loan through the CR Math Dept. This course will also utilize *Mathematica*, which is available on campus computers.

Homework: Suggested problems will be assigned daily and graded for completion. Students will be expected to assess the accuracy of homework solutions on their own using textbook solutions.

Tests: There will be 5 tests given in class with at least one week's notice, plus a comprehensive final exam. Make up tests will only be given under extreme and documented circumstances. The final exam may **NOT** be rescheduled.

Projects: We will complete a handful of projects utilizing *Mathematica*. The purpose of these projects is to provide a more hands-on learning experience to reinforce the concepts illustrated during lecture. These projects will emphasize explorative learning.

Attendance: Attendance is required. I reserve the right to drop any student from the course who misses more than 4 course meetings. If you know you are going to miss a class, it is your responsibility to be in contact with me before class is missed.

Grading: I generally use the traditional grading scale (90-100 = A, etc.) but occasionally will grade on a curve. You must "pass" the final exam with a grade of 60% or greater to pass the course, regardless of the other components of your grade. Here are the components of your final grade:

Homework - 20%
Projects - 15%
Tests (5) - 50%
Final Exam - 15%

Updates: I reserve the right to make changes to this syllabus as I see fit. All changes will be announced in class.