Syllabus for Linear Algebra – Eureka Campus		
Semester & Year	Fall 2018	
Course ID and Section #	MATH-45-E5184	
Instructor's Name	Jackson	
Day/Time	TTh 9:20-11:25	
Location	SC204	
Number of Credits/Units	4	
Contact Information	*Office location*	SC 214L
	Office hours	TBA
	Phone number	707 476 4219
	Email address	steve-jackson@redwoods.edu
Textbook Information	*Title & Edition*	Linear Algebra and its applications
	Author	David C. Lay
	ISBN	978-0-321-38517-8

Course Description

The use and application of matrices in the solution of systems of linear equations, determinants, vector spaces, linear transformations, eigenvalues, eigenvectors, diagonalization, and orthogonality. Linear algebra is a core course in many engineering, physics, mathematics, and computer science programs.

Student Learning Outcomes

- **Use the theory of linear algebra as a fundamental problem-solving tool.**
- **Apply the mathematics of linear algebra to real-world problems and applications.**
- **Use computer technology to perform matrix computations, explore mathematical concepts, and verify results.**
- **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 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.
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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.

Syllabus for Linear Algebra – Eureka Campus

Our Course Description:
Linear algebra consists of an interesting mixture of computational techniques and abstract theory. The theory arises out of the use and applications of matrices in the solution of systems of linear equations, and leads through the topics of determinants, vector spaces, linear transformations, eigenvalues, and eigenvectors. Linear algebra also has many applications in other areas of mathematics, in the physical and social sciences, and in business. Consequently, linear algebra is a core course in many engineering, physics, mathematics, and computer science programs. We will study both the abstract theory and the computations, and will also look at some applications.

Prerequisite: Math 50A (or equivalent) with a grade of "C" or better.

Attendance Policy:
We reserve the right to drop from the course any student that has more than three unexcused absences.
Reference: Title 5, Sections 55024 and 58004. Approved: 05/01/2012

Textbook:
Linear Algebra and its Applications, by David C. Lay (4th edition). The textbook comes bundled with the Student Study Guide. The Student Study Guide includes detailed solutions to many of the odd exercises, supplementary material in the form of study notes and tips, key ideas, warnings, etc., and also has help resources for calculators and computers.

HOMEWORK: There will be daily reading and homework assignments that will be mostly computational and routine, and assigned primarily 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 homework assignments, and we will collect and check these periodically. Most of your homework grade will be based on weekly homework assignments that will be collected and graded carefully. These assignments will generally be more challenging and will involve more intermediate steps, synthesis of concepts, experimentation, and writing. A portion of these homework assignments will involve proofs, but they will also include some of the more important computations. Some of the assignments will involve the use of MATLAB to help you learn and explore the concepts of the course. You will also gradually learn how to use TeX (the mathematics typesetting language) to write your solutions. TeX (and probably MATLAB) will also be needed for your final project. 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.

FINAL PROJECT: All students are required to complete a final project. The subject of the final project must be a real world application of linear algebra, or possibly an application of linear algebra to another area of mathematics. You will be expected to complete a written report and also give a brief presentation. Presentations will be given during the last week of classes and during finals week. More information about the project will be available later in the course.

GRADING:

Homework and class activities:	20%
Quizzes and Exams:	65%
Final project:	15%

Class participation will also be an important consideration in your course grade.

USE OF CALCULATORS AND COMPUTERS: A good graphing calculator is required. The calculator must have the capability to use matrices and to solve linear systems of equations. Recommended calculators for students in linear algebra are the TI-83+, TI-84+, TI-92, TI-89, TI-86, or TI-85. However, if you already have another good calculator that meets the above requirements, that may be used instead. The TI-89 and TI-92 can do symbolic calculations. While these calculators are powerful and useful tools, the ability to do linear algebra calculations by hand is important for understanding the concepts. Therefore, unless otherwise indicated, you will be expected to show all steps on your homework and exams in order to receive full credit for your work.

This information is subject to change depending on class circumstances.