

Math 313
Section 003 MWF 10:00–10:50 a.m. ENGR 308
Spring 2016

Course: Introduction to Linear Algebra
Text: *Linear Algebra and its Applications*, Custom Edition for the University of Arizona
(based on the 5th edition), by David C. Lay.
Instructor: Ronnie Scott Williams
Office: ENR2 – S370BB
Office Hours: M: 12:00-1:50 p.m.
W 11:00-11:50 a.m.
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Class Webpage: <http://math.arizona.edu/~rwilliams/math313-spring2016.html>

Catalog Course Description: An algorithmic approach to solving systems of linear equations transitions into the study of vectors, vector spaces and dimension. Matrices are used to represent linear transformations and this leads to eigenvectors and eigenvalues. The precise use of definitions plays an important role. Examinations are proctored. This course is required in the math major and prepares students to take Math 323. It is a prerequisite to the majority of the higher level courses in mathematics.

Prerequisites: Appropriate Math Placement Level or one of MATH 129, MATH 250A, MATH 223, MATH 243, MATH 254, or CSC 245.

Attendance: Students are expected to attend every scheduled class and be familiar with the University Class Attendance policy as it appears in the General Catalog. Any student who does not attend either of the first two classes will be administratively dropped from the course. It is the student's responsibility to keep informed of any announcements, syllabus adjustments or policy changes made during scheduled classes, by email, or posted on our class webpage. Additionally, it is the student's responsibility to notify the instructor in advance of an absence related to religious observation or an activity for which a Dean's excuse has been granted, and to arrange for how any missed work will be handled.

Homework: (75 points) Homework problems will be assigned for each section we cover in the textbook. Solving problems is an integral part of learning mathematics so there will be a substantial amount of homework assigned; however, only a select few of those problems will need to be submitted for grading. You will be informed of which problems are to be submitted before the due date (i.e., you will not know which problems will be collected when they are initially assigned.).

Your submitted homework problems will not only be graded on the correctness of your answer, but on your ability to exhibit the steps you took to obtain your answer using correct mathematical notation. When applicable, you must show all of your work or explain the reasoning behind your answer.

You are encouraged to discuss homework problems with me, with tutors, and especially with each other. However, you are expected to write up your own solutions. If you have a question about a homework problem and want to email me for help, please include be sure to include your name, the section the question comes from, the question number, and any steps you have tried to solve the problem. I will not respond to emails that say "How do I do problem #blank" – at least tell me what you think should be tried to solve the problem. Also, all emails should be written in a professional manner, please use correct spelling, punctuation, capitalization and grammar!

MATLAB: (25 points) Computer projects will be assigned to introduce you to the programming environment of MATLAB and certain applications of linear algebra. Visit

<http://softwarelicense.arizona.edu/mathworks-matlab>

to obtain a free download of the MATLAB software. You will be required to enter your NetID and password.

In-Class Exams: (300 points) There will be three in-class exams (each worth 100 points). In general, there will be no make-up exams in the course, however, in complex and unusual circumstances which are beyond your control, a make-up exam may be given on a case-by-case basis. This will require providing a detailed account of the situation and supporting documents. Approval in these cases is at the sole discretion of the instructor and/or the dean of students.

Final Exam: (200 points) The final exam is a comprehensive departmental exam. It is scheduled for **Friday, May 6 from 10:30 a.m. - 12:30 p.m.** The University's Exam regulations will be strictly followed (see <http://www.registrar.arizona.edu/schedule2151/exams/examrules.htm>).

Calculators: No calculators will be permitted on any of the exams (in-class or final); however, you may use any calculator you wish throughout the rest of the course. Please keep in mind that you must show all of your work on the homework you submit, so if you use a calculator to find the answer (unless specifically instructed to do so) you will not receive credit.

Grades: The total number of points available in this course is 600. The grading scale is as follows:

$540 \leq \text{points} \leq 600$	A
$480 \leq \text{points} \leq 539$	B
$420 \leq \text{points} \leq 479$	C
$360 \leq \text{points} \leq 419$	D
$0 \leq \text{points} \leq 359$	E

Accessibility and Accommodations: It is the University's goal that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please let me know immediately so that we can discuss options. You are also welcome to contact Disability Resources (520-621-3268) to establish reasonable accommodations.

Please be aware that the accessible table and chairs in this room should remain available for students who find that standard classroom seating is not usable.

Students Withdrawing from the Course: You may withdraw from the course with a deletion from your enrollment record through January 27 using UAccess. March 29 is the last day to withdraw with a grade of "W" from a class online using UAccess. The University allows withdraws between March 30 - April 19, but only with your instructor's permission on a Late Change Petition form to your college Dean. Late withdraws are dealt with on a case by case basis, and requests for late withdraw without a valid reason may or may not be honored.

Incompletes: The grade of I will be awarded if **all** of the following conditions are met:

1. The student has completed all but a small portion of the required work.
2. The student has scored at least 50% on the work completed.
3. The student has a valid reason for not completing the course on time.
4. The student agrees to make up the material in a short period of time.
5. The student asks for the incomplete before grades are due, 48 hours after the final exam.

Academic Integrity: Students are responsible to inform themselves of University policies regarding the Code of Academic Integrity. Students found to be in violation of the Code are subject to penalties ranging from a loss of credit for work involved to a grade of E in the course, and risk possible suspension or probation. The Code of Academic Integrity will be enforced in all areas of the course, including, but not limited to, homework, quizzes, and tests. For more information about the Code of Academic Integrity policies and procedures, including information about your rights and responsibilities as a student, see the following website: <http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity>

Student Code of Conduct: Students at The University of Arizona are expected to conform to the standards of conduct established in the Student Code of Conduct. Prohibited conduct includes:

1. All forms of student academic dishonesty, including cheating, fabrication, facilitating academic dishonesty, and plagiarism.
2. Interfering with University or University-sponsored activities, including but not limited to classroom related activities, studying, teaching, research, intellectual or creative endeavor, administration, service or the provision of communication, computing or emergency services.
3. Endangering, threatening, or causing physical harm to any member of the University community or to oneself or causing reasonable apprehension of such harm.
4. Engaging in harassment or unlawful discriminatory activities on the basis of age, ethnicity, gender, handicapping condition, national origin, race, religion, sexual orientation, or veteran status, or violating University rules governing harassment or discrimination.

Students found to be in violation of the Student Code of Conduct are subject to disciplinary action. For more information about the Student Code of Conduct, including a complete list of prohibited conduct, see the following website: <http://deanofstudents.arizona.edu/accountability/students/student-accountability>

Other Relevant University Policies Relating to Conduct: Please take note of the following University policies:

1. Policy on Threatening Behavior by Students:
<http://policy.web.arizona.edu/education-and-student-affairs/threatening-behavior-students>
2. Nondiscrimination and Anti-Harassment Policy:
<http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy>

Grading Disputes: Any grading disputes must be addressed within one week after an exam or homework has been returned.

Changes to the Course Syllabus: The information contained in the course syllabus, other than the grade and absence policies, may be subject to change with reasonable advance notice, as deemed appropriate by the instructor.