

**THE UNIVERSITY OF TEXAS AT EL PASO**  
**COLLEGE OF SCIENCE**

Department of Mathematical Sciences

Course #: MATH 5322, CRN 28861  
Course Title: Linear Algebra  
Credit Hours: 3  
Term: Spring 2018  
Course Meeting Times: MW 1:30 pm – 2:50 pm  
Classroom Location: Cotton Memorial Building 207  
Prerequisite Course: MATH 3325 Principles of Mathematics, or an equivalent course where you learned the basics of writing proofs.  
Course Fee: (if applicable) N/A  
Instructor: Son-Young Yi  
Office Location: Bell Hall 218  
Contact Info: Phone # : 747-6864  
E-mail address: syi@utep.edu  
Fax # (Math Department): 915-747-6502  
Emergency Contact (Math Department): 915-747-5761  
Office Hours: MW 9:00 am – 10:00 am

Textbook(s), Materials: *Linear Algebra Done Right*, by Sheldon Axler, 3<sup>rd</sup> Edition.

We will cover Chapters 1-7 throughout the semester. We will generally spend one to two class periods per section, though parts of Chapters 1, 2, and 4 should be review and we will go a little faster through these. We will skip some sections as announced in class.

Course Website: <http://www.math.utep.edu/Faculty/yi/math4326-5322s18.html>

Course Description: This course offers a rigorous treatment of linear algebra, including vector spaces, linear transformations and matrix representations, canonical forms, eigenvalues and eigenvectors, invariant subspaces, orthogonal and unitary transformations, and bilinear and quadratic forms. Emphasis will be given on proofs and abstract theory rather than on computation or concrete examples.

Expected Student Learning Outcomes: Upon successful completion of the course,

1. students will be able to prove (and occasionally discover) theorems in linear algebra, at the level of abstraction of linear transformations and vector spaces.
2. students will know, understand, and be able to apply, prove, and explain major results in this area.
3. students will be better able to independently read advanced mathematics.

- Assessment of Course Objectives: The final grade will be based on class participation, homework, a midterm exam, and a final exam. No books, notes, or calculators will be allowed on the exams. Tentative exam schedules are as follows:  
**Midterm exam:** Wednesday, March 7 in class.  
**Final exam:** Wednesday, May 9 at 4:00 pm – 6:45 pm.
- Reading Assignments and Homework: Read each section that we will cover and watch a short video on the author's webpage before class. You can skip the proofs and examples, but should get some idea of what you will be learning in class. Also, there will be weekly homework assignments. Homework is due Wednesdays at the beginning of class. No late homework will be accepted, but the lowest homework score will be dropped at the end of the semester. You may discuss the homework with other students, but you must write up your solutions independently. It is not permitted to submit nearly identical solutions.
- Grading Policy: Class participation will count for 10%, homework will count for 20%, the midterm exam will count for 30%, and the comprehensive final exam will count for 40% of your final grade. A grade of Incomplete is only used in extraordinary circumstances confined to a limited event. If you have missed a significant amount of work (e.g., multiple assignments or tasks), a grade of Incomplete is not appropriate or warranted.
- Make-up Policy: **No make-up/alternate exam** will be given.
- Course Drop Policy: The UTEP Spring 2018 drop deadline is **Thursday, March 29, 2018**. The College of Science will remain aligned with the University and not approve any drop request after that date.
- Attendance Policy: Due to the course structure, attendance is mandatory. There is no particular penalty for missing a particular class, but you cannot get a good participation grade if you miss too many classes. You are expected to arrive for class on time and to remain for the entire class period.
- Academic Integrity Policy: The University policy is that all suspected cases or acts of alleged scholastic dishonesty must be referred to the Dean of Students for investigation and appropriate disposition. Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but is not limited to cheating,

plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts. Each student is responsible for notice of and compliance with the provisions of the Regents' Rules and Regulations, which are available for inspection electronically at <http://www.utsystem.edu/bor/rules/homepage.htm>

All students are expected and required to obey the law, to comply with the Regents' Rules and Regulations, with System and University rules, with directives issued by an administrative official in the course of his or her authorized duties, and to observe standards of conduct appropriate for the University. A student who enrolls at the University is charged with the obligation to conduct himself/herself in a manner compatible with the University's function as an educational institution. Any student who engages in conduct that is prohibited by Regents' Rules and Regulations, U. T. System or University rules, specific instructions issued by an administrative official or by federal, state, or local laws is subject to discipline, whether such conduct takes place on or off campus or whether civil or criminal penalties are also imposed for such conduct.

**Civility Statement:** Calculators may not be shared during quizzes and exams. Please do not use cell phones, pagers, iPods, MP3 players, blue tooth devices, etc. during class. Cell phones and pagers should be set to silent or vibrate, and any calls should be taken outside of class. Please do not wear headsets or blue tooth devices during class. Please don't talk in class. Cell phone calculators may not be used on quizzes or exams. Active participation in class is expected, teamwork in class will be implemented.

**Disability Statement:** If a student has or suspects she/he has a disability and needs an accommodation, he/she should contact The Center for Accommodations and Support services (CASS) at 747-5148 or at <cass@utep.edu> or go to Room 106 Union East Building. The student is responsible for presenting to the instructor any CASS accommodation letters and instructions.

**Military Statement:** If you are a military student with the potential of being called to military service and/or training during the semester, please contact me by the end of the first week of class