

APPLIED LINEAR ALGEBRA

The University of Toledo

Mathematics & Statistics Department, College of Natural Sciences and Mathematics

MATH4350/5350/7350-001

Instructor: Paramasamy Karuppuchamy (PK)

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Office Hours: MWF 10:00-11:20 MW 4:30-5:00

Office Location: UH 2020 B

Office Phone: 419-530-3249

Class Location: FH 1040

Class Day/Time: MWF 2:00-2:50

Credit Hours: 3

Term: Spring, 2017

COURSE DESCRIPTION

Matrices, systems of equations, vector spaces, linear transformations, determinants, eigenvalues and eigenvectors, singular value decomposition, pseudoinverses, rank, numerical methods and applications to various areas

STUDENT LEARNING OUTCOMES

- Solve problems involving matrices and numerical methods.
- Solve Problems involving numerical issues of accuracy in linear algebra

PREREQUISITES

Math 1890 for Level UG with minimum grade of C- or Math 2890 for level UG with minimum grade of C-. Students who enrolled in Math 4350/5350/7350 but have not passed either prerequisite may be administratively dropped from the class.

TEXTBOOKS:

Linear Algebra and its applications, 4th edition, by Gilbert Strang

Numerical Linear Algebra Lloyd N. Trefethen, David Bau, III

POLICY STATEMENT ON NON-DISCRIMINATION ON THE BASIS OF DISABILITY (ADA)

The University is an equal opportunity educational institution. Please read The University's Policy Statement on Nondiscrimination on the Basis of Disability Americans with Disability Act Compliance.

ACADEMIC ACCOMMODATIONS

The University of Toledo is committed to providing equal access to education for all students. If you have a documented disability or you believe you have a disability and would like information regarding academic accommodations or adjustments in this course please contact the Student Disability Services Office (Rocket Hall 1820; 419.530.4981; studentdisabilitysvs@utoledo.edu) as soon as possible for more information and/or to initiate the process for accessing academic accommodations. For the full policy see: <http://www.utoledo.edu/offices/student-disability-services/sam/index.html>

ACADEMIC POLICIES:

STUDENT PRIVACY

Federal law and university policy prohibits instructors from discussing a student's grades or class performance with anyone outside of university faculty/staff without the student's written and signed consent. This includes parents and spouses. For details, see the "Confidentiality of Student Records (FERPA)" section of the University Policy Page at <http://www.utoledo.edu/policies/academic/undergraduate/index.html>

MISSED CLASS POLICY

If circumstances occurring in accordance with The University of Toledo Missed Class Policy (found at <http://www.utoledo.edu/policies/academic/undergraduate/index.html>) result in a student missing a quiz, test, exam or other graded item, the student must contact the instructor in advance (or as early as possible) in person, provide official documentation to back up his or her absence, and arrange to make up the missed item as soon as possible. If a student can't meet the instructor during the office hours, can make an appointment at a convenient time (or talk to the instructor after the class for simple issues).

ACADEMIC DISHONESTY

Any act of academic dishonesty as defined by the University of Toledo policy on academic dishonesty (found at <http://www.utoledo.edu/dl/students/dishonesty.html>) will result in an F in the course or an F on the item in question, subject to the determination of the instructor.

IMPORTANT DATES

Final exam date, add/drop, withdraw dates are decided by the university. You can find these dates online yourself at UT website. Dates for quizzes and tests will be announced in class, some quizzes may be pop quizzes.

FINAL EXAM: May 4, Thursday, 12:30-12:30

OTHER DATES

The last day to drop this course is: January 23, 2017

The last day to withdraw with a grade of "W" from this course is: March 24, 2017

GRADING AND EVALUATION

GRADING SCALE

Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-
Minimal Percentage Required	93%	90%	87%	83%	80%	77%	73%	70%	67%	63%	60%

GRADING POLICY

Homework and/or presentation	20%
Quizzes	30%
Exams	50%

STUDENT SUPPORT SERVICES

Free math tutoring on a walk-in basis is available in the Math Learning and Resources Center located in Rm B0200 in the lower level of Carlson Library (phone ext 2176). The Center operates on a walk-in basis. MLRC hours can be found at <http://www.math.utoledo.edu/mlrc/MLRC.pdf>

We will cover materials (may not be in the same order) from Gilbert Strang's book. We will include topics not discussed in this book. Regular attendance is very important to succeed in this course. Students are responsible for all the materials covered in the class and all the announcements made in the class irrespective of whether a student was present or not.