Kent Pearce
Office: Math 201-A
Phone: 742-2566

Office Hours:
Fixed Hours
TRF 1:00 - 2:00
Other Hours
By Appointment

Website:
www.math.ttu.edu/~pearce/courses.shtml

Linear Algebra

Math 2360-001
MA 111 MWF 10:00-10:50

Text:
Leon, Steven J.
Linear Algebra with Applications
Seventh Ed., Prentice Hall

Chapters:
1(1-4), 2(1-3),
3(1-6), 4(1-3),
5(1-3,5-6, 6(1-3)

Learning Objectives

Math 2360 satisfies the university core curriculum requirement in Mathematics: "*Students graduating from Texas Tech University should be able to demonstrate the ability to apply quantitative and logical skills to solve problems.*" It meets the following TTU general education student learning outcomes for mathematics that students will:

1. Apply arithmetic, algebraic, geometric, statistical and logical reasoning to solve problems.
2. Represent and evaluate basic mathematical and/or logical information numerically, graphically, and symbolically.
3. Interpret mathematical and/or logical models such as formulas, graphs, tables and schematics, and draw inference from them.

Students will develop skills in manipulating matrices and understand their relationships to linear systems. They will develop an understanding of the concept of bases and vector spaces, as well as, eigenvectors and eigenspaces.

In particular, students will learn to:

1. recognize vector spaces, and compute their bases,
2. express a linear transformation as a matrix,
3. perform basic matrix manipulations, and compute the determinant of a matrix,
4. compute eigenvalues and eigenvectors,
5. use the Gram-Schmidt process.

Assessment of Learning Outcomes

Assessment will be achieved through one or more activities, non-graded and graded, such as: attendance, class discussion, board work, electronic homework, examinations and other optional activities deemed appropriate by the instructor. It is important to note that these assessments are for your learning benefit. Class grades will be assigned according to the following rubric:

Grading

In Class Tests:	300 pts.
3 Exams @ 100 pts.	
Dates: Sep 28, Oct 21, Nov 18	
WeBWorK:	150 pts.
6 Electronic Homework @ 25 pts.	
Dates: Sep 11, Sep 25, Oct 16, Oct 30, Nov 13, Dec 04	
Web Address: http://webwork.math.ttu.edu/webwork2/f09kpearcem2360	
Final Exam:	200 pts.
Comprehensive	
Date: Tuesday, 15 Dec, 7:30 am	
Grade Total	650 pts.

Grading Scale

A...100% - 90% B...89% - 80% C...79% - 70% D...69% - 60% F...59% - 0%

Technology

Graphing calculators (TI-83, TI-84, TI-89 or equivalent) and/or computer algebra software (Maple, Mathematica, Matlab) can be invaluable aids for facilitating learning. On the other hand, the course objectives are not centered around calculator proficiency nor computer expertise. Students may use a graphing calculator or computer algebra software while doing webwork assignments to facilitate: (1) learning of concepts; (2) understanding the material; (3) checking calculation details. The emphasis on mid-term exams and the final exam will be oriented towards assessing mastery of the concepts stated in the Learning Objectives section. To that end, calculators will <u>not</u> be allowed in the mid-term exams nor in the final exam.

Attendance

A roll sheet will be circulated each class period (except on exam dates). Each student is responsible for his/her signing the roll each class period. Students who are absent more than three (3) class periods will receive 30 point deduction from their cumulative total. Students who are absent more than six (6) periods will receive a 90 point deduction from their cumulative total.

Critical Dates

Monday-Tuesday, Oct 12-13, Fall Break
Monday, Oct 26, Mid-Semester Grades Due
Monday, Nov 02 - Last day to drop a course
Wednesday, Dec 09 - Last day of classes.
Tuesday, Dec 15 - Comprehensive Final Exam (7:30-10:00)

Notices

Academic Integrity (Extracted from OP 34.12)

It is the aim of the faculty of Texas Tech University to foster a spirit of complete honesty and high standard of integrity. The attempt of students to present as their own any work not honestly performed is regarded by the faculty and administration as a most serious offense and renders the offenders liable to serious consequences, possibly suspension.

"Scholastic dishonesty" includes, but it not limited to, cheating, plagiarism, collusion, falsifying academic records, misrepresenting facts, and any act designed to give unfair academic advantage to the student (such as, but not limited to, submission of essentially the same written assignment for two courses without the prior permission of the instructor) or the attempt to commit such an act.

Observance of Religious Holiday (Extracted from OP 34.19)

A student who intends to observe a religious holy day should make that intention known to the instructor prior to the absence. A student who is absent from classes for the observance of a religious holy day shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence.

Accommodation for Students with Disabilities (Extracted from OP 34.22)

Any student who, because of a disability, may require some special arrangements in order to meet course requirements should contact the instructor at MA 201-A as soon as possible to request necessary accommodations. Students should present appropriate verification from Student Disability Services. No requirement exists that accommodations be made prior to completion of this approved university process.