MATH 251 - Matrix Algebra I - Fall 2020
Tu, Th 2:50–4:05 in BUE 300

Professor: Tim Schulze, 224C Ayres Hall, 974-4162, tschulze@utk.edu

Office Hours: W 2:00 – 3:00 or by appointment

Text: Elementary Linear Algebra, by H. Anton.

Course Prerequisites: Second semester calculus

Grading: Your grade will be determined by a weighted average of 5 quizzes (20% total), 2 midterm exams (25% each) and a comprehensive final exam (30%). Midterm and quiz dates will be shown below at least two weeks before the relevant date. Makeup exams are only given in the event of extreme, documented circumstances. Quiz scores, including missed quizzes, below your score on the final will be replaced with your score on the final. Suggested homework will be assigned on most days. Any student who feels s/he may need an accommodation based on the impact of a disability should contact me privately to discuss your specific needs. Grades will be awarded based on the following percentages: A 90 and above, A- 87, B+ 83, B 80, B- 77, C+ 73, C 70, C- 67, D+ 63, D 60, D- 57, F below 57.

Course Description:
First course in the algebra of simultaneous linear equations and matrices. Includes Gaussian elimination, determinants, vector spaces, linear transformations, eigenvalues, and eigenvectors. This corresponds to chapters 1-5 and 8 in the text.

1. The first midterm covers chapter 1 & 2, emphasis on linear systems of equations.
2. The second midterm covers chapter 3 & 4, emphasis on vector spaces.
3. The final is cumulative, but will have some emphasis on material from the later chapters.

Dates to note:

This will be continually updated so that quizzes and exams are announced at least two weeks ahead of time.

Tu. Sept. 1, Quiz 1.
Tu. Sept. 15, Quiz 2.
Th. Sept. 24, Exam I.
Tu. Oct. 6, Quiz 3.
Tu. Nov. 3, Exam II.
Tu. Nov. 17, Quiz 5.
Tu. Dec. 8 3:30-6:00, Final Exam.
Assignments:

Lecture 1: Section 1.1 1,7,9,11
Lecture 2: Section 1.2 1,3,6-7,9-11,15-16
Lecture 3: Section 1.3 1,3,5,6,11,13
Lecture 4: Section 1.4 5,6,9,10,11-16
Lecture 5: no assignment
Lecture 6: Section 1.5 3,8,11-12,23,27
Lecture 7: Section 1.6 2,4,9,15; Section 1.7 25,27,42
Lecture 8: Section 2.1 2,3,a,15-16,28-30
Lecture 9: Section 2.2 2,5,15-20; Section 2.3 2,5,7-8,15-16,24-26
Lecture 10: Review
Lecture 11: Exam I
Lecture 12: no assignment
Lecture 13: Section 3.2 1,3,12,13,18; Section 3.3 1,3,4,7,9,11,15,21,25
Lecture 14: Section 3.4 1,2,5,6,9,10,17,21
Lecture 15: Section 3.5 1-25 odd
Lecture 16: Section 4.1 1,2,6,17
Lecture 17: Section 4.2 1,3,7
Lecture 18: Section 4.2 9,10,11,13
Lecture 19: Section 4.3 3,5b,6,7,17,19
Lecture 20: Section 4.4 1,3,4,7,10; Section 4.5 1,2,7,11,12
Lecture 21: Section 4.5 1,2,7,11,12
Lecture 22: Exam II
Lecture 23: Section 4.6 2,6
Lecture 24: Section 4.7 13,14,15
Lecture 25: Section 4.7 1,3,5,9-10; Section 4.8 1,3,7,9; Section 4.10 7a,c
Lecture 26: Section 5.1 1,2,5,7,13
Lecture 27: Section 5.2 5,7; Section 5.3 1,2,11,15,17