MATH 220 – LINEAR ALGEBRA

Semester: Spring 2022

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Office: SA–127 *Phone:* 2115
Office hours: Tuesdays 13:40-15:30 or by appointment on Zoom.

Exams & grading: 1^{st} Midterm (25%)
2^{nd} Midterm (25%)
Final Exam (35%)
HW & Quizzes (15%)

Required Textbook:
Elementary Linear Algebra with Applications,
Bernard Kolman and David R. Hill,
2014, 9th ed., new int. ed., Pearson

Course Policy

- There will be about 4 homework assignments to be collected via Moodle. The questions will be on a pdf file and will be posted on Moodle. An announcements will be sent by email.
- There will be 3-4 quizzes announced in advance in class with a specific topic (usually after covering an important topic).
- There will be some attendance quizzes. Everyone who is in the class that day will get 10 points by writing their names on a piece of paper. Usually given when the attendance on a particular day is very low. The attendance quizzes count as much a normal quiz.
- One of the lowest Quiz grades will be dropped at the end of the semester. No make-up will be given for the missed quizzes even if you have an health report.
- Make-ups for the Midterms will be given only when you have a valid health report approved by the Health center. If they approve your health report I receive an email from them. A single make-up exam is given during the last week of classes, covering the entire syllabus.
- If the sum of your midterm exams is less than 50 (out of 200), you will receive an **FZ** grade.
- Students who have failed to show up to take the final exam with not medical excuse will get an **FX** grade.

- Attendance will be taken regularly and will be entered to the STARS system. These records will have no consequences to your course grade but they maybe used by the University for deciding on your scholarship status.
- You can send me email any time but do not expect to get answers in the evenings or on the weekends. Also in your emails please write which course you are taking since I am teaching two different courses this semester with many students.

Schedule: The chapter numbers below refer to the chapters in the textbook Kolman and Hill.

Week		**Subject**	
1	Jan 31–Feb 4	Systems of linear equations, Matrices (1.1-1.5)	
2	Feb 7–11	Echelon form of a matrix, Nonsingular matrices (2.1-2.3)	
3	Feb 14–18	Elementary matrices (2.3, 2.4)	
4	Feb 21–25	Determinants (3.1-3.5)	
5	Feb 28–Mar 4	Applications	Mid. 1
6	Mar 7–9	Vector spaces, Subspaces (4.1-4.4)	Sp.Break
7	Mar 14–18	Linear independence, Basis and dimension (4.5-4.6)	
8	Mar 21–25	Coordinates. Homogeneous systems (4.7-4.8)	
9	Mar 28–Apr 1	Rank of a matrix (4.9), Standard inner product (5.1-5.2)	
10	Apr 4–8	Inner product spaces, Gram-Schmidt process (5.3-5.4)	
11	Apr 11–15	Orthogonal complement (5.5), Linear transform. (6.1)	
12	Apr 18–22	Kernel and range of a matrix (6.2, 6.3), Similarity (6.5)	Mid. 2
13	Apr 25–29	Eigenvalues and eigenvectors (7.1-7.2)	
14	May 5–6	Diagonalization (7.3)	Bayram
15	May 9–13	Applications	