Peterson **Math 2B** **Spring 2018**

Content - **Systems of equations, Matrices and Determinants, Vector Spaces, Inner Products, Eigenvalues and vectors, and applications.**

Prerequisite **Math 1D or equivalent (Preferably with grade of C or better)**

Text - **Elementary Linear Algebra (11th edition) , Anton**

Exams - **There are a total of 600 points available. three 100 point midterm exams, one 200 point final exam, and an unspecified number of quizzes worth a total of 100 points.**

Homework **Homework will be assigned every day but will not be collected. The quizzes will be based upon the homework that I assign as well as in class material. The homework I assign is the minimum work that can be done and I strongly suggest that students do more problems than are assigned.**

Attendance - **Attendance in class is crucial to learning the material. If anyone misses more than two classes without informing me first, they will be dropped from the class. If anyone misses one class during the first week without informing me first, they also will be dropped. If you know you are not going to be in class, call (408) 742-8828 and leave a message. Please do not call the division office or the administration office.**

Office Hours - **I will have assigned office hours on Tuesdays from 3 to 4 in S43 (math lab). Also, if your phone goes off during class, I will ask you to leave. If it happens a second time, you will be dropped from the class.**

4/10	**Systems of linear equations, Gaussian Elimination**
4/12	**Matrices and Matrix Operations**
4/17	**Elementary Matrices, Methods for finding Inverse Matrix**
4/19	**Determinant Function, Determinants by Row Reduction**
4/24	**Properties of Determinants, Cramer's Method**
4/26	**Exam #1**
5/01	**Euclidean n-space, General Vector Spaces**
5/03	**General Vector Spaces, Subspaces**
5/08	**Linear Independence, Basis and Dimension**
5/10	**Row Space and Column Space, Rank and Nullity**
5/15	**Inner Products, Angle and Orthogonality**
5/17	**Orthonormal Bases, Change of Basis Problem**
5/22	**Exam #2**
5/24	**Linear Transformations, Kernel and Range**
5/29	**Linear Trans.from R^n to R^m, Matrices of General Transformations**
5/31	**Similarity**
6/05	**Eigenvalues and Eigenvectors, Diagonalization**
6/07	**Diagonalization/Review**
6/12	**Exam #3**
6/14	**Applications**
6/19	**Applications**
6/21	**Applications**
6/28	**Final Exam**

GRADE SCALE

85% +	**A**
70-84%	**B**
55-69%	**C**
45-54%	**D**
<45%	**F**

Student Learning Outcome(s):

*Construct and evaluate linear systems/models to solve application problems.

*Solve problems by deciding upon and applying appropriate algorithms/concepts from linear algebra.

*Apply theoretical principles of linear algebra to define properties of linear transformations, matrices and vector spaces.