Tentative Course Schedule

We will spend more time on the topics in **bold,** which are mainly new topics. The rest of the material is a review of topics covered in the previous linear algebra course.

Approximate week	Topics	Sections
1. January 8-12	Solving systems of linear equations, vector and matrix equations	1.1-1.4
2. January 15-19	Solution sets and **applications**	1.5,**1.6**
3. January 22-26	(Matrix of) linear transformations **Linear models**	1.8,1.9 **1.10**
4. Jan. 29 – Feb 2	*Linear independence, Matrix inverse thms,* *LU* factorization	1.7, 2.2,2.3 2.5
5. February 5-9	**Leontief model** **Applications to computer graphics**	**2.6, 2.7**
6. February 12-16	Determinants Subspaces, bases, dimension, rank	3.1, 3.2 2.8, 2.9
7. February 19-23	Eigenvalues, eigenvectors, **diagonalization and linear transformations**	5.1-5.3 **5.4, (partially 5.5)**
8. Feb 26 – Mar 2	**Markov chains**, **Google PageRank**	**4.9** **Notes (10.1, 10.2)**
9. March 5-9	**Change of basis, Difference equations** **Discrete dynamical systems**	**4.7, 4.8** **5.6**
10. March 12-16	Inner products and orthogonality, **Gram–Schmidt and *QR***	6.1-6.3 **6.4**
11. March 19-23	*Spring Recess*	
12. March 26-30	*Least squares* *Applications to linear models*	6.5, **6.6**
13. April 2-6	Diagonalization and **symmetric matrices** **Quadratic forms**	**7.1, 7.2**
14. April 9-13	**Constrained optimization**	**7.3**
15. April 16-20	**Singular value decomposition**	**7.4**
16. April 23-27	Review for Final Exam	

Important Dates Throughout the Term

Jan 9 – First Day of Classes   **Mar 15** – Last day to withdraw with a grade of "W"

Jan 16 – MLK Day (No Class)   **Mar 20-24** – Spring Recess (No Class)

Feb 9 – Midterm #1   **Apr 13** – Midterm #3

Feb 19 – Progress Reports Due   **Apr 25** – Last Day of Classes

Mar 9 – Midterm #2   **April 26 (Thursday) 2:50- 5:40pm – Final Exam**