Math 300, Fall 2014

| Monday | WEDNESDAY | Friday |
| :---: | :---: | :---: |
| Aug 25th <br> 1.1 <br> Vectors <br> Classes Begin | 27 th $\mathbf{2}$ <br> 1.2  <br> Some geometry  | 29 th $\mathbf{3}$ <br> 2.1  <br> Linear Systems  |
| Sep 1st <br> 2.2 <br> Elimination | 3rd $5$ <br> 2.3/2.4 <br> Matrix operations <br> HW 1 Due | 5th <br> 2.4/2.5 <br> More matrices, inverse matrix |
| 8th <br> 2.5/2.6 <br> More on the inverse matrix $A=L U$ | 10 th $\mathbf{8}$ <br> 2.7  <br> $A^{T}$  <br> HW 2 Due  <br> 17  | 12th $\mathbf{9}$ <br> Catch-up / Problem day  |
| 15 th $\mathbf{1 0}$ <br> 2.7  <br> Permutation matrices  | 17 th $\mathbf{1 1}$ <br> 3.1  <br> Vector spaces  | 19th $\mathbf{1 2}$ <br> 3.1  <br> Column space of $A$  |
| 22nd 13 <br> Review / Problem day  | 24 th $\mathbf{1 4}$ <br> Test 1  <br> Hw 3 Due  | 26 th $\mathbf{1 5}$ <br> 3.2  <br> Nullspace of $A$  |
| 29 th $\mathbf{1 6}$ <br> 3.3  <br> Rank of $A$, rref  | Oct 1st <br> 3.4 <br> Complete solution of $A \vec{x}=\vec{b}$ <br>  | 3rd 3.5 Independence, basis, dimension |
| 6 th 3.6 Dimensions of the four subspaces | 8th $\mathbf{2 0}$ <br> 4.1  <br> Orthogonality of subspaces  <br> HW 4 Due  | 10th $\mathbf{2 1}$ <br> Catch-up / Problem day  |
| 13th $\mathbf{2 2}$ <br> 4.2  <br> Projections  | 15 th $\mathbf{2 3}$ <br> $4.2 / 4.3$  <br> More about projections  | 17 th $\mathbf{2 4}$ <br> 4.3  <br> Least squares (application)  |
| 20th $\mathbf{2 5}$ <br> Review / Problem day  | 22nd $\mathbf{2 6}$ <br> Test $\mathbf{2}$  <br> HW 5 Due  <br> 29  | 24 th $\mathbf{2 7}$ <br> 4.4  <br> Gram-Schmidt  |
|   <br> 27 th $\mathbf{2 8}$ <br> 5.1  <br> Determinants  | 29 th $\mathbf{2 9}$ <br> 5.2  <br> Cofactor expansion  | 31 st $\mathbf{3 0}$ <br> 5.3  <br> Cramer's rule, inverses,  <br> volumes (geometry)  |
| Nov 3rd <br> 6.1 <br> Eigenvalues | 5th $\mathbf{3 2}$ <br> 6.2  <br> Diagonalization  <br> Hw 6 Due  | 7th $\mathbf{3 3}$ <br> Catch-up / Problem day  |
| 10 th $\mathbf{3 4}$ <br> $6.2 / 6.4$  <br> Symmetric matrices  | 12 th  <br> 6.4 35 | 14 th $\mathbf{3 6}$ <br> 6.6  <br> Similar matrices  |
| 17th $\mathbf{3 7}$ <br> Review / Problem day  | 19th $\mathbf{3 8}$ <br> Test $\mathbf{3}$  <br> HW 7 Due  | 21 st $\mathbf{3 9}$ <br> 6.7  <br> SVD  |
| 24th $\quad$ Thanksgiving | 26th $\quad$ Thanksgiving | 28th $\quad$ Thanksgiving |
| Dec 1st $40$ <br> 7.1 <br> Linear transformations | 3rd $41$ <br> 7.2 <br> Matrix representation | 5th <br> Review / Problem day <br> Last Class |

