Section 1

MANE 3351

Lecture 21

Classroom Management

Agenda

- Inverting Matrices by Hand
- Transpose of a Matrix
- Python for Linear Algebra
- Homework 6
- Lab 9 for those who did not finish on Monday

Resources

Handouts

- Lecture 21 slides
- Lecture 21 slides marked
- Python Linear Algebra Cheat Sheet

Calendar

Date	Lecture Topic	Lab Topic
11/11	Lecture 20 - Determinant	Lab 9
11/13	Lecture 21 - Matrix Inversion, Homework 6	
11/18	Lecture 22 - Row Echelon Form	
11/20	Lecture 23 - Octave	
11/25		
11/27		
12/2		
12/4	Review	
12/9	**Final exam 1:15 - 3:00 pm**	

Assignments

- Homework 6 (assigned 11/13, due 11/20)
- Lab 9 (assigned 11/11, due 11/18 before 3:30 pm)

Inverting 2 x 2 Matrices by Hand

- Inverting 2x2

Ex: Inverting a 2x2 Matrix by Hand

Inverting 3x3 Matrices by Hand

- Inverting 3x3

Ex: Inverting a 3x3 Matrix by Hand

Transpose of a Matrix

- Matrix Transpose

Python Linear Algebra Cheat Sheet

- Jupyter Notebook Demonstration

```
import numpy as np
from scipy import linalg, sparse
# Creating matrices

A=np.mat([[3,4],[5,6]])
print(A)

print(A.I)
print(linalg.inv(A))

print( A.I @ A)

C=np.mat([[1,2,5],[5,8,2],[7,6,5]])
print(C)
```