# Linear Systems

Math 214 Spring 2007 © 2007 Ron Buckmire

Fowler 110 MWF 2:30pm - 3:25pm http://faculty.oxy.edu/ron/math/214/07/

### Week 7

## Monday March 5 Class 16:

**Subspaces.** We shall introduce the concept of vector spaces and subspaces in a rather formal way.

## Reading:

Poole, Section 3.5 and Section 6.1

Homework #15: (due in Class 16)

Poole, Section 3.5, 1,3,4,5,6,7,9,11,12. EXTRA CREDIT 10.

#### Wednesday March 7 Class 17:

Basis and Dimension. We continue to see how linear independence, rank, subspaces, dimension and span all inter-connect with each other.

## Reading:

Poole, Section 3.5

Homework #16: (due in Class 18)

Poole, Section 3.5: 17, 18, 21, 24, 39, 40, 41, 42. EXTRA CREDIT 44, 50.

## Friday March 9 Class 18:

Introduction to Linear Transformations. We begin to exmain a graphical interpretation for the matrix operations we have been looking at.

## Reading:

Poole, Section 3.6

Homework #17: (due in Class 19)

Poole, Section 3.6: 1,2,3,6,7,15,17,19. EXTRA CREDIT 28

#### Quiz #6