Modern Algebra
MATH 325W – Spring 2015

Monday:	Chapter 7: Rings	
Wednesday:	Chapter 8: Polynomial Rings	**Week 6**
Friday:	Chapter 8: Polynomial Rings	

Homework

Homework #10   **due Friday, February 27**

    Ch. 7: #9, 10
    Ch. 8: #18, 20, 24

Writing Assignments

On writing assignments, part of your grade will reflect the quality of your ***style***. Style includes everything from the basic mechanics of writing (complete, grammatically correct sentences with capitalization and proper punctuation) to the conventions of writing mathematics developed in Linear Algebra.

Writing Assignment #5   **due Friday, February 27**

    Problem 1. Let $\alpha \in \mathbb{C}$ such that $\alpha \notin \mathbb{Q}$. If $\alpha^2 \in \mathbb{Q}$, prove that $S := \{a + b\alpha \mid a, b \in \mathbb{Q}\}$ is a subfield of $\mathbb{C}$ and that $\mathbb{Q}(\alpha) = \{a + b\alpha \mid a, b \in \mathbb{Q}\}$.