MTED 611
Algebra for Middle School Teachers
Course Outline

Topics		# of Weeks
Chapter 0:	Problem Solving and Pre-Algebra	1
Chapter 1:	Pre-Algebra (continued)	1
Chapter 2:	Proportional Reasoning	1
Chapter 3:	Variation & Graphs	1
Chapter 4:	Linear Equations	1
Chapter 5:	Fitting a Line to Data	1
Chapter 6:	Systems of Equation & Inequalities	1
Chapter 7:	Exponents & Exponential Models	1
Chapter 8:	Functions	2
Chapter 9:	Transformations	1
Chapter 10:	Quadratic Models	1
	Presentations	1
Tests:		1

Course Objectives:

Students will be able to solve problems and exercises, often using physical materials and/or graphing calculators, in the following content areas:

- rational numbers
- integers
- number theory
- matrices
- recursion
- proportional reasoning
- variation and graphs
- linear, exponential, and quadratic functions
- systems of equations and inequalities
- linear, exponential, and quadratic regression
- transformations

These content topics will be introduced and developed using activities, problems, and exercises that illustrate "best practices" with respect to promoting student engagement and learning.

Textbooks: Discovering Algebra: An Investigative Approach, by Murdoch, Kamischke, & Kamischke

Selected References: Algebra to Go: A Mathematics Handbook (Great Source, 2000)
Mathematics on the Internet: A Resource for K-12 Teachers (Pearson, 2006)

Adopted: Fall, 2006