

# Rice University School Mathematics Project

Education 585: Contemporary Topics in Middle School Mathematics

Fall 1999

## SYLLABUS

### STRAND

<b>Numerical Reasoning:</b> fractions, decimals, percents, integers, rational numbers, real numbers	Sept. 14	Exploring	
	Sept. 21	Developing	
	Sept. 28	Applying	
<b>Proportional Reasoning:</b> ratio, proportion, scaling, similarity	Oct. 5	Exploring/developing	
	Oct. 12	Developing/applying	
<b>Algebraic Reasoning:</b> variables, equations, ordered pairs, patterns, functions	Oct. 19	Exploring	
	Oct. 26	Developing	
	Nov. 2	Applying	
<b>Geometric &amp; Spatial Reasoning/Measurement:</b> perimeter, area, volume, angles, polygons, Pythagorean Theorem, circles, polyhedra	Nov. 9	Exploring	
	Nov. 16	Developing	"Learning Plan" due
	Nov. 30	Applying	Take-home exam distributed
<b>Probability &amp; Statistics:</b> measures of central tendency, probability of central events, probability of compared events, permutations, combinations	Dec. 7	Exploring/developing	
	Dec. 14	Developing/applying	Take-home exam due

### In addition to in-depth concept development teachers will:

- reason and communicate mathematically,
- solve problems,
- collect, analyze, and interpret data - communicating the conclusions symbolically,
- use manipulatives and technology appropriately,
- model and solve real-world situations,
- explore and develop models for assessment.