

Math 302 Math Strategies for Grades 7-Algebra 1**Credit Hours:** 2**Scheduled hours per week****Lecture:** 2**Lab:** 0**Other:** 20 hours classroom observation

Catalog Course Description: This course is designed for senior education majors seeking a math specialization. Curricula and methods at the middle school levels are studied. Laboratory and field experiences will occur, along with the use of current technology.

Pre-requisites: Admission to teacher education and completion of all mathematics requirements for the specialization.

Co-requisites: Field experience

Course Learning Outcomes:

1. Students will show understanding of NCTM's Principles and Standards
2. Students will be aware of state goals and objectives for middle school math classrooms
3. Students will demonstrate a knowledge of the scope and sequence of mathematical topics taught in middle school
4. Students will exhibit knowledge of various learning styles and teaching strategies
5. Students will demonstrate a knowledge of assessment, evaluation methods, and materials
6. Students will demonstrate the use of manipulatives, graphing calculators, and computer technology in the middle school math classroom
7. Students will evaluate mathematical teaching materials
8. Students will demonstrate a knowledge of classroom organization and management skills as they relate to mathematics.

Topics to be studied:

Number Theory and Number Sense Geometry

Patterns, Functions, and Algebra

Measurement

Computer Technology

Relationship of Course to Program or Discipline Learning Outcomes:

(What program outcomes are being met by this course?)

For general education courses, a listing of the general education competencies that are met.)

Relationship of Course to Mathematics (MATH) Student Learning Outcomes:	
Demonstrate understanding of the language of mathematics, by their use of symbols, definitions, word phrases, and representations.	x
Display proficiency in mathematical computations.	x
Implement mathematical techniques to solve applied problems.	x
Employ appropriate technology to demonstrate knowledge of mathematical concepts.	x
Exhibit mastery of core course competencies.	x
10/20/2017	

Relationship of Course to General Education Learning Outcomes:	
Composition and Rhetoric Students illustrate a fundamental understanding of the best practices of communicating in English and meet the writing standards of their college or program-based communication requirements.	
Science & Technology Students successfully apply systematic methods of analysis to the natural and physical world, understand scientific knowledge as empirical, and refer to data as a basis for conclusions.	
Mathematics & Quantitative Skills Students effectively use quantitative techniques and the practical application of numerical, symbolic, or spatial concepts.	x
Society, Diversity, & Connections Students demonstrate understanding of and a logical ability to successfully analyze human behavior, societal and political organization, or communication.	
Human Inquiry & the Past Students interpret historical events or philosophical perspectives by identifying patterns, applying analytical reasoning, employing methods of critical inquiry, or expanding problem-solving skills.	
The Arts & Creativity Students successfully articulate and apply methods and principles of critical and creative inquiry to the production or analysis of works of art.	
5/3/2016	

Special requirements of the course:

Micro-Teaching Experiences
 Group Presentations
 Reaction Papers
 Observation Journals
 Field Observations

Additional information: None**Prepared by: Chris Cunningham****Date: 10/20/2017**

