

EDUC 388 Math Strategies for Grades 7-Algebra I**Credit Hours:** 2**Scheduled hours per week**

Lecture: 2

Lab:

Other: 20 field experience hours

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; Completion of all mathematics requirements.

Co-requisites: Field Experience (20 hours)

Course Learning Outcomes:

1. Students will show understanding of NCTM's Principles and Standards (*WVPTS 1A, 1B, 1C, 1D*) (*InTASC 1, 4, 7, 8, 9*) (*ACEI 1.0, 2.3, 3.1, 3.2, 3.3*) (*Praxis 5622 I. A.1, A.2, A.3, A.4, A.5, II. A.1, A.2, A.3, IV. 1, 2, 3, 4, 7*) (*ISTE 1a, 1b, 5c,*) (*CAEP 1.1, 1.3, 1.4, 2.3*) (*Assessment: Class Assignment*)
2. Students will be aware of state college-and career-readiness standards for middle school math (*WVPTS 1A, 1B, 1C, 1D, 2A, 2F, 3A, 3C, 3D, 3E*) (*InTASC 1, 2, 3, 4, 5, 6, 7, 8, 9*) (*ACEI 1.0, 2.3, 3.1, 3.2, 3.3, 3.4, 3.5, 4.0*) (*Praxis 5622 I. C.1, C.2, C.3, C.4, II. A.1, A.2, A.3, A.4, A.5, A.6, A.7, B.1, B.2, B.3, B.4, B.5, B.6, B.7, B.8, B.10, B.11, B.12, C.2, C.3, C.4*)(*ISTE 2c, 3d*) (*CAEP 1.1, 1.3, 1.4*) (*Assessment: Lesson Planning Assessment*)
3. Students will demonstrate a knowledge of the scope and sequence of mathematical topics taught in middle school (*WVPTS 1A, 1B, 1C, 1D, 2A, 3A, 3C, 3D, 3E, 4C*) (*InTASC 1, 2, 3, 4, 5, 6, 7, 8, 9*) (*ACEI 1.0, 2.3, 3.1, 3.2, 3.3, 3.4, 3.5, 4.0*) (*Praxis 5622 I. B.1, B.3, B.4, B.5, B.6, C.1, C.2, C.3, C.4, II. A.1, A.2, A.3, A.4, A.5, A.6, A.7, B.1, B.2, B.3, B.4, B.5, B.6, B.7, B.8, B.10, B.11, B.12, C.2, C.3, C.4, D.1, D.2, D.3, D.4, III. A.1, A.2, A.3, A.4, A.6, B.1, B.2, B.3*)(*ISTE 2c, 3d, 5c, 6c, 7c*) (*CAEP 1.1, 1.3*) (*Assessment: Exam*)
4. Students will exhibit knowledge of various learning styles and teaching strategies (*WVPTS 1A, 1B, 1C, 1D, 2F, 3A, 3C, 3D, 3E*) (*InTASC 1, 2, 3, 4, 5, 6, 7, 8, 9*) (*ACEI 1.0, 2.3, 3.1, 3.2, 3.3, 3.4, 3.5, 4.0*) (*Praxis 5622 I.C.1, C.2, C.3, C.4, II. A.1, A.2, A.3, A.4, A.5, A.6, A.7, B.1, B.2, B.3, B.4, B.5, B.6, B.7, B.8, B.10, B.11, B.12, C.2, C.3, C.4*)(*ISTE 2c, 3d, 5c, 6c, 7c*) (*CAEP 1.1, 1.3*) (*Assessment: Lesson Planning Assessment*)
5. Students will demonstrate a knowledge of assessment, evaluation methods, and materials (*WVPTS 1E, 2A, 3A, 3C, 3D, 3E, 4C*) (*InTASC 1, 2, 3, 4, 5, 6, 7, 8, 9*) (*ACEI 1.0, 2.3, 3.1, 3.2, 3.3, 3.4, 3.5, 4.0*) (*Praxis 5622 I. B.1, B.3, B.4, B.5, B.6, C.1, C.2, C.3, C.4, II. A.1, A.2, A.3, A.4, A.5, A.6, A.7, B.1, B.2, B.3, B.4, B.5, B.6, B.7, B.8, B.10, B.11, B.12, C.2, C.3, C.4, D.1, D.2, D.3, D.4, III. A.1, A.2, A.3, A.4, A.6, B.1, B.2, B.3*)(*ISTE 2c, 3d, 5c, 6c, 7c*) (*CAEP 1.1, 1.2, 1.3,*) (*Assessment: Teacher Performance Assessment*)
6. Students will demonstrate the use of manipulatives, graphing calculators, and computer technology in the middle school math classroom (*WVPTS 1A, 1B, 1C, 1D, 2F, 3A, 3C, 3D, 3E*) (*InTASC 1, 2, 3, 4, 5, 6, 7, 8*) (*ACEI 1.0, 2.3, 3.1, 3.2, 3.3, 3.4, 3.5, 4.0*) (*Praxis 5622 I.C.1, C.2, C.3, C.4, II. A.1, A.2, A.3, A.4, A.5, A.6, A.7, B.1, B.2, B.3, B.4, B.5, B.6, B.7, B.8, B.10, B.11, B.12, C.2, C.3, C.4*)(*ISTE 2c, 3d, 5c, 6c, 7c*) (*CAEP 1.1, 1.3, 1.4, 1.5*) (*Assessment: Class Assignment*)
7. Students will evaluate mathematical teaching materials (*WVPTS 1E, 4C*) (*InTASC 1, 4, 5, 6, 7, 9*) (*ACEI 1.0, 5.1, 5.2*)(*Praxis 5622 II. A.4, B.8, IV. 2, 3*) (*ISTE 1a, 1b*) (*CAEP 1.1, 1.3, 1.4*) (*Assessment: Lesson Planning Assessment*)
8. Students will demonstrate a knowledge of classroom organization and management skills as they relate to mathematics. (*WVPTS 1D, 2F*) (*InTASC 2, 3, 4, 5, 7, 10*) (*ACEI 1.0, 2.3, 3.2, 3.5*) (*Praxis 5622 I. C.1, C.2, C.3, C.4, II. B.5, B.6, B.7, B.9, B.10, B.11, B.12, IV. 1, 2, 3, 4, 7*) (*CAEP 1.1, 1.3, 1.4*) (*Assessment: Exam*)

Topics to be studied:

1. Number Theory and Number Sense Geometry
2. Patterns, Functions, and Algebra Measurement
3. Computer Technology
4. Number Talks

Relationship of Course to Program or Discipline Learning Outcomes:

This course develops opportunities for the teacher candidates to increase their understanding of the mathematics and the middle school setting and their knowledge of effective material and methods for instruction and assessment. The teaching experiences enable them to demonstrate commitment to the profession and to practice the skills of planning, teaching, personal interactions, integration of cultural diversity, and decision-making for the enactment of that commitment.

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.	X
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.	X
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.	
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Special requirements of the course:

1. Each student will be evaluated on a collection of lesson plans submitted in LiveText and instructors should consider the collection when completing the lesson plan rubric.
2. Students should teach the lessons in the middle school classroom.
3. The Planning Assessment rubrics will be completed by the instructor based on a collection of

three lesson plans covering mathematics.

4. Submit Field Experience paperwork
5. Submit School based educator evaluation of field experience placement
6. Have current livetext (or affiliate) subscription and use Blackboard for the course requirements
7. Background Check

Additional information:

NA

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