Math 303 Diagnostic & Prescriptive Math

Credit Hours: 2

Scheduled hours per week

Lecture: 2
Lab: 0
Other: 20 hours field placement

Catalog Course Description: Methods and content with respect to primary grade mathematics. Focus will be on error analysis and guidance for assessment and preventive teaching.

Pre-requisites: Admission to Teacher Education, Math 301, EDUC 320

Co-requisites: None

Course Learning Outcomes:

1. Students will implement methods of mathematical content delivery in primary grades.
2. Students will demonstrate an in-depth understanding of the scope and sequence of primary grades mathematical content.
3. Students will implement State Common Core Standards and NCTM Standards and develop 21st Century Skills.
4. Students will research and implement various assessment techniques for both formative and summative assessment in mathematics.
5. Students will practice preventative teaching skills.
6. Students will identify influences that a child's background and culture have on mathematical learning.
7. Students will develop writing assignments for mathematics instruction.
8. Students will study, select, and implement various methods and materials to remediate various mathematical difficulties and deficits.

Topics to be studied:

1. Common Core Standards
2. NCTM Principals and Standards
3. 21st Century Skills
4. Assessment Materials and Techniques
5. Error Analysis
6. Preventative Teaching
7. Writing with in the math context
8. Understanding Discussion Strategies and Talk as Effective Tools for Connecting Mathematical Concepts
9. Flexible Thinking and Reasoning for Mathematics
10. Questioning Strategies for Assessment

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	

Additional information: None

Special requirements of the course:

Lesson Plans and Presentations
Error Analysis Report
Clinical Experiences Journal and Report
Field Placement

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