ELED 436.710 - Integrated Learning: Math in Field-Based Settings - 4-8

COURSE SYLLABUS: Fall 2012

Instructor: Carol Smith, Ed.D - Clinical Instructor
Office Location: Navarro Partnership/Corsicana
Office Hours: Monday and Tuesday 2:00–5:00, or by appointment
Home Phone: 903-778-2207, Cell Phone: 903-880-3222
Office Fax: 903-872-2019
Home Email: drcarolsmith@aol.com

COURSE INFORMATION

Required materials:

1. TExES Preparation Mathematics 4-8 found at:
2. National Council of Teachers of Mathematics: Math Standards and Expectations found at:
   http://www.nctm.org/standards/content.aspx?id=4294967312,
3. Texas Essential Knowledge and Skills for Mathematics: Subchapter B. Middle School at:
   http://ritter.tea.state.tx.us/rules/tac/chapter111/ch111b.html, and
4. Proposed revisions to the mathematics TEKS at:
   http://www.tea.state.tx.us/index2.aspx?id=2147499971

Course Description:

This course explores the integrated nature of learning with math as the content focus. Seminars are conducted at the Navarro College campus; field-based applications take place in public schools under the guidance of public school teachers and university personnel that comprise the Instructional Leadership Team. Activities will lead the intern toward identifying techniques and strategies that will assist in teaching mathematics. The intern will become familiar with essential knowledge and skills in appropriate mathematics competencies. Interns are expected to actively participate in seminar discussions and course assignments in ways that will demonstrate their development as professional educators.

Course Objectives:

Objectives are from the Domains in the TExES Preparation Manual - Mathematics 4-8 at:

Domain I, Standard I. Number Concepts: The mathematics teacher understands and uses numbers, number systems and their structure, operations and algorithms, quantitative
reasoning, and technology appropriate to teach the statewide curriculum (Texas Essential Knowledge and Skills (TEKS)) in order to prepare students to use mathematics.

**Domain II, Standard II. Patterns and Algebra:** The mathematics teacher understands and uses patterns, relations, functions, algebraic reasoning, analysis, and technology appropriate to teach the statewide curriculum (Texas Essential Knowledge and Skills (TEKS)) in order to prepare students to use mathematics.

**Domain III, Standard III. Geometry and Measurement:** The mathematics teacher understands and uses geometry, spatial reasoning, measurement concepts and principles, and technology appropriate to teach the statewide curriculum (Texas Essential Knowledge and Skills (TEKS)) in order to prepare students to use mathematics.

**Domain IV, Standard IV. Probability and Statistics:** The mathematics teacher understands and uses probability and statistics, their applications, and technology appropriate to teach the statewide curriculum (TEKS) in order to prepare students to use mathematics.

**Domain V, Standard V. Mathematical Processes:** The mathematics teacher understands and uses mathematical processes to reason mathematically, to solve mathematical problems, to make mathematical connections within and outside of mathematics, and to communicate mathematically.

**Standard VI. Mathematical Perspectives:** The mathematics teacher understands the historical development of mathematical ideas, the interrelationship between society and mathematics, the structure of mathematics, and the evolving nature of mathematics and mathematical knowledge.

**Domain VI, Standard VII. Mathematical Learning and Instruction:** The mathematics teacher understands how children learn and develop mathematical skills, procedures, and concepts, knows typical errors students make, and uses this knowledge to plan, organize, and implement instruction; to meet curriculum goals, and to teach all students to understand and use mathematics.

**Standard VIII. Mathematical Assessment:** The mathematics teacher understands assessment and uses a variety of formal and informal assessment techniques appropriate to the learner on ongoing basis to monitor and guide instruction and to evaluate and report student progress.

### COURSE REQUIREMENTS

**Grading:**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Points</th>
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<tbody>
<tr>
<td>Final Comprehensive Examination</td>
<td>30</td>
</tr>
<tr>
<td>Mathematical Computations and Assessment (TExES)</td>
<td>25</td>
</tr>
<tr>
<td>Assignments/Presentations*</td>
<td>45</td>
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</table>

* A total of 45 points are possible for the acceptable lessons from the competency examples discussed in class. (See also the self-evaluation form provided in class.)

All assignments are due when stated and will not be accepted later than October 22.
Professionalism:

You are preparing to enter a profession in which independent responsibility and professional behavior are expected at all times. Therefore, the same high standards of responsibility, behavior, and performance in this class are expected.

TECHNOLOGY REQUIREMENTS

Access to the Internet
Access to an Email Account
Access to University Library Site
Word Processor (Microsoft Word)
Presentation Software (PowerPoint)
USB Flash Drive (For Use at Home and University)
Data Projector (Provided by University)

COMMUNICATION AND SUPPORT

Interaction with Instructor Statement:
In addition to the information listed on page 1 of this syllabus, I may be contacted using my home email: drcarolsmith@aol.com, my home phone: 903.778.2207, or my cell phone: 903.880.3222.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

University Specific Procedures:

Attendance

It is the prerogative of the instructor to drop students from courses in which they have accrued excessive absences (three or more). However, a student wishing to drop the course should do so. Failure to do so may result in a failing grade.

Academic Honesty Policy

Texas A&M University-Commerce does not tolerate plagiarism and other forms of academic dishonesty. Conduct that violates generally accepted standards of academic honesty is defined as academic dishonesty. "Academic dishonesty" includes, but is not limited to, plagiarism (the appropriation or stealing of the ideas or words of another and passing them off as one's own), cheating on exams or other course assignments, collusion (the unauthorized collaboration with others in preparing course assignments), and abuse (destruction, defacing, or removal) of resource material.

Disciplinary action for these offenses may include any combination of the following:

1. Point deduction on an assignment.
2. Failure for an assignment.
3. A grade of zero for an assignment.
4. Failure for the course.
5. Referral to the Academic Integrity Committee or department head for further action.
6. Referral to the Dean of the College of Education and Human Services, Business and Technology, Arts and Sciences, or Graduate School as appropriate.
7. Referral to the University Discipline Committee.
8. Communication of student's behavior to the Teacher Certification Office and/or Dean of the College of Education as constituting a reason to bar student from entering into or continuing in a teacher certification program. Procedures, A 13.04, 13.12, 13.31, and 13.32

ADA Statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services
Texas A&M University-Commerce
Gee Library 132
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
StudentDisabilityServices@tamu-commerce.edu
Student Disability Resources & Services

Disclaimer:

The instructor reserves the right to make changes to the schedule of the class. Any alterations will be announced by the instructor in class, on ecollege, or via email. Students who do not attend class, log into ecollege, or check their email assume full responsibility for missing changes to the course.

COURSE OUTLINE / CALENDAR

<table>
<thead>
<tr>
<th>Dates</th>
<th>Content</th>
<th>Assignments Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 27</td>
<td>Introductions; Review Syllabus; TExES Prep Manual; Mathematical Perspective</td>
<td>For September 10, prepare a written assessment comparing and contrasting the Mathematical Standards from the TExES Preparation Manual (listed on Syllabus) with the Mathematical Standards identified by the National Council of Teachers of Mathematics (<a href="http://www.nctm.org">www.nctm.org</a>). This should be at least one paragraph and at least half a page. Also look at the TEKS on the TEA website, and be ready to discuss.</td>
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<td>Sept. 3</td>
<td>Labor Day Holiday</td>
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<tr>
<td>September 17</td>
<td>TEExS Domain I: Number Concepts</td>
<td>Read the Mathematics Domain I Standards in the TEExS Preparation Manual. From the math textbook or other materials used in grades 4-8 of your school, locate/develop lesson plans from at least three of the competencies of Domain I. Make a copy of each of your three examples (3 points) to turn in to the instructor with your name on each. Make copies of each of your three examples (3 points) to share with the colleagues in your group. Make copies of each of your three examples (3 points) for every class member. Select one example to present orally to the class. Use an overhead transparency, PowerPoint, other technology, or manipulatives for an additional 6 points.</td>
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<tr>
<td>September 24</td>
<td>TEExS Domain II: Patterns and Algebra; and Domain III: Geometry and Measurement</td>
<td>Read TEExS Domain II and III. From the math textbook or materials used in grades 4-8 of your school, locate/develop lesson plans of at least three of the competencies. Make a copy of each of your three examples (3 points) to turn in to the instructor with your name on each. Make copies of each of your three examples (3 points) to share with the colleagues in your group. Make copies of each of your three examples (3 points) for every class member. Select one example to present orally to the class. Use an overhead transparency, PowerPoint, other technology, or manipulatives for an additional 6 points.</td>
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<td>October 1</td>
<td>TEExS Domain IV: Probability, and Statistics; and Domain V: Mathematical Processes; Comprehensive Review for TEExS</td>
<td>Read TEExS Domain IV and V. From the math textbook or materials used in grades 4-8 of your school, locate/develop lesson plans of at least three of the competencies. Make a copy of each of your three examples (3 points) to turn in to the instructor with your name on each. Make copies of each of your three examples (3 points) to share with the colleagues in your group. Make copies of each of your three examples (3 points) for every class member. Select one example to present orally to the class. Use an overhead transparency, PowerPoint, other technology, or manipulatives for an additional 6 points.</td>
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<tr>
<td>October 8</td>
<td>TEExS Review Exam; Review for Final Exams</td>
<td>Come to class prepared to take a practice TEExS exam that will be graded and reviewed in class to prepare to take a TEExS Math Computations and Assessment Exam. A Review will also be conducted to prepare for a Final Exam covering all of the non-mathematical information presented in class.</td>
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<tr>
<td>October 17</td>
<td>Math Computations and Assessment (TEExS)</td>
<td>Come to class prepared to take a TEExS Math Computations and Assessment Exam.</td>
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<tr>
<td>October 15</td>
<td>ELED 436 Final Comprehensive Exam</td>
<td>Come to class prepared to take a Final Exam covering all the non-mathematical information that has been presented in class.</td>
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