ELED 436.001 Integrated Learning: Math in Field-Based Settings (East Texas Area) - Exploring the integrated nature of learning with math as the content focus. (3hrs)

COURSE SYLLABUS: Spring 2013

Instructor: Sharon M. Anderson, M.Ed.
Office Location: EDS 220
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COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings:


Course Description:
Hours: Three. This course explores the integrated nature of learning with mathematics as content focus. Seminars are conducted in CPDT centers; field-based applications take place in public schools under the guidance of public school teachers and university personnel that comprise the Instructional Leadership Team. Prerequisite EIEd 300; Rdg 350, 370; admission to teacher education program; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI.

Student Learning Outcomes:
Objectives for the course will be based upon the Texas Educator Standards so that the students may have the experiences that lead to the knowledge and skills that an entry-level educator in the field of elementary education in the area of mathematics in Texas public school must possess. Domain II Mathematics comprises approximately 19% of the TExES Generalist EC-6 (191).

Competency 013 (Mathematics Instruction): The teacher understands how students learn mathematical skills and uses that knowledge to plan, organize, and implement instruction and assess learning.

Competency 014 (Number Concepts and Operations): The teacher understands concepts related to numbers, operations and algorithms, and the properties of numbers.

Competency 015 (Patterns and Algebra): The teacher understands concepts related to patterns, relations, functions and algebraic reasoning.

Competency 016 (Geometry and Measurement): The teacher understands concepts and principles of geometry and measurement.
Competency 017 (Probability and Statistics): The teacher understands concepts related to probability and statistics and their applications.

Competency 018 (Mathematical Processes): The teacher understands mathematical processes and knows how to reason mathematically, solve mathematical problems, and make mathematical connections within and outside of mathematics.

### COURSE REQUIREMENTS

**Instructional / Methods / Activities Assessments**

The field-based component of the course will require students to develop and teach lessons in their assigned classrooms that incorporate and identify the competency and TEKS that are implemented in the lesson.

Through a variety of activities throughout the semester the seminar component of the course will be used to give guidance and assessment of student knowledge of the Mathematics standards and competencies and the related Texas Education Association TEKS for grades K-6 as adopted.

In order to become an effective mathematics teacher, the goals of this course are to look at current ideas regarding mathematics instruction; to understand the goals, principles and standards of EC-6 education in Texas; to effectively implement the application of problem – based mathematics instruction; to explore creative avenues for practice and drill that will enhance active learning in mathematics classrooms; and to understand the potential and importance for integrating mathematics instruction into other disciplines.

Students are expected to know and apply the TExES competencies.

**Grading**

Attendance at seminars is required to maximize learning; therefore attendance and participation will factor into the final grade. Credit for seminar activity will be based on:

- displaying interest (no unrelated text messaging or web surfing) and good attitude about learning (paying attention to what your fellow interns and the instructor are saying during whole group discussion);
- active whole and small group participation; staying on topic in group work.

Half of the final grade for this course will be based upon journal scores and a math post test given in seminar. 5 points will be deducted from this average for each seminar absence when mathematics is the topic. The other half of the final grade will be based upon the quality and timeliness of the completion of the assigned requirements (journals, lessons, etc.) and performance in the public school classroom. Seminar instructors, mentors, liaisons will determine the grade based on the following scale:

- **A (90 – 100%) = Commendable.** Well above average in initiative, thought, organization, reflection, and implementing professional choices. Evidences extensive control of own decision-making and learning processes. Monitors, adjusts, and manages independently. Excellent attitude, attendance, participation and completion of assignments completed by due date.

- **B (80 – 89%) = Developing.** Functional, but in need of instruction, in initiative, thought, organization, reflection, and implementing professional choices. Evidences some control of own decision-making and learning processes. Monitors, adjusts, and manages—but requires intervention. Good attitude, attendance, participation and completion of assignments completed by due date.

- **C (70 – 79%) = Needs Improvement.** Some lack of initiative, thought, organization, reflection, and responsibility. Evidences little to no control of own decision-making and learning processes. Does not adequately monitor, adjust, and manage. Sometimes exhibits poor attitude, attendance, participation and completion of assignments by due date.

- **D – (less than 70%) = not able to be certified as a teacher.**

**TECHNOLOGY REQUIREMENTS**

Must be able to regularly access email and internet for purposes of communication and research of topics.

The following sites will be required to use:

Important resource:
ELL: http://ritter.tea.state.tx.us/rules/tac/chapter074/ch074a.html#74.4

TExES preparation resources:
- Practice questions: http://www.texas.ets.org/prepMaterials/
- Released STAAR: http://www.tea.state.tx.us/student.assessment/staar/
- TEKS link: http://www.tea.state.tx.us/index2.aspx?id=6148

Documentation of Technology use in the classroom (learning boards, etc.) will be shown in the intern portfolio.

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**COMMUNICATION AND SUPPORT**

**Interaction with Instructor Statement:**
The instructor(s) of this course will be available to students before, during, and after seminar. They also may be contacted through email and phone. Text message preferred: please include your name!

**Instructor(s):** Sharon M. Anderson, M.Ed.
**e-mail:** sharon.anderson@tamuc.edu
**US Mail:** C&I Dept., A&M University-Commerce, P.O. Box 3011, Commerce, TX 75429

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**COURSE AND UNIVERSITY PROCEDURES/POLICIES**

**Course Specific Procedures**

**How to be Successful in This Class:** The ability to convey an understanding of and development of strategies and problem solving activities that promote thinking in students will be considered when grading. Active learning and questioning of ideas is encouraged. This is a field-based course. Be sure that you are documenting for your portfolio your efforts to teach math and integrate math in various activities/lessons.

**Additional Information:**
You should also make a habit of reviewing the list at this web site before the 12th class day of each semester to be sure you remain in compliance with graduation and certification requirements.
http://www.tamuc.edu/registrar/pdfs/UndergradChecklist.pdf

**University Specific Procedures**

**Students with Disabilities:**
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
Room 132
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
http://web.tamuc.edu/studentLife/campusServices/studentDisabilityResourcesAndServices/assistiveTestingRequestForm/default.aspx

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. (See Student’s Guide handbook, Policies and Procedures, Conduct)

For weather related information regarding class cancellations enroll in the IRIS alert system on your myleo page, visit the TAMU-C website, listen to KETR, 88.9 FM, or call 886-5005.
The first seminar session is Wednesday, January 16th, 2012 beginning at 9:30. All other seminar meetings will meet on Wednesdays. The day will be divided into blocks of time beginning at 9:30 and ending at 3:00. There will be a 30 minute break to go to purchase lunch and bring it to seminar for a working lunch period.

Field-based dates for your assigned public school campus are: one or two days on Jan. 17 and 18; two days a week beginning January 21st. Each liaison will discuss with the students what days they should plan to attend for their field experience.

A holiday is considered a day off for students only if their public school is closed that day. Students should plan to attend teacher in-service days and work days that fall on their chosen field experience days unless they get other instructions from their liaison.

Reflection journal guidelines:
As you read:
Think about your thoughts and ideas regarding the concepts presented in the text. Consider what you have learned about teaching mathematics, how you learned mathematics yourself and how the ideas in the text relate to these. Also consider what you are experiencing in your field placement and the implication this has on your own future classroom.

As you write:
What important things do you want to remember and what questions do you still have? How are the things you learning important to the classroom and your teaching?

Journals will be scored using the following criteria:
The first journal should show that you understand the various global ideas associated with teaching math and that you have seriously considered your attitude and its impact on your students. When writing about the other competencies associated with content you should show specifically what you already know and specific content you still need to work on; also specifically show your plan for gaining the knowledge you still need to have. The journal should also show connections you are making to the public school regarding teaching methodology. The rubric score will be translated into a percentage score to be averaged with the test grade: 3 (100), 3- (95), 2+ (90), 2 (85), 2- (80), 1+ (75), 1 (70), 1- (65)

IMPORTANT NOTE: You are required to document 6 hours of TExES preparation outside of seminar. Be sure to document the hours you spend on this and all assignments related to TExES preparation.

Math Journal #1 Due:
Read competency 013. Consider active problem based learning and how teachers assess instruction of this type. Be prepared to share an experience you have had with this type of instruction and assessment.

Journal: tell several important things you learned about mathematics instruction and how it will impact your preparation for teaching.

Complete a self awareness analysis of your attitude toward teaching and learning math. Describe how you think your attitude will impact the success or failure of your students to enjoy and learn math.

Math Journal #2 Due:
Prepare yourself for teaching your students and for the TExES exam by studying competencies 014 & 015 (Number Concepts and Operations & Patterns and Algebra) in your text book and in the handouts you are given. Note the information and vocabulary you are confident you already know and what you need to continue to study. State your specific plan for gaining that knowledge. Make connections to your public school experiences that relate to
these competencies. What do you see that is working? And/Or what do you predict you will need to do to be a master math teacher of these competencies. Using Preparation Manual 191 in your reading handbook, answer the questions associated with these competencies.

Math Journal #3 Due:
Prepare yourself for teaching your students and for the TExES exam by studying competencies 016 & 017 (Geometry and Measurement & Probability and Statistics) in your textbook and in the handouts you are given. Note the information and vocabulary you are confident you already know and what you need to continue to study. State your specific plan for gaining that knowledge. Make connections to your public school experiences that relate to these competencies. What do you see that is working? And/Or what do you predict you will need to do to be a master math teacher of these competencies. Using Preparation Manual 191 in your reading handbook, answer the questions associated with these competencies.

Mathematics Journal #4 Due:
Prepare yourself for teaching your students and for the TExES exam by studying competency 018 (Mathematical Processes) in your textbook and in the handouts you are given. Note the information and vocabulary you are confident you already know and what you need to continue to study. State your specific plan for gaining that knowledge. Make connections to your public school experiences that relate to these competencies. What do you see that is working? And/Or what do you predict you will need to do to be a master math teacher of these competencies. Using Preparation Manual 191 in your reading handbook, answer the questions associated with these competencies.

Complete a re-analysis of your attitude toward teaching and learning math. Describe how your attitude has changed or remained the same and tell how you think your attitude has affected your students.