ELED 436.71E  Mathematics in the Field-Based Setting  
COURSE SYLLABUS: SPRING, 2013  

Instructor: Linda S Sadler – Adjunct Professor  
Office Location: Room to be assigned  
Office Hours: Monday afternoon and evening by appointment  
Phone: 254-562-7182 or 254-625-1989  
Email Address: lsadler@wildblue.net  rleesadler@yahoo.com  

COURSE INFORMATION  

Materials – Textbooks, Readings, Supplementary Readings:  

PREPARING TO TEACH TEXAS CONTENT AREAS 2ND EDITION – NATH, RAMSEY  

This course will lead the intern toward identifying techniques and strategies that will assist in teaching mathematics in an elementary setting. 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.  

The following standards are extracted from Mathematics Standards for EC-6 at the State Board of Educator Certification (SBEC) website:  
http://www.sbec.state.tx.us/SBECOnline/standtest/standards/ec6gen.asp  
You should review the standards for EC-6 teachers that define Teacher Knowledge: What Teachers Know as well as Application: What Teachers Can Do.  

MATHEMATICS GENERALIST EC–6 STANDARDS  
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.  
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.  
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.  
Standard IV. Probability and Statistics: The mathematics teacher understands and uses probability and statistics, their applications, and technology appropriate to teach the statewide curriculum (Texas Essential Knowledge and Skills [TEKS]) in order to prepare students to use mathematics.  
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.
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 an ongoing basis to monitor and guide instruction and to evaluate and report student progress.

Standard IX. Professional Development: The mathematics teacher understands mathematics teaching as a profession, knows the value and rewards of being a reflective practitioner, and realizes the importance of making a lifelong commitment to professional growth and development.

TExES Preparation Manual-Generalist EC-6 found at:

TEKS http://www.tea.state.tx.us/rules/tac/chapter111/index.html
http://www.tea.state.tx.us/index2.aspx?id=2147499971

NCTM Standards www.nctm.org

COURSE REQUIREMENTS

Instructional / Methods / Activities Assessments

This course is designed to help you teach math in a classroom setting. We will be focusing on developing lessons through the use of literature, games, and technology. Child development, integrating other subject matter and basic math skills through 6th grade will be covered. You will be comparing NCTM Standards, SBEC State Standards and TEKS. Student observations, projects, and presentations will be assigned.

ATTENDANCE

Additional points will be deducted from your final grade for each class that you miss without justification. Points will be deducted for late arrivals and for leaving early without justification. The instructor shall make the determination as to whether extenuating circumstances should be considered. An unexcused absence on the night of your assigned presentation or the final exam will result in a 10-point deduction from your grade. It is the prerogative of the instructor to drop students from courses in which they have accrued excessive absences (two or more). However, a student wishing to drop the course should do so. Failure to do so may result in a failing grade.

Grading

ALL HOMEWORK ASSIGNMENTS ARE DUE WHEN STATED AND WILL NOT BE ACCEPTED LATER THAN OUR LAST CLASS MEETING.

Students are expected to complete all class assignments by our last class meeting. Grades of “incomplete” are recorded only when extenuating circumstances justify extending the time for completion of assignments. A grade of incomplete (X) is rarely given and requires an agreed upon proposal for completing the course between the student and the instructor. This proposal is submitted to the Director of the Navarro Partnership who will forward it to the appropriate department head and dean for approval. Upon approval, the student has one long semester to complete all requirements. Failure to do so results in a grade of “F.”
# Grading Rubric for Intern field and class experiences

Your grade in this course will be determined from the following Field experience and seminar criteria

<table>
<thead>
<tr>
<th>Field Experience</th>
<th>Number</th>
<th>Points Each</th>
<th>Total Points Possible</th>
<th>Student’s Actual Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>ILT Evaluations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formal/Informal</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Liaison Evaluation</td>
<td></td>
<td></td>
<td>40</td>
<td></td>
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<tr>
<td>Mentor Evaluation</td>
<td></td>
<td></td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Mid-term Progress Report</td>
<td></td>
<td></td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Summative Evaluation</td>
<td></td>
<td></td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Journals</td>
<td></td>
<td></td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Attendance Field Experience (To include arriving late and leaving early)</td>
<td></td>
<td></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Methods Class</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attendance Intern Seminar (To include arriving late and leaving early)</td>
<td></td>
<td></td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Assignments</td>
<td>Varies by Class</td>
<td>Varies by Class</td>
<td>60</td>
<td></td>
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<tr>
<td>Seminar Activities</td>
<td>Varies by Class</td>
<td>Varies by Class</td>
<td>150</td>
<td></td>
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<tr>
<td>Class Participation</td>
<td></td>
<td></td>
<td>15</td>
<td></td>
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<tr>
<td>Integrated Projects</td>
<td></td>
<td></td>
<td>200</td>
<td></td>
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<tr>
<td>Final Exam</td>
<td></td>
<td></td>
<td>30</td>
<td></td>
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<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>700</td>
<td></td>
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</tbody>
</table>

**Point total of:**

- 630 – 700 = A
- 629 – 560 = B
- 559 – 490 = C
- 489 – 420 = D
- Below 420 = F
ELED 436 (Math), ELED 437 (Science), ELED 448 (Reading) and ELED 438 (Social Studies)

Evaluation of Integrated Lesson Plan and Display
This page MUST come before the cover page

Student: ______________________________          Instructor:_________________________

Suggested grade level: _________      Project Name: ___________________________

Develop a “Thematic Unit” lesson plan for at least five days. Make the lesson plan on a Social Studies topic and integrate Math, Science and Reading into it. The lesson plan MUST include AT LEAST seven children's books. The lesson plan MUST NOT be downloaded from the internet or photocopied from a textbook. You MUST rewrite (retype) in your own words and the proper format. The lesson plan MUST include math, science, reading and social studies TEKS and ELPS written out with numbers, letters, and concepts. The lesson plan MUST include technology used by the students. The lesson plan MUST include higher level thinking skills and hands on activities for the students to complete.

<table>
<thead>
<tr>
<th>Student Self-Evaluation Points</th>
<th>Instructor Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Lesson Plan — Include TEKS and ELPS for all four subjects, number, letter and concepts.</td>
<td>20 16 12 8 4</td>
</tr>
<tr>
<td>a. “Hook or Interest Grabber”</td>
<td>20 16 12 8 4</td>
</tr>
<tr>
<td>b. Formative and Summative Evaluations</td>
<td>20 16 12 8 4</td>
</tr>
<tr>
<td>c. Higher level thinking Activities</td>
<td>20 16 12 8 4</td>
</tr>
</tbody>
</table>

2. Objectives — Listed for each lesson.

3. Materials & Resources

4. Use of Literature — Must include a minimum of seven children’s books (NO teacher's manuals or resource materials such as dictionaries, atlas, etc.)

5. Use of Technology — Include in lesson plan at least ten websites for both student and teacher use.

6. Creativity

7. Overall Display — MUST contain higher level thinking activities that would be presented by children.

EXTRA CREDIT

8. Fine Arts Integrated

9. P.E .Integrated

Total Points ______________________  ______________________
Lesson plans **MUST** be fastened together in a binder with a cover page including your name, your topic and grade level, your email address, as well as names of Math, Science, Reading and Social Studies instructors. This information **MUST** also be put on the display. You **MUST** complete a self-evaluation and place that on top of the cover page to be removed by the instructor. **HIGHLIGHT** speaking, listening, reading and writing throughout your reading lesson plan. Make five copies of your integrated lesson plan – one for each instructor and one for you to keep. You **WILL NOT** get the four copies back from the instructors.

INSTRUCTOR COMMENTS:

**Teaching for Mastery Learning**

1. **Anticipatory Set or Focus**
The teacher focuses the students’ thoughts on to what will be learned. This can be a short activity, a prompt on the board, a handout when students enter the room, two problems on the overhead, or verbally stated. (Tie in yesterday’s lesson with today’s lesson. Get them interested.)

2. **Objective and Purpose**
Students learn more effectively when they know what they are supposed to be learning and why. Teachers also teach more effectively when they have the same information. Make sure you state why the students need to know it. (Tell what/how/why the students are going to learn).

3. **Input**
The new knowledge, vocabulary, concept, process or skill must be presented to the students in the most effective manner. This could be through discovery, discussion, reading, listening, observing, etc. (This is the stuff they need to know to be successful).

4. **Modeling**
It is important for the students to “see” what they are learning. It helps them when the teacher demonstrates what is to be learned. (A picture is worth a thousand words).

5. **Guided Practice**
The students practice the new learning under direct teacher supervision. The teacher leads the students through the steps necessary to perform the skill using the hear, see, do approach.

6. **Checking for Understanding**
It is important to make sure the students understand what was presented. One way this can be done is by asking the students a variety of questions and then determining if you can move forward or do you need to back up?

7. **Independence Practice**
When the teacher is sure the students understand the new material, they assign independent practice.

8. **Closure**
A review or wrap-up of the lesson – “Tell me/show me what you learned today.”
COMMUNICATION AND SUPPORT

Interaction with Instructor Statement:
Since I am an Adjunct Professor I do not have an office located on campus. You may contact me through email or phone. I will be happy to set up an appointment to meet with you on Mondays before or after class.

You are preparing to enter a profession in which independent responsibility and professional behavior are expected at all times. Therefore, I expect the same high standards of responsibility, behavior, and performance from you in the class as I would expect from you as a teacher in your own classroom.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

University Specific Procedures:
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 or via email. Students who do not attend class or check their email assume full responsibility for missing changes to the course.

<table>
<thead>
<tr>
<th>COURSE OUTLINE / CALENDAR</th>
</tr>
</thead>
</table>
| **1st Class** Introductions  
Review of Syllabus and Assignments  
Websites  
Overview of Math, Introduce Math Standards |
| **2nd Class** Mathematical Process an Mathematics Instruction  
(Standards I, VII, VIII) pp. 97-113 |
| **3rd Class** Number Concepts, Patterns, and Algebra  
(Standards I & II) pp. 113-119  
Computation |
| **4th Class** Math Class Observation Due  
Number Concepts, Patterns, and Algebra  
(continued from last week)  
Computation |
| **5th Class** Geometry, Measurement, Probability and Statistics  
(Standards III, IV) pp. 119-128  
Computation |
| **6th Class** Mathematical Processes, Perspectives and  
Professional Development (Standards V & VI) pp. 128-134 |

PRESENTATIONS
1. NUMBERS, OPERATIONS & QUANTITATIVE REASONING  
2. PATTERNS, RELATIONSHIPS, & ALGEBRAIC THINKING  
3. GEOMETRY & SPATIAL REASONING  
4. MEASUREMENT  
5. PROBABILITY AND STATISTICS

| **7th Class** FINISH PRESENTATIONS  
Final – Course content |