ELED 437.002 Integrated Learning: Science in Field-Based Settings (East Texas Area) - Exploring the integrated nature of learning with science as the content focus. (3hrs)

COURSE SYLLABUS: Fall 2012

Instructor: Ellen Oats
Office Location:
Office Hours:
Office Phone:
Office Fax: 903-886-5581
University Email Address: Ellen.Oats@tamuc.edu

COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings:

Textbook(s) Required: Texas TExES Generalist EC-6 (191) w/TestWare by Luis A Rosado

Field-Based Teacher Education Program Handbook. Available online: www.tamuc.edu; hold the cursor over ‘academics’ until a drop down screen shows (do not click); make your cursor hover over Education and Human Services and down the list then click on ‘educator certification’; scroll down the page to the box on the right hand side that says ‘handbooks’. There you will find this document.

Course Description:
Hours: Three. Explores the integrated nature of learning with science 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 science in Texas public school must possess. Domain IV Science comprises approximately 18% of the TExES Generalist EC-6 (191).

Competency 024 (Safe and Proper Laboratory Processes): The teacher understands how to manage learning activities, tools, materials, equipment and technologies to ensure the safety of all students.

Competency 025 (Scientific Inquiry): The teacher understands the history and nature of science, the process and role of scientific inquiry, and the role of inquiry in science instruction.
Competency 026 (Impact on Daily Life/Environment): The teacher understands how science impacts the daily lives of students and interacts with and influences personal and societal decisions.

Competency 027 (Unifying Concepts and Processes in Science): The teacher knows and understands the unifying concepts and processes that are common to all sciences.

Competency 028 (Theory and Practice of Science Teaching): The teacher has theoretical and practical knowledge about teaching science and about how students learn science.

Competency 029 (Assessment in Science Learning): The teacher knows the varied and appropriate assessments and assessment practices for monitoring science learning in laboratory, field and classroom settings.

Competency 030 (Physical Science): The teacher understands forces and motion and their relationships.

Competency 031 (Physical Science): The teacher understands the physical and chemical properties of and changes in matter.

Competency 032 (Physical Science): The teacher understands energy and interactions between matter and energy.

Competency 033 (Physical Science): The teacher understands energy transformations and the conservation of matter and energy.

Competency 034 (Life Science): The teacher understands the structure and function of living things.

Competency 035 (Life Science): The teacher understands reproduction and the mechanisms of heredity.

Competency 036 (Life Science): The teacher understands adaptations of organisms and the theory of evolution.

Competency 037 (Life Science): The teacher understands the relationships between organisms and the environment.

Competency 038 (Earth and Space Science): The teacher understands the structure and function of Earth systems.

Competency 039 (Earth and Space Science): The teacher understands cycles in Earth systems.

Competency 040 (Earth and Space Science): The teacher understands the role of energy in weather and climate.

Competency 041 (Earth and Space Science): The teacher understands the characteristics of the solar system and the universe.
**Instructional / Methods / Activities Assessments**

The course will focus on the importance of science in the elementary school curriculum; ideas and practices in teaching science, integration of science with other content areas, and active science learning. It is expected that interns will actively participate in seminar activities and seminar and field assignments in a highly professional manner.

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 Science standards and competencies and the related Texas Education Association Texas Essential Knowledge and Skills (TEKS) for grades K-6 as adopted.

In order to become an effective science teacher, the goals of this course are: to understand and appreciate the goals and principles of the Texas State competencies for teachers; to implement the application of inquiry-based science instruction; to explore creative avenues for teaching science that will enhance active learning in elementary classrooms; and to understand the potential and importance for integrating science instruction into other disciplines. Interns will review information in physical, life and earth science that the teacher must know in order to effectively teach the TEKS.

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 a science post test given in seminar. 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**

5 points will be deducted from the averaged final grade for each seminar absence when science is the topic.
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 TAKS: http://www.tea.state.tx.us/index3.aspx?id=3839&menu_id=793
   TEKS link: http://www.tea.state.tx.us/index2.aspx?id=6148
Documentation of Technology use in the classroom will be shown in the intern portfolio.

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.
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

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 inquiry 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.tamu-commerce.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.tamu-commerce.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.

**COURSE OUTLINE / CALENDAR**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friday, August 17th, 2012</td>
<td>9:30 am – 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.</td>
</tr>
<tr>
<td>Field-based dates for your assigned public school campus are: 5 days a week August 20th – August 31st. Two days a week September 3rd – December 7th. 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.</td>
<td></td>
</tr>
</tbody>
</table>

**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 science, how you learned science 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 on A, B, C basis using the rubric shown on the Intern Grade Evaluation form (see below). The score will be translated into a percentage score to be averaged with the field grade.

**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.

Another source of information for TExES competency review is the curriculum library on the second floor of the TAMU-C library. Document time spent outside seminar in study there to apply toward your 6 hours.

**Science Journal #1 Due:**

Read competencies 024 - 029.

Groups in seminar will create charts showing the important things about each of these competencies patterned after The Important Book. Example: "The important thing to remember about competency 024 is ______." Then make two or more additional brief summary statements about your assigned competency. End with, but the important thing to remember is ______.

Present your patterned page to the group.

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

Complete a self awareness analysis of your attitude toward teaching and learning science. Describe how you think your attitude will impact the success or failure of your students to enjoy and learn science.
Science Journal #2 Due:
Prepare yourself for teaching your students and for the TExES exam by studying competencies 030 – 033 (physical science). Highlight or make note of the information and vocabulary you need to continue to study. Using Preparation Manual 191 in your reading handbook, answer the questions associated with these competencies.
Journal: tell how you have improved and on what you still need help.

Science Journal #3 Due:
Prepare yourself for teaching your students and for the TExES exam by studying competencies 034 – 037 (life science). Highlight or make note of the information and vocabulary you need to continue to study. Using Preparation Manual 191 in your reading handbook, answer the questions associated with these competencies.
Journal: tell how you have improved and on what you still need help.

Science Journal #4 Due:
Prepare yourself for teaching your students and for the TExES exam by studying competencies 038 – 041 (Earth and space science). Highlight or make note of the information and vocabulary you need to continue to study. Using Preparation Manual 191 in your reading handbook, answer the questions associated with these competencies.
Journal: tell how you have improved and on what you still need help.
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.

The following forms are included here as part of the holistic internship experience.
# Intern Rubric

Name: _______________________

## Assessment Portfolio Checklist:

Items listed below should be included in your portfolio.

<table>
<thead>
<tr>
<th>Item</th>
<th>Mid-Term</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 (2 per teacher) What Did You Learn by Observing Your Teacher?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Each liaison will formally evaluate 2 lessons you teach.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Each mentor will formally evaluate 2 lessons you teach.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Journals – Written Reflections on your field experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ITEP and seminar news</td>
<td></td>
<td></td>
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<tr>
<td>Self Evaluation of Professionalism</td>
<td></td>
<td></td>
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<tr>
<td>TExES Preparation Documentation</td>
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</tbody>
</table>

It would also be good to include the items listed below in your portfolio.

<table>
<thead>
<tr>
<th>Item</th>
<th>Mid-Term</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>Documentation of assignments from each of your courses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology Documentation (copy of implemented lesson plan and evaluation by mentor or liaison is required by the end of residency)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class schedule for each of your mentors if required by liaison</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any additional documentation of contributions to team, professionalism, taking responsibility and initiative</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Report</th>
<th>Mid-Term</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm Progress Report</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final Evaluation Report</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Attendance:

<table>
<thead>
<tr>
<th></th>
<th>Field</th>
<th>Seminars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid-Term</td>
<td>Final total (Include dates)</td>
<td>Mid-Term</td>
</tr>
<tr>
<td>______</td>
<td>______</td>
<td>______</td>
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<td>______</td>
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<td>______</td>
</tr>
</tbody>
</table>

Reasons for non-attendance, etc.: ____________________________________________
What You Learned By Observing Your Mentor Teacher
(to be completed by intern)

Intern Name: ___________________________ Date: ___________

Brief description of the lesson (e.g. topic, objective, strategies used, instructional method, grouping, activities)

3 Things I want to remember about the lesson, classroom, etc. related to the art and science of teaching.

•

•

•

I still wonder or would like to know more about……
Focus: purpose, intro
Establish purpose of lesson (state objectives, focus activity, review prior knowledge).

Concept Discovery: information, example, model
Provide information by example, model, etc. and monitor student participation.

Practice: (guided)
Practice with teacher monitoring students’ work. Aid where needed to move to student independence.

Practice: (independent)
What the students continue to work on, may be done without teacher direct involvement.

Evaluation: how to measure
Scoring rubric or measure; expected outcome; grading, etc.

Extension:
Related enrichment activities that extend knowledge and may involve application of knowledge. May be short activity or longer project completed over time.

Closure: restate obj
Wrap up the lesson, obtain samples of each student’s work, restate objective and perhaps connect to future learning.

Note: Closure may come before Extension if you want to close the lesson and the students can do the related additional activities at another time. Reflect upon your lesson and make notes for adjustments or what to remember for future lessons.
Interactive Teacher Education Plan (ITEP)
Discussion Log

Intern Name: ____________________________  Dates covered: ____________________________

Strengths I have demonstrated:

How I have documented and/or demonstrated this growth:

Areas in which I plan to grow (include which competencies you will be working on):
What I plan to work on during the next period of time:

Seminar News – what I need to remember to tell my mentor about seminar:
Date:          News

_____________________________  ____________________________  ____________________________
Intern Signature     Mentor Signature/Initial     Liaison Signature/Initial
NET CPDT INDIVIDUAL LESSON EVALUATION

This instrument may be used to provide feedback to interns as they begin to work with individuals, a small group or the entire class. Mentors may complete the form, liaisons may utilize this instrument, or the intern may use it as a self-evaluation tool. The form could be used with residents who are focusing on a particular area of growth and/or are on a growth plan. It provides an opportunity for discussion since there is a line for mentor and intern/resident signatures.

Intern/Resident: _______________________________  Subject: __________________
Mentor: ______________________________________ Date of Lesson/Activity: _______

Rate Factors Below: 3 (Exceptional), 2 (Acceptable), 1 (Needs Improvement)  N/A (Not Applicable)  N/O (Not Observed)

<table>
<thead>
<tr>
<th>RATING</th>
<th>1. Lesson Plan: accurate, proper objectives, appropriate intro., sufficient detail, evaluation tied to obj., appropriate closing, able to use resources other than textbook in planning</th>
<th>3 2 1 N/A N/O</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Presentation: followed plan, appropriate intro., made obj. clear, connected lesson to past/future learning, stressed more imp. items, good closing, evidence of content knowledge, use of lesson cycle, teaches using resourceful materials</td>
<td>3 2 1 N/A N/O</td>
</tr>
<tr>
<td></td>
<td>3. Strategies: Solicits &amp; provides time for responses, secures attention, begins, promptly maintains good pacing, varies the teaching and learning strategies</td>
<td>3 2 1 N/A N/O</td>
</tr>
<tr>
<td></td>
<td>4. Management: Students on-task, appropriate noise level for activities, appropriate movement for type of lesson, noticed &amp; handled problem situations appropriately</td>
<td>3 2 1 N/A N/O</td>
</tr>
<tr>
<td></td>
<td>5. Personal: evidence of poise &amp; confidence, voice projection, proper grammar, enunciation, eye contact, warmth &amp; enthusiasm</td>
<td>3 2 1 N/A N/O</td>
</tr>
<tr>
<td></td>
<td>6. Materials Used: sufficient use of manipulatives, AV materials visible and used sufficiently; handouts adequate, accurate, useful, &amp; relevant, appropriate and timely distribution of materials</td>
<td>3 2 1 N/A N/O</td>
</tr>
</tbody>
</table>

STRENGTHS AND CHANGES

1. Strengths of the Lesson:

2. Improvements:

Evaluator Signature    Title    Date                         Intern/Resident Signature    Date
Directions: Mark the rating that best describes the intern in relation to each criteria:
3 = Exceptional  2 = Proficient  1 = Needs Improvement  N/O = Not yet observed

**Self Rating** is to be completed by the intern prior to the portfolio conference. Intern should bring this form to the conference.

<table>
<thead>
<tr>
<th>Criteria:</th>
<th>Self Rating:</th>
<th>Mentor/Liaison Rating:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrates professionalism in action and dress</td>
<td>3 2 1 N/O</td>
<td>3 2 1 N/O</td>
</tr>
<tr>
<td>Asks questions that demonstrate a willingness to learn</td>
<td>3 2 1 N/O</td>
<td>3 2 1 N/O</td>
</tr>
<tr>
<td>Interacts positively with faculty, students, staff, and residents</td>
<td>3 2 1 N/O</td>
<td>3 2 1 N/O</td>
</tr>
<tr>
<td>Knows and follows school policy and procedures and is punctual</td>
<td>3 2 1 N/O</td>
<td>3 2 1 N/O</td>
</tr>
<tr>
<td>Handles assigned activities willingly, correctly, and punctually</td>
<td>3 2 1 N/O</td>
<td>3 2 1 N/O</td>
</tr>
<tr>
<td>Demonstrates enthusiasm for teaching (small/large group)</td>
<td>3 2 1 N/O</td>
<td>3 2 1 N/O</td>
</tr>
<tr>
<td>Demonstrates enthusiasm for learning about teaching methods</td>
<td>3 2 1 N/O</td>
<td>3 2 1 N/O</td>
</tr>
<tr>
<td>Shows willingness to help in a variety of areas and contents</td>
<td>3 2 1 N/O</td>
<td>3 2 1 N/O</td>
</tr>
<tr>
<td>Shows signs of self-evaluation and plans for professional growth</td>
<td>3 2 1 N/O</td>
<td>3 2 1 N/O</td>
</tr>
<tr>
<td>10. Plans and implements effective instruction</td>
<td>3 2 1 N/O</td>
<td>3 2 1 N/O</td>
</tr>
</tbody>
</table>

Comments:

__________________________________________________________________________

__________________________________________________________________________

Signatures Note: Mentors do not need to sign the intern SELF evaluation.

__________________________________________________________________________

Mentor  Mentor  Liaison

__________________________________________________________________________

Intern  Date
Intern Grade Evaluation
TEXAS A&M UNIVERSITY-COMMERCE
Northeast Texas Center for Professional Development and Technology
(circle one) Mid-term (circle one) SELF Final TEAM
(self copy to be completed by intern prior to portfolio conference and brought to the conference)

Name: ___________________________________________ Date: ____________
Place Suggested Grade in table below

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Intern</th>
<th>Mentor</th>
<th>Liaison</th>
<th>Final Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.ELED 436</td>
<td>Mathematics Methods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.ELED 437</td>
<td>Science Methods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.ELED 438</td>
<td>Social Studies Methods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.RDG 448</td>
<td>Characteristics of English Language Learners</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Directions:
Please use the following scoring criteria to rank the intern with a percentage score for each course.
The following scoring format will be used and adapted for field evaluation:
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,
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D = (less than 70%) = not able to be certified as a teacher
N/A = Not Applicable N/O = Not Observed

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<tr>
<td></td>
<td>Mid-Term</td>
<td>Final</td>
</tr>
<tr>
<td>Times absent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Times tardy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Times left early</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What do you think has gone particularly well this semester? ________________________________________________

What area would we like to see the intern work on as s/he begins the second half of the semester or begins
residency? ____________________________________________

Is there a need for a growth plan at this point in time? _____ yes _____ no _____ currently on a growth plan

Signatures  Note: Mentors do not need to sign the intern SELF evaluation.

Mentor _______________ Mentor _______________ Liaison _______________

Intern __________________ Date __________________