IS 352.711 SCIENCE INQUIRY II
COURSE SYLLABUS: FALL 2012

Instructor: Lisa C. Dillman
Office Location: 207 Drane Hall
Office Hours: 4-5pm Thursday
Office Phone: 903-875-7517
Office Fax: 903-875-7525
University Email Address: lisa.dillman@navarrocollege.edu

COURSE INFORMATION

Textbook(s) Required: PROJECT WILD – Aquatic Manual
Textbook(s) Required: Reviewing Science Paul Cohen et al. 3nd edition

Composition Notebook

Other materials recommended:
  Basic Standard calculator
  Pencil and colored pencils
  Ruler
  Scissors
  Scotch tape or glue stick

Course Description: Science topics and themes are chosen to emphasize broad concepts highlighted in the Texas and National Science Standards. Topics include fundamental physical and chemical processes such as the chemistry of the environment, macromolecules of life, systems in nature, and the nature of scientific inquiry. The course will be taught using any inquiry based method, modeling, instructional techniques proven effective by current educational research. Prerequisite Junior level standing.

Student Learning Outcomes:

1. To help prepare pre-service elementary teachers to pass the elementary science section on the TEExES exam. Approximately 15% of the TEExES exam is science-related. To address the 10 science competencies (42–51) Listed in the TEExES preparation manual.

2. To provide a continuation of science content and lab skills introduced in IS 351 and to demonstrate that certain universal concepts are present in all the sciences and can be investigated. Topics are correlated with the TEKS and TAKS objectives and with elementary science teacher competencies.

3. Most important: To provide you and your future students with a good base of Science knowledge! To be a successful teacher you need to be well rounded and apply concepts across the curriculum to give your students the foundation they need to be successful.
4. To provide the pre-service teacher with an opportunity to fulfill the following Science Standards:

I. The science teacher manages classroom, field and laboratory activities to ensure the safety of all students and the ethical care and treatment of organisms and specimens.

II. The science teacher understands the correct use of tools, materials, equipment, and technologies

III. The science teacher understands the process of scientific inquiry and its role in science instruction.

IV. The science teacher has theoretical and practical knowledge about teaching science and about how students learn science.

V. The science teacher know the varied and appropriate assessments and assessment practices to monitor science learning.

VI. The science teacher understands the history and nature of science.

VII. The science teacher understand show science affects the daily lives of students and how science interacts with and influences personal and societal decisions.

VIII. The science teacher knows and understands the science content appropriate to teach the statewide curriculum (Texas Essential Knowledge and Skills {TEKS}) in physical science

IX. The science teacher knows and understands the science content appropriate to teach the statewide curriculum (Texas Essential Knowledge and Skills {TEKS}) in life science

X. The science teacher knows and understands the science content appropriate to teach the statewide curriculum (Texas Essential Knowledge and Skills {Teks}) in earth and space science.

XI. The science teacher knows unifying concepts and processes that are common to all sciences.

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**COURSE REQUIREMENTS**

**Classroom Policies**

**Attendance**

- To be successful as a student I expect you to attend **ALL** classes. I understand situations arise that may result in you needed to miss class, keep in mind you are responsible for the material recovered in the class that day, regardless of the reason for missing class. If you miss a class the instructor will NOT re-teach the material to you, it is your responsibility to make up all missed work on your own. Please make arrangements with another student in the classroom to get notes, lab results or announcements missed in class. Copying another students work into your science notebook will NOT give you any credit toward this lab you must be present to receive the grade.

- Attendance is Mandatory. If you miss a class you will not be allowed to make up the work. I will however review a Student’s absence if they have been in the hospital or have had a death in the family. Proper documentation must be supplied. Going on Vacation is NOT an excuse to miss class. **IF YOU MISS CLASS BEFORE AN EXAM, YOU ARE STILL RESPONSIBLE FOR THE MATERIAL COVERED ON THAT DAY.**

- If you make the choice to cheat on exams, copy someone else’s work or plagiarize (copy without documentation) material from a source you will receive a penalty. You may be asked to leave the class, dropped from the class &/or receive an automatic F
- You will also need to participate in classroom activities and study outside of class.

- Please be on time for all class meetings and bring your textbook, paper and supplies with you to lecture and lab.

- Makeup lecture exams may be given if contact is made prior to the absence. You must discuss any options to complete the missing work ahead of time. Failure to take responsibility for missing class will result in a grade of 0 for an exam.

**General Classroom**

- If you have a problem with the course or the material see me and I will do my best to help.

- Rude and disruptive behavior will not be tolerated. You will be asked to leave the classroom and will not be allowed to return without meeting with the instructor and the director of the A & M program.

- No scheduled breaks. Unless there is a class discussion, lecture, or video, you may take a break as needed.

- No food or drinks allowed in the classroom. For safety reasons, you should never eat or drink in the lab

- Cell phone/ pagers- TURN THEM OFF!

- Study your materials for a few minutes every day. Science is not easy, short study periods are much more effective than late night “Cram” sessions

- **I am excited about this class. I hope you will relax and enjoy the class, we are going to learn lots of cool science information and have fun together!**

**Grading** (Subject to change *****)

Grades will be calculated by taking the total points possible. The resulting percentage will determine the grade. (90% and above an A, 80% a B etc.)

50% Four major exams 100 pts each

30% Lab Reports 15 reports to be turned in for 20pts (some 10) each and project

20% Final Exam Comprehensive

**Grading FY I’s**

1. All work must be completed and done neatly for full credit.

2. All diagrams (chart, tables, graphs, etc.) must be drawn with a ruler.

3. Any calculations or measurements should be expressed to one place past the decimal.

4. Numerical answers without the correct unit have no meaning and will result in deduction of points for each answer.
TECHNOLOGY REQUIREMENTS

None

COMMUNICATION AND SUPPORT

Interaction with Instructor Statement:
I will be in my office 1 hour before class to prepare for class and answer questions. I will also remain after class as needed by students

Contact: 903-875-7517

Primary E-mail: lisa.dillman@navarrocollege.edu
Please use this one, I have a Commerce address but do not check it regularly

Course Specific Procedures:

1. We will be using the Project Wild curriculum as well as added labs and assignments from the textbook

2. Tests will be a combination of objective items [multiple choice, matching, etc.] and short answer/discussion items.) Included on the exam will be questions over the actual labs, notes and additional information for the labs, introduction and backgrounds from the project wild labs, lab results and other materials as assigned

3. Labs will be completed as a group. All members of the group are expected to participate. Individual student work will be recorded in their Science Notebooks and then submitted for grading. Books not completed at the time of grading will lose points for the unfinished labs.

University Specific Procedures:

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

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. (See Code of Student Conduct from Student Guide Handbook).
<table>
<thead>
<tr>
<th>Date</th>
<th>Class Activities</th>
<th>Homework</th>
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<tbody>
<tr>
<td>8/30</td>
<td>Intro to course; video clip from Texas Water Stories;</td>
<td>Read pp. 186-195 in <em>Reviewing Science</em>; complete review sections;</td>
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<td>LABS: Observation vs. Inference; AquaWords, pp. 29-30 in WILD-Aquatic Manual</td>
<td>complete Phases of the Moon assignment;</td>
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<td>Begin Moon Journal</td>
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<td>9/6</td>
<td>TExES Prep Test #1</td>
<td>Read pp. 203-204 in <em>Reviewing Science</em> and read the handouts on the</td>
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<td>Go over review sections; turn in Phases of the Moon assignment;</td>
<td>senses</td>
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<td>LABS: DNA Isolation and Inheritance Patterns in Humans;</td>
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<td>Begin “Rice” Investigation</td>
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<td>9/13</td>
<td>TExES Prep Test #2</td>
<td>Read handouts.</td>
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<td>Check rice experiment</td>
<td>Study for TEST #1</td>
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<td>The Human Nervous System</td>
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<td>LAB: Investigating the Senses</td>
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<td>9/20</td>
<td><em>TURN IN MOON JOURNAL</em></td>
<td>Read pp. 85-90 in WILD-Aquatic Manual and read pp. 192-193 in *</td>
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<td>Check rice experiment</td>
<td>Reviewing Science*</td>
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<td>LABS: Dragon Genetics and Adaptations in the Potato Heads</td>
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<td>TAKE TEST #1</td>
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<td>9/27</td>
<td>TExES Prep Test #3</td>
<td>Read pp. 118-120 and pp. 140-144 in WILD-Aquatic Manual</td>
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<td>Check rice experiment</td>
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<td>VIDEO: How Does Evolution Work?</td>
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<td>LAB: Bird Beaks &amp; Natural Selection</td>
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<td>WILD-Aquatic activity: Net Gain; Net Effect</td>
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<td>10/4</td>
<td>TExES Prep Test #4</td>
<td>Read handout on Enzymes and Lactose Intolerance</td>
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<td>Check rice experiment</td>
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<td>WILD Aquatic activities: Riparian Retreat and What’s in the Water?</td>
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<td>Water Testing with Pond Water Tour Kit</td>
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<td>NOTE: Today will involve an “Expedition” to the Navarro College pond to make</td>
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<td>observations and gather data. Dress for outside.</td>
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<td>10/11</td>
<td>TExES Prep Test #5</td>
<td>Read pp. 2-3 and pp. 34-37 in WILD-Aquatic Manual</td>
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<td>Finish rice experiment and turn in Rice Journal</td>
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<td>Discuss Enzymes and Enzyme Activity</td>
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<td>LAB: Lactose Intolerance</td>
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<td></td>
<td>WILD-Aquatic activities: Are You Me? and Marsh Munchers</td>
<td>Study for TEST #2</td>
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<td>BRING PLASTIC RECYCLABLES TO CLASS.</td>
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<tr>
<td>Date</td>
<td>Activity/Assignment</td>
<td>Notes</td>
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| 10/25 | **WILD-Aquatic activities:**  
Turtle Hurdles (outside) and Plastic Jellyfish (inside)  
Take TEST #2 | Read Chapter 8, pp. 221-242 in *Reviewing Science*; complete review sections. |
| 11/1  | TExES Prep Test #7  
Go over review sections  
Discuss Nutritional Relationships, Food Chains, Food Webs, and Energy Transfer in Ecosystems.  
**Video Segment:** Avian Vomitologist  
LAB: Owl Pellet Dissection | Read pp. 272-279 in *Reviewing Science*; complete review section. |
| 11/8  | TExES Prep Test #8  
Discuss Weathering and Erosion  
**LAB:** Stream Table Investigations | Read Chapter 12, pp. 330-361 in *Reviewing Science*; complete review sections. |
| 11/15 | TExES Prep Test #9  
Go over review sections  
**LAB:** “Stargazer” Activities | Read pp. 257-259 in *Reviewing Science*; answer review items 24-39  
**Study for TEST #3** |
| 11/29 | Go over review items 24-39  
Discuss Paleontology  
**LAB:** Investigating Geologic Time and Fossil Formation  
Take TEST #3 | Read handouts on Introduced Species  
**Begin studying for Final Exam** |
| 12/6  | TExES Prep Test #10  
Energy Rotation Lab | **STUDY FOR FINAL EXAM** |
| 12/13 | **FINAL EXAM (Comprehensive)** | N/A |