



**IS351 Science Inquiry
COURSE SYLLABUS: SUMMER 1 Online**

Instructor: Melinda Ludwig

Office Location:

Office Hours: N/A

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COURSE INFORMATION

Materials – Textbooks, Supplementary Readings:

Texts: Reviewing Science 2nd Ed. Cohen/Deutsch/Sorrentino (2009)

Project WILD Manual (NEW EDITION – 2018)

(For Navarro Partnership students, both books are available in the Navarro College bookstore, but it may not be open for Summer 1. Both books are also available from Amazon. A used copy is o.k.)

Additional Supplies: Notebook or paper for notes, lab reports; pencils; map colors; rigid metric ruler; scissors.

Course Description:

Science Inquiry is a course with minimal lecture. The bulk of the course consists of a variety of hands-on, inquiry science activities that target science instructional strategies in grades Pre-K through 8.

Student Outcomes:

1. Through participation in the inquiry science activities, students will gain experience and knowledge that will help them prepare for the science section of the TExES exam.
2. Students will gain practical and interesting science knowledge and skills appropriate for science instruction in grades Pre-K through 8.
3. Students will increase their own science literacy by participating in the inquiry science activities.
4. Students will gain experience in cooperative learning techniques, which are used as part of the inquiry method.

COURSE REQUIREMENTS

“This course consists of a selection of hands-on, inquiry science activities from a variety of disciplines/sources and is designed to enhance your skills in teaching science to elementary and middle school students. Each week you will participate with members of your group in completing one, or more, inquiry science activities.”

Grading

Grading Scale: (90-100% = A; 80-89% = B; 70-79% = C; 60-69% = D; Below 60% = F)

For this semester, the value of each assignment (Reading Homework, Lab Activities, Worksheets, and Tests) will be the same.

TECHNOLOGY REQUIREMENTS

N/A

ACCESS AND NAVIGATION

N/A

COMMUNICATION AND SUPPORT

Interaction with Instructor Statement: You may contact me about class-related matters at the e-mail address listed on Page 1. Because we are not meeting in a regular classroom, you may also contact me by phone at 972-875-8078 on weekdays between 9:00 a.m. and 4:00 p.m (class-related matters only). No weekends.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures:

Academic Honesty Policy:

Texas A&M University – Commerce does not tolerate **plagiarism** and other forms of **academic dishonesty**. Conduct that violates 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 the student's behavior to the Teacher Certification Office and/or the Dean of the College of Education as constituting a reason to bar the student from entering into or continuing in a teacher certification program. Procedures A 13.04, 13.12, 13.31. and 13.32.

Examination Policy:

There will be a test for Weeks 2, 3, and 4. Each test will cover all material done during the previous week. The test will be a combination of items that cover reading assignments, handout content, and lab activities. The format will likely include a variety of formats, such as matching, multiple choice, fill in the blank, and short answer. Some short answer items will be structured to include higher level analysis and thinking skills and will refer to the data or procedures in the lab activities.

In Week 5, there will be a Final Exam. It will be comprehensive and include small parts covering most of the topics explored in the previous four weeks (plus two activities assigned for the fifth week). The format will be the same. The value of this grade will be the same as for the other assignments.

Attendance Policy:

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.

You are expected to attend each online class meeting at the appointed starting time.

You must keep up with your assignments and turn them in by the deadline. Failure to do so will result in a zero for that assignment. We are on a tight schedule and all of us have responsibilities to fulfill for a successful completion of this course

Additional Requirements

The materials you need, other than the textbooks and the materials listed on Page 1, should be available at your home or will be provided to you. You will receive a list of materials you need to gather for the lab activities and a list of materials that will be provided

****NOTE: THE INSTRUCTOR RESERVES THE RIGHT TO MODIFY ANY COURSE-SPECIFIC POLICY/PROCEDURE IF EXTRAORDINARY CIRCUMSTANCES EXIST, AND THE INSTRUCTOR WILL DETERMINE THE DEFINITION OF "extraordinary".**

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 162
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148 Email: Rebecca.Tuerk@tamuc.edu**

Internship Requirements:

All students applying for internship must attend a mandatory meeting the semester prior to the internship beginning. If you are interning in the fall, the meeting will be in January. If you are interning in the spring, the meeting will be in August.

All students must complete an application for internship. Students must meet the following requirements:

- a) Reading THEA score of 250 or Accuplacer Reading Score of 88 or COMPASS reading score of 90 or ACT score of 23 or SAT Verbal score of 550.
- b) Math THEA of 230, ACT score of 19 or SAT Math Score of 500, grade of C or better in College Algebra.
- c) Writing THEA of 220, grade of C or better in College English
- d) 2.75 GPA overall
- e) 2.5 GPA Interdisciplinary Studies Courses
- f) 2.5 GPA Specialization Courses
- g) 2.5 GPA Professional Development Courses
- h) Completion of all of the following courses: ELED 200, 300, RDG 350, 360,370, PSY 300, 310, SPED 346, IS351 OR 352, MATH 350
- i) Students may not lack more than 9 hours on entering internship. The following may be lacking: MusArtThe 305, one of the IS courses, Math 351, 1 specialization course. All other courses must be complete.
- j) Failure to meet the above requirements will result in not entering internship on time.
- k) Students will not be permitted to take the generalist exam, if they are missing content courses.

Graduation – All students should meet with their advisor 1 semester prior to graduation to ensure that all requirements are met.

**Completion of all requirements for degree (check degree evaluation for errors)
Successful completion of JLE (see advisor)**

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment.

You are expected to conduct yourself as a responsible adult. You are expected to show respect to the instructor and to your classmates. Behavior that deviates from this model and that disrupts the educational process can result in your removal from the class.

Nondiscrimination Notice

A&M-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information, or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry

Texas Senate Bill – 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University – Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46-035 and A&M – Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to

(<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>) and/or consult your event organizer). Pursuant to PC46.035, the open carrying of handguns is prohibited on all A&M – Commerce campuses. Report violations to the University Police Department at 903-886-5658 or 9-1-1.

Please be aware of the new campus concealed carry policy issued by Navarro College effective August 1, 2017. You are responsible for reading and knowing this information. Please see the link below:

<http://navarrocollege.edu/boardpolicies/section-gj-1/>

COURSE OUTLINE / CALENDAR

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

Week	Activities	Assignments for next class session	Student Outcomes Addressed
Week 1 June 1 - 5	<p>Reading Assignments in Reviewing Science: Pages 123-140. Pages 133-137</p> <p>Reading Assignment in Project WILD Guide: Pages 334-336.</p> <p>Hands-on Activities: Complete the activities and Lab Report, “Sheep in a Jeep”. Designed for grades 3 and 4. Turn in. Complete the activity and analysis, “Alka-Seltzer Rocket”. Designed for grades K-6. Turn in Analysis.</p>	<p>Study for Test #1.</p> <p>Reading Assignments in Reviewing Science. pp. 93-96 and p. 342 (The Sun)</p> <p>Reading Assignment in Project WILD Guide: Read pp. 366-374.</p> <p>Hands-on Activities: Go over the activities, “Mystery Beads, Silly Spoons, and Mirror, Mirror” (grades K-2) and the Additional Activities page (older students). Go to the GLOBE at Night website and learn about the Citizen Science Project that you will do. www.globeatnight.org.</p>	1,2,3,4

Week	Activities	Assignments for next class session	Student Outcomes Addressed
<p>Week 2</p> <p>June 8-12</p>	<p>Hands-on Activities: Complete the activities, “Mystery Beads, Silly Spoons, and Mirror, Mirror” (grades K-2) and the Additional Activities page. Turn in. For the Project WILD activity, “Lights Out”, you need to read Guidelines for Mapping Field Study Sites” on p. xxv in the front of the book. Then, read #7 in Part IV on p. 370. You will draw a map of a bird’s eye view of your house and identify the light fixtures on the outside of the house or in the yard, and you will make two lists. Both will be done on a sheet of graph paper (provided). Turn in the drawing/lists. Test #1 – Complete and turn in.</p>	<p>Reading Assignments in <u>Reviewing Science</u>. pp. 27-46. Hands-on Activities: Go over the activity, Properties of Water. Be sure you understand the concepts of surface tension, cohesion, and adhesion. Go over the handout, Physical and Chemical Changes. Review the Lab Report form, Observing Changes in Matter to be sure you understand the purpose and procedure of each of the short activities. Study for Test #2.</p>	<p>1,2,3,4</p>
<p>Week 3</p> <p>June 15-19</p>	<p>Hands-on Activities: Complete the Lab activity, Properties of Water, using the materials provided and materials you have at home. Turn in. Complete the Lab activity, Observing Changes in Matter, using materials provided and those you have at home. Turn in. Worksheets: Use the Periodic Table provided and any other <u>printed</u> resource to complete the Worksheets: on States of Matter, Chemical and Physical Changes, and Element Symbols. Turn in. Note: One grade for this group of 3 worksheets. Take Test #2.</p>	<p>Reading Assignment: Read the activity “Tracks!” from the WILD Activity Guide. The activities you will complete are modifications of the content that can be done at home. Reading Assignment in <u>Reviewing Science</u>. pp. 244-251. Rocks pp. 264-267 Topographic Maps Hands-on Activities: “I Found a Rock” is a geology activity designed for grades 2-4. Read the background material provided. Then use the rock sample provided to complete the observation activity for your rock specimen. Your rock drawing should be larger than the specimen and include color. If there are several colors, label each of them. Think about the statement at the bottom of the page before you answer Study for Test #3.</p>	<p>1,2,3,4</p>

<p>Week 4</p> <p>June 22-26</p>	<p>Hands-on Activities: Complete the activities, using the pages provided. Use the handout of the activity to help you. Turn in. Complete the Observation page for "I Found A Rock". Use your <u>Reviewing Science</u> book and the reference material provided to help you with this assignment. Turn in. Use the materials provided to complete the activity page on using a Topographic maps. Map A is a hypothetical place; Map B is a real place here in Texas. Turn in. Take Test #3</p>	<p>Reading Assignment from WILD Activity Guide: Read the WILD activity, "Busy Bees, Busy Blooms" (provided). Complete the data page on flower parts and characteristics. If you have flowering plants in your yard, go outside and examine the flowers with your hand lents. Look for some of the parts involved in flower pollination. Also notice flower color(s), number of petals, whether you can detect a scent, and if there are any insects near or on the flowers. Do an internet search for pictures of flowers and pollinators. Invasive Species: Fire Ants Read the handout on Invasive Ecology and the handout on Population Growth of the Imported Fire Ant (provided). Use these resources to help you complete the three data sheets. Study for the Final Exam</p>	<p>1,2,3,4</p>
<p>Week 5</p> <p>June 29- July 3</p>	<p>Hands-on Activities: "Busy Bees; Busy Blooms" from Project WILD. Turn in data page and one picture each from your internet search for a flower and a pollinator. If you find a picture with a flower and a pollinator on or near it, one picture will be enough. Turn in. "Invasive Species: Fire Ants" Complete the three data sheets about the fire ants. Turn in all three. Take Final Exam (Comprehensive)</p>	<p>N/A</p>	<p>1,2,3,4</p>

