IS351-71E Science Inquiry 1 for Pre-Service Educators(202580)

COURSE SYLLABUS: FALL 2025

INSTRUCTOR INFORMATION

Instructor: Melinda Ludwig
Office Location: No office. Instructor will be in Drane Hall, Room 205, beginning at 4:00 p.m. on Tuesdays.
Office Hours: N/A
Office Phone: N/A
Office Fax: N/A
University Email Address: Melinda Ludwig@etamu.edu
Preferred Form of Communication: E-mail
Communication Response Time: As soon as I see it.

COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings

Textbook(s) Required

1. Reviewing Science (2nd Ed.) – Cohen, Deutsch, Sorrentino (2009)
2. Project WILD manual (Green cover with photos)

Note: For Navarro College Partnership students, both books are available in the Navarro bookstore. A used copy of Reviewing Science is o.k., but the current copy (2018) of Project WILD is required.

Software Required: N/A

Optional Texts and/or Materials: N/A

The *syllabus/schedule are subject to change.*

Course Description

Student Learning Outcomes (Should be measurable; observable; use action verbs)

Science Inquiry is a course with minimal lecture. Introductory explanations and/or review of topics precede the hands-on, inquiry science activities and investigations that target science instruction in grades Pre-K through 8. Students work in groups of 3 or 4 on the investigations. They are encouraged to interact with each other, so that each group member is actively involved in the investigation. Interaction with the instructor by asking for help or asking questions is encouraged.

1. Through participation in the inquiry science activities, students will gain experience and knowledge that will help them in preparation for the science section of the Generalist 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 a variety of laboratory techniques and procedures, which are used as part of teaching science as inquiry.

COURSE REQUIREMENTS

Minimal Technical Skills Needed

Familiarity with standard laboratory equipment and procedures.
Fine motor skills for handling some types of laboratory equipment.
General computer skills and ability to use the internet, when required.

Instructional Methods

Some pre-lab discussions, interactions during investigations involving instructor/student question and answer periods, handling a variety of laboratory equipment and materials (with emphasis on lab safety), opportunities to observe a variety of specimens that may complement the investigations, students groups interacting with each other to improve in-person communication skills.

Student Responsibilities or Tips for Success in the Course

1. Plan to attend each class meeting, if at all possible. Absences are discouraged.
2. Reading assignments are generally reasonable in length. Set aside some time to read and understand.
3. Turn in written assignments on time. Points may be removed from the grade for late work.
4. Pay attention in class. ASK QUESTIONS! Get along with students in your group.

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GRADING

Final grades in this course will be based on the following scale:

A = 90%-100%
B = 80%-89%
C = 70%-79%
D = 60%-69%
F = 59% or Below

Total points corresponding to the final letter grades
A = 451- 500 Points
B = 401- 450 Points
C = 351- 400 Points
D = 301- 350 Points
F = 300 & > Points

Weights of the assessments in the calculation of the final letter grade.
Example:

Assignments	20%
Discussions	20%
Midterm Exam	30%
Final Exam	30%
TOTAL	100%

Assessments

There will be three topic-based tests during the semester and a comprehensive final exam. Topic-based tests will occur every 3-4 weeks and cover the investigations and other activities completed during those weeks. Each topic-based test will have a lab part done by the whole group and an individual part, based on reading assignments, homework, out of class projects, that each student completes on their own. The lab part of the test is worth 40 points, and the individual part is worth 60 points. The final exam could have the same format, or it may consist of just hands-on investigations in the manner of a lab practical exam.

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TECHNOLOGY REQUIREMENTS

LMS

All course sections offered by East Texas A&M University have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:
https://community.brightspace.com/s/article/Brightspace-Platform-Requirements

LMS Browser Support:
https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm

ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@etamu.edu

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a ETAMU campus open computer lab, etc.

COMMUNICATION AND SUPPORT

If you have any questions or are having difficulties with the course material, please contact your instructor.

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

https://community.brightspace.com/support/s/contactsupport

Interaction with Instructor Statement

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

University Specific Procedures

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the Student Guidebook.
https://inside.etamu.edu/admissions/onestopshop/undergraduateAdmissions/studentGuidebook.aspx

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum:
https://www.britannica.com/topic/netiquette

ETAMU Attendance

For more information about the attendance policy please visit the Attendance webpage and Procedures 13.99.99.R0.01

https://inside.etamu.edu/admissions/registrar/generalInformation/attendance.aspx

Academic Integrity

Students at East Texas A&M University are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:
https://inside.etamu.edu/aboutus/policiesproceduresstandardsstatements/rulesprocedures/13students/graduate/13.99.99.R0.10.pdf

https://inside.etamu.edu/academics/graduateSchool/faculty/GraduateStudentAcademicDishonestyForm.pdf

Students with Disabilities-- 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
East Texas A&M University
Velma K. Waters Library Rm 162
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
Email: studentdisabilityservices@etamu.edu

Website: Student Disability Services

https://www.etamu.edu/student-disability-services/

Nondiscrimination Notice

East Texas A&M University 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 Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in East Texas A&M University 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 ETAMU Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the Carrying Concealed Handguns On Campus document and/or consult your event organizer.
Web url:
http://www.etamu.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all ETAMU campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

East Texas A&M University Supports Students' Mental Health

The Counseling Center at ETAMU, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit **www.etamu.edu/counsel**

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Mental Health and Well-Being
The university aims to provide students with essential knowledge and tools to understand and support mental health. As part of our commitment to your well-being, we offer access to Telus Health, a service available 24/7/365 via chat, phone, or webinar. Scan the QR code to download the app and explore the resources available to you for guidance and support whenever you need it.

http://telusproduction.com/app/5108.html

AI use policy [Draft 2, May 25, 2023]

East Texas A&M University acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors 'guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

13.99.99.R0.03 Undergraduate Academic Dishonesty
13.99.99.R0.10 Graduate Student Academic Dishonesty

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Department or Accrediting Agency

Required Content

Note: 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 e-mail. Students who do not attend class regularly or check e-mail frequently assume full responsibility for missing changes to the content.

COURSE OUTLINE / CALENDAR

Date(s)	Activities	Assignments for next class	Student Outcomes
T 8/26	Intro to Course. Video on WILD curriculum. Discuss Cooperative Learning; additional curricula. Hands-on activities to demonstrate inquiry learning.	Read pp. 123-128 in *Reviewing Science*. Complete Review Questions, Part 1, on pp. 130-132 (All answers on a single page.) Due next class. Read handouts.	1,2,3,4
T 9/2	Review Force, Motion, Friction, Gravity, Inertia, Laws of Motion. LAB: Ride, Newton, Ride (K-2) Lab: Sheep in a Jeep (3-6)	Read pp. 43-46 and pp. 133-137 in *Reviewing Science*. Read handouts.	1,2,3,4
T 9/9	Review Laws of Motion. LAB: Float Your Boat (3-6) LAB: Secrets of Flight (4-6) **GLOBE at Night Project**	Read pp. 27-36 in *Reviewing Science*. Complete Review Questions, Part 1, on pp. 37-39. Due next class. Read handouts.	1,2,3,4
T 9/16	Review the Periodic Table and its uses. Discuss Matter, its phases, and the role of Density. LAB: Science Mysteries (K-3) LAB: Michael Faraday and the Chemistry of a Candle (3-6)	Read handouts on Physical and Chemical Changes. **Prepare for Test #1**	1,2,3,4
T 9/23	Review characteristics of Physical and Chemical Changes in Matter. LAB: Creating and Observing Physical and Chemical Changes. **Take Test # 1.**	Read pp. 331-336 and pp. 342-350 in *Reviewing Science*. Complete Review Questions, Part 1, on pp. 339-341 and 352-354. Due next class.	1,2,3,4

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T 9/30	Discuss Solar Energy, Electromagnetic Spectrum, Earth's orbit, and the Seasons. Activity: Happy Birthday! (K-2) LAB: Investigating Solar Energy and the Visible, IR, and UV parts of the Spectrum. (3-6) LAB: Feel the Heat. (K-2)	Read pp. 26-35 and pp. 195-199 in Project WILD manual.	1,2,3,4
T 10/7	Discuss survival of animals in the wild, based on Adaptations, Carrying Capacity, and Limiting Factors. Activity: How Many Bears...?(6-8) Activity: What Bear Goes Where? (K-5)	Read handouts on value of trees to the environment.	1,2,3,4
T 10/14	Discuss the important role of trees in the environment. Go outside and examine characteristics of several tree species. LAB: Analyzing a Tree Cookie (3-8) LAB: The Peppermint Beetle (K-6)	Read pp. 36-41 and pp. 42-50 in Project WILD manual.	1,2,3,4
T 10/21	Discuss the value of animal tracks in interpreting inhabitants of an ecosystem and the effect of limiting factors on wildlife populations. Activity: Tracks! (5-8) Activity: Oh Deer! (5-8) **Begin Moon Journal project.**	Read pp. 18-25 in Project WILD manual. **Prepare for Test #2.**	1,2,3,4
T 10/28	Discuss the life cycle and migration behavior of the Monarch Butterfly. Use plastic modes to observe stages in the Life Cycle. Use simple materials to make a mini-poster of the Monarch life cycle. **Take Test #2.**	Read pp. 243-252 in *Reviewing Science.* Complete Review Questions, Part 1, on pp. 253-255. Due next class. Read handout on properties of minerals and rocks.	1,2,3,4

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T 11/4	Review properties of minerals and rocks. Go over the Rock Cycle. LAB: Identifying Selected Minerals and Rocks – Physical Properties.(5-8)	Read pp. 264-268 in *Reviewing Science.* Complete Review Questions on pp. 269-270. Due next class.	1,2,3,4
T 11/11	Discuss maps and their uses; introduce Topographic Maps and how they are different from other types of maps. Activity: Working with Topographic Maps (5-8) LAB: Create a simple Topographic Map from a 3-D landform model. (6-8)	Read pp. 295-304 and pp. 309-315 in *Reviewing Science*. Complete Review Questions, Part 1, on pp. 304-308. Due next class. Read handouts on making simple weather instruments. **Study for Test #3.**	1,2,3,4
T 11/18	Discuss atmospheric composition, weather instruments and what they measure. Make simple weather instruments to use in recording weather data. **Take Test #3.**	Use the weather instruments you made, plus others that are provided, to record weather data for 5 consecutive days during the Thanksgiving holiday. Weather Chart is due on 12/2 when we come back.	1,2,3,4
11/25 To 12/1	Thanksgiving Holiday	Collect weather data. Read pp. 366-374 in Project WILD manual.	1,2,3,4
T 12/2	Discuss the environmental problems caused by Light Pollution. Watch video clips that illustrate the impact of light pollution on wildlife. Review specific animals and plants whose life cycles are affected by Light Pollution. Discuss solutions.	**Prepare for Final Exam**	1,2,3,4
T 12/9	**FINAL EXAM**	**N/A**	**N/A**

Important Astronomical Dates – Fall, 2025

September 22 – Autumn Equinox
November 7 – Cross Quarter Day
December 21 – Winter Solstice

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