



PHYS 371 Science and Math Education Theory and Practice

Cross-listed with MATH 371, CHEM 371, and BIO 371

COURSE SYLLABUS: Fall 2024

INSTRUCTOR INFORMATION

Instructor: Mr. Clay Stanfield

Office Location: STC 105A or EDS 218

Office Hours: Wednesday 12-1 pm, Thursday 1 -2 pm or by appointment

Office Phone: 903-468-8757

Office Fax: 903-886-5480

University Email Address: clay.stanfield@tamuc.edu

Preferred Form of Communication: Email

Communication Response Time: 48 hours

COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings

Textbook(s) Required: There is no required textbook. Readings provided throughout the course.

Course Description

University Catalogue Description

Learning theory and teaching practices for science learning assistants. Topics include questioning strategies, conceptual development, formative assessment, argumentation, metacognition, and nature of science.

Additional Course Description

This course will provide you with support and community to improve your experience as a learning assistant. You will have the opportunity to reflect on your teaching experience, discuss with other learning assistants, and read relevant science education literature that will inform your teaching.

Student Learning Outcomes

1. Students will be able to reflect on their teaching practice.
2. Students will be able to explain findings from science education literature.

The syllabus/schedule are subject to change.

3. Students will be able to apply findings from science education literature to their teaching.

COURSE REQUIREMENTS

Minimal Technical Skills Needed

Students should be able to use myLeo Online and Microsoft Word.

Instructional Methods

Readings and brief lectures introduce topics. Students are encouraged to ask questions during the virtual lecture. The primary instructional method for this course will be discussion, both live and asynchronously using Perusall. Students will reflect on their experiences through prompted writing assignments and class discussion.

Student Responsibilities or Tips for Success in the Course

Students are expected to read assigned articles, participate in all discussions (virtual meetings and discussion boards), and complete all homework assignments. Students are to be aware of all deadlines and ask questions when directions are unclear.

GRADING

Final grades in this course based on the following scale:

A = 90%-100%

B = 80%-89%

C = 70%-79%

D = 60%-69%

F = 59% or Below

Grades will be based on 3 components:

| | |
|--------------------------|-----|
| Teaching reflections | 40% |
| Reading reflections | 40% |
| Discussion participation | 20% |

Assessments

Teaching reflections: 4 teaching reflections will be assigned throughout the semester.

Reading reflections: 4 reading reflections will be assigned throughout the semester on Perusall (access code: STANFIELD-RB3RQ).

Discussion participation: Group and/or whole class discussions will take place in class every week.

Guidelines for the teaching reflections, reading reflections, and discussion participation grading are provided in a separate document.

***Note: The assignments and points are subject to change due to the needs of the course

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TECHNOLOGY REQUIREMENTS

LMS

All course sections offered by Texas A&M University-Commerce 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

YouSeeU Virtual Classroom Requirements:

<https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements>

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@tamuc.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 TAMUC 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

The best method to reach the instructor is through email. You can send an email to clay.stanfield@tamuc.edu with "**LA Class**" in the subject line. If you do not receive a response within 48 hours, send a reminder email.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

1. Cell phone use is only allowed if used for class activities.
2. **Eating is not allowed.** However, covered drinks are allowed.
3. Attendance will be taken.

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4. The instructor must be notified by email (clay.stanfield@tamuc.edu) about any excused absences **no later than 24 hours after the missed class**. Even if you choose to notify the instructor in person, you **must still follow up with email** within 24 hours of the missed class. If you do not follow this policy, you will not be able to turn in late work except in extreme circumstances.
5. You are responsible for obtaining notes and class announcements from missed classes.
6. Excessive absences may result in being dropped from the course.
7. When emailing the instructor, include the **course number in the subject line**.
9. You are expected to check your email at least once a day for class announcements. Emails will be sent to the email addresses you provided to MyLeo. Notify the instructor if you would prefer to receive emails at a different address.
11. Students should fully participate in class activities.
12. Students are expected to be professional and respectful and take responsibility for their learning. If you find yourself struggling, the instructors are available to provide extra help outside of class.
13. Assignments will be turned in through myLeo Online. Late work will not be accepted.

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. A calendar will be available the first week of class.

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](http://www.tamuc.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>

TAMUC Attendance

For more information about the attendance policy please visit the [Attendance](#) webpage and [Procedure 13.99.99.R0.01](#).

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

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<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

Academic Integrity

Students at Texas A&M University-Commerce 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:

[Undergraduate Academic Dishonesty 13.99.99.R0.03](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

[Graduate Student Academic Dishonesty 13.99.99.R0.10](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf>

Plagiarism

Plagiarism is a criminal activity. You must cite all sources of information. Unreferenced copying of material, whether parts of sentences, whole sentences, paragraphs, or entire articles can result in a score of zero for your assignment and may result in further disciplinary action

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

Texas A&M University-Commerce

Velma K. Waters Library Rm 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: studentdisabilityservices@tamuc.edu

Website: [Student Disability Services](#)

<https://www.tamuc.edu/student-disability-services/>

Nondiscrimination Notice

Texas A&M University-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.

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Campus Concealed Carry Statement

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 the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

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

A&M-Commerce Supports Students' Mental Health

The Counseling Center at A&M-Commerce, 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.tamuc.edu/counsel

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

Texas A&M University-Commerce 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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COURSE OUTLINE / CALENDAR

| Week | Date | Assignment info |
|------|--------|-------------------------|
| 2 | 2-Sep | Teaching HW #1 Assigned |
| 3 | 9-Sep | Teaching HW #1 Due |
| 3 | 9-Sep | Reading HW #1 Assigned |
| 4 | 16-Sep | Reading HW #1 Due |
| 5 | 23-Sep | Teaching HW #2 Assigned |
| 6 | 30-Sep | Teaching HW #2 Due |
| 6 | 30-Sep | Reading HW #2 Assigned |
| 7 | 7-Oct | Reading HW #2 Due |
| 8 | 14-Oct | Reading HW #3 Assigned |
| 9 | 21-Oct | Reading HW #3 Due |
| 10 | 28-Oct | Teaching HW #3 Assigned |
| 11 | 4-Nov | Teaching HW #3 Due |
| 12 | 11-Nov | Reading HW #4 Assigned |
| 13 | 18-Nov | Reading HW #4 Due |
| 13 | 18-Nov | Teaching HW #4 Assigned |
| 15 | 2-Dec | Teaching HW #4 Due |

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