



ECE 460.02W

Teaching STEAM in ECE

COURSE SYLLABUS: Spring 2024

INSTRUCTOR INFORMATION

Instructor: David L. Brown, PhD
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Office Hours: By Appointment
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Preferred Form of Communication: Email
Communication Response Time: 24 - 48 Hours (Monday thru Friday)

COURSE INFORMATION

Class Meeting Information:

First Day of Spring 2024 Semester – January 10, 2024

Materials – Textbooks, Readings, Supplementary Readings

See TAMUC Academic Calendar for Important Dates (including Drop Dates)

[2023-2024 Academic Calendar](#)

Textbook(s) Required

ECE 460 Teaching STEAM in ECE (E-Textbook)

Pearson

- Access Code ISBN: 9780137200252
- <https://console.pearsoned.com/enrollment/sdmzze>
If you need help, check out these Revel student resources:
<https://www.pearsonhighered.com/revel/students/support/>

Additional Information

Core Test Prep (Online Free Practice TEST)

240Tutoring: EC-6 Core Subjects

- **Math**
<https://www.240tutoring.com/texas/core-subjects-ec-6-mathematics/>
- **Science**
<https://www.240tutoring.com/texas/core-subjects-ec-6-science/>

Course Description

This course is a comprehensive study of early childhood pedagogy, research and curriculum, including the area of instruction, experience, and list of materials. A special emphasis will be given to planning curriculum that will help make learning meaningful for young children. The focus will be on integrated curriculum, child-centered philosophy, the role of play, and attention to the individual child's needs and interests. Reflecting and supporting diversity in addition to utilizing assessment tools and processes will also be emphasized.

Student Learning Outcomes

1. To investigate theories and practices associated with the ECE curriculum.
2. To examine techniques used in the authentic assessment and evaluation of young children.
3. To create instructional material used to teach the curriculum.
4. To plan activities for an active hands-on approach to the curriculum.
5. To demonstrate methodology for teaching an **integrated** curriculum of *STEAM* to young children.
6. To develop curriculum sensitive to cultural pluralism and children with special needs.

7. To explore technology resources that can be integrated into science and math learning experiences.
8. To plan interactive learning experiences that are culturally responsive which consider students' individual, community, and cultural assets.

Learning Objectives: The learner will...

- be an active and engaged participant in discussion forums by analyzing, constructing/creating, and evaluating information presented within the textbook, external readings/resources, student research, and class activities.
- demonstrate an understanding of the methods used in education by creating appropriate curriculum, highlighting the technology employed, and the appropriateness and effectiveness in the study of early childhood education.
- demonstrate understanding of the course materials through a learning journals and individual and group assignments

TEA Standards I-IV. Domains I-IV. Competencies.

Standard I: Domain I. Competencies 001-004 & Domain III. Competencies 007-010:

The teacher designs instruction appropriate for all students that reflects an understanding of relevant content and is based on continuous and appropriate assessment.

- 1.7k the importance of the state content and performance standards as outlined in the Texas Essential Knowledge and Skills (TEKS)
- 1.9k the significance of the vertical alignment of content, including prerequisite knowledge and skills
- 1.12k the importance of developing instructional goals and objectives that are clear, relevant, meaningful, and age-appropriate
- 1.13k the importance of developing instructional goals and objectives that can be assessed
- 1.14k the importance of developing instructional goals and objectives that are suitable for students with varied learning needs
- 1.16k the use of appropriate materials and resources for preparing instruction, presenting lessons, and assessing learning
- 1.17k the importance of knowing when to integrate technology into instruction and assessment
- 1.19k the importance of designing instruction that reflects the TEKS
- 1.20k features of instruction that maximize students' thinking skills
- 1.21k the importance of planning lessons and structuring units so that activities progress in a logical sequence
- 1.22k how materials, technology, and other resources may be used to support instructional goals and objectives and engage students in meaningful learning
- 1.23k the benefits of designing instruction that integrates content across disciplines
- 1.24k the importance of engaging in continuous monitoring and self-assessment of instructional effectiveness
- 1.25k the role of assessment in guiding instructional planning
- 1.26k the importance of creating assessments that are congruent with instructional goals and objectives
- 1.27k the characteristics, uses, advantages, and limitations of various assessment methods and strategies
- 1.28k the role of technology in assessing student learning
- 1.29k the benefits of and strategies for promoting student self-assessment

Standard I. Domain I. Competencies 001-004 Domain III. Competencies 007-010:

The teacher designs instruction appropriate for all students that reflects an understanding of relevant content and is based on continuous and appropriate assessment.

- 1.30k the connection between the Texas statewide assessment program, the TEKS, and instruction
- 1.1s plan lessons that reflect an understanding of students' developmental characteristics and needs
- 1.2s adapt lessons to address students' varied backgrounds, skills, interests, and learning needs, including the needs of English language learners
- 1.3s use effective approaches to address varied student learning needs and preferences
- 1.4s plan instruction that motivates students to want to learn and achieve
- 1.5s acknowledge and respect cultural and socioeconomic differences among students when planning instruction
- 1.6s use the Texas Essential Knowledge and Skills (TEKS) to plan instruction
- 1.12s develop instructional goals and objectives that are clear, relevant, meaningful, and age-appropriate
- 1.13s develop instructional goals and objectives that are able to be assessed
- 1.14s develop instructional goals and objectives that reflect students' age, developmental level, prior skills and knowledge, background, and interests
- 1.15s develop instructional goals and objectives that reflect different types of student learning and skills
- 1.16s use various types of materials and other resources to aid in preparing and implementing instruction
- 1.17s use technological tools to promote learning and expand instructional options
- 1.18s use resources available outside the school (e.g., museums, businesses, community members) to enhance students' learning opportunities
- 1.19s plan instructional activities that progress sequentially, and support stated instructional goals based on the TEKS
- 1.20s select instructional resources that support instructional goals, enhance student achievement, and engage students in learning
- 1.21s use varied activities and instructional groupings to engage students in instructional content and meet instructional goals and objectives
- 1.22s allocate time appropriately within lessons and units, including providing adequate opportunities for students to engage in reflection and closure
- 1.23s provide students with opportunities to explore content from many perspectives

Standard II. Domain II. Competencies 005-006:

The teacher creates a classroom environment of respect and rapport that fosters a positive climate for learning, equity, and excellence.

- 2.6s establish classroom rules and procedures to promote an organized and productive learning environment
- 2.14s communicate high and realistic expectations for students' behavior and ensure that students understand behavior expectations and consequences for misbehavior
- 2.17s use effective methods and procedures for monitoring and responding to positive and negative student behaviors

Standard III. Domain III. Competency 007-01:

The teacher promotes student learning by providing responsive instruction that makes use of effective communication techniques, instructional strategies that actively engage students in the learning process, and timely, high-quality feedback.

- 3.4k skills and strategies for engaging in skilled questioning and leading effective student discussions
- 3.5k criteria for selecting appropriate instructional activities and assignments for students with varied characteristics and needs
- 3.6k how to present content to students in relevant and meaningful ways

- 3.6s apply skills for leading discussions that engage all students in exploring important questions and that extend students' knowledge
- 3.7s create lessons with a clearly defined structure around which activities are organized
- 3.8s create activities and assignments that are appropriate for students and that actively engage them in the learning process
- 3.9s select and use instructional materials, resources, and technologies that are suitable for instructional goals and that engage students cognitively
- 3.10s represent content effectively and in ways that link with student's prior knowledge and experience
- 3.11s use flexible grouping to promote productive student interactions and enhance learning
- 3.13s engage students intellectually by teaching meaningful content in ways that promote all students' active and invested participation in the learning process
- 3.14s encourage students' self-motivation and active engagement in learning
- 4.1k the importance of families' involvement in their children's education

COURSE REQUIREMENTS

Minimal Technical Skills Needed

Students will be required to use the current learning management system, Microsoft Word, PowerPoint, YouTube videos and Web browsing skills while completing this course.

Instructional Methods

Methods of Instruction:

This course is made up of a series of assignments and assessments to assist you in achieving the course and module learning objectives. Each day you will work on various combinations of assignments, activities, discussions, readings, research, and projects.

There will be no extra credit given in this course.

Assignments	SLO
<p>Tasks completed independently:</p> <ul style="list-style-type: none"> • 240 Tutoring Diagnostic Assessment & Reflection • Content Area Math Station Creation • Math Lesson Plan (Danielson) • Science Lesson Plan (5E) • STEAM Activity Demonstration Presentation • End of Course Learning Reflection 	<ol style="list-style-type: none"> 1. To investigate theories and practices associated with the ECE curriculum. 2. To examine techniques used in the authentic assessment and evaluation of young children. 3. To create instructional material used to teach the curriculum. 4. To plan activities for an active hands-on approach to the curriculum. 5. To demonstrate methodology for teaching an integrated curriculum of <i>STEAM</i> to young children. 6. To develop curriculum sensitive to cultural pluralism and children with special needs. 7. To explore technology resources that can be integrated into science and math learning experiences. 8. To plan interactive learning experiences that are culturally responsive which consider students' individual, community and cultural assets.

Student Responsibilities or Tips for Success in the Course

Each of you are expected to participate fully in assigned readings related to course topics. Regular thoughtful and consistent course involvement will be expected of all students.

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

Information on how assignments are related to the course outcomes and how they are assessed can be found in the course assignment section.

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

Zoom Video Conferencing Tool

https://inside.tamuc.edu/campuslife/CampusServices/CITESupportCenter/Zoom_Account.aspx?source=universalmenu

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

My aim is to be in quick communication with you. I do respond to text and email quickly. If you have not heard from me within a two-day timeframe, please text or email again. I might have missed the communication, or it did not come through. If you need to call me to discuss an issue, please feel free to call the number of the syllabus.

Correspondingly, I will make every effort to grade papers in a timely fashion. You will notice that I have given you several weeks to complete the quizzes, discussions and assignments for a set of chapters. This will allow you to go into depth on a topic you may be interested in researching further and not feel challenged to get an assignment done by just “skimming the surface” within a week’s time. Therefore, please note it will take me time to grade the large amount of assignments that are submitted. My goal is to have your grades posted by the due date of the next set of assignments.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

Assignment Due Dates/Late Work Policy:

Plan ahead and to complete assignments well in advance to avoid last-minute problems.

Computer difficulties will not be accepted as an excuse for late submission.

Students are encouraged to check with different browsers, security levels; and, if settings on home computers are not compatible, they are encouraged to use libraries or computer labs on campus or local/private cyber cafes. It is a good idea to allow plenty of time for eleventh-hour adversities.

10 points will be deducted each day that an assignment is submitted past the deadline. Please notify the instructor before the assignment deadline concerning emergency situations that may prevent you from submitting assignments by the assignment deadline.

Materials from the course will not always be found in your text. Typically, you will be expected to read 1 to 3 chapters per week. It is advised that you do not wait until the night before to start the reading material. It is recommended that you stay current with chapter readings and read the assigned chapter(s) in a timely manner.

Please understand that you should not come to me at the end of the semester, unhappy with your grade, asking for a way to change it. Grades will not be changed.

Written Assignments (if applicable): All assignments must be typed in legible (preferably Times Roman) 12 point font. College level writing is expected. If you feel insecure about your writing abilities, you may want to seek assistance from the writing lab in the department of literature and languages. They will not assist with spelling. Please make sure someone proofs your paper. Excessive grammar, spelling and vocabulary errors will result in a lower grade. You should demonstrate mastery of organizing, structure and editing. **All assignments should be written using the APA Style Manual, Version 7.**

Citizenship: All Students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. (See Student 92s Guide Handbook, Policies and Procedures, Conduct).

Student Conduct: You are expected to demonstrate a professional attitude at all times. This includes respecting the thoughts of your peers as well as your instructor.

Also included are the following: participating in small and large group discussions, being on time, staying the entire time, accepting constructive criticism, listening, turning in high quality work, and understanding that this is a growth experience. Students who come into class expecting an A need to rethink their reason for being here. If you want an A, then you will work to earn the A.

Discriminatory, rude, and inappropriate language will not be tolerated, and students will be asked to drop the class. If a student continues to act in the same manner during future classes, the instructor reserves the right to drop the student from the course.

Plagiarism: Plagiarism **WILL NOT** be tolerated and will result in an automatic **F** in the course. Various versions of your work and final papers will be run through Turnitin software – this is not meant to “catch” you in the act, but rather assist you in seeing possible areas that may be unintentionally plagiarized and allow for editing your work.

Academic integrity is the pursuit of scholarly work free from fraud and deception and is an educational objective of this institution.

Texas A&M University-Commerce has explicit rules and regulations governing academic dishonesty and academic misconduct. As the University states, "All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment." These policies are stated in detail in the Student's Guide Handbook. Each student is expected to read this document and abide by the contained policies. These university policies will be followed in this class. The minimum penalty for an act of academic dishonesty will be the assignment grade of 0 or F on the assignment. The maximum penalty is expulsion from the University.

Texas A&M University-Commerce further does not tolerate **plagiarism** and other forms of academic **dishonesty**. Conduct that violates generally 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.

If you are unsure what constitutes plagiarism and how to avoid it. Visit the following websites:

<http://www.plagiarism.org/>

<http://writingcenter.unc.edu>

<http://www.indiana.edu/~wts/pamphlets/plagiarism.shtml>

AI Use in Course

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

Scholarly Expectations: All works submitted for credit must be original works created by the scholar uniquely for the class. It is considered inappropriate and unethical, particularly at the graduate level, to make duplicate submissions of a single work for credit in multiple classes, unless specifically requested by the instructor. Work submitted at the graduate level is expected to demonstrate higher-order thinking skills and be of significantly higher quality than work produced at the undergraduate level.

Withdrawal Policy:

Every student has the right to drop the course without penalty until the drop-date. Students dropping the course during this period will be given a DP (drop while passing). A grade of DP is GPA neutral, but a grade of DF counts as an F on your transcript.

If you choose to stop attending class, you may be dropped from the course due to excessive absences. If you are not satisfied with your grade in the course and wish to drop, it is YOUR responsibility to drop the course. Once a grade of DP or DF has been submitted, it cannot be changed.

A student may drop a course by logging into their myLEO account and clicking on the hyperlink labeled 'Drop a Class' from among the choices found under the myLEO section of the Web page.

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](http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx).
<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>

<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](#)

[Undergraduate Student Academic Dishonesty Form](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/documents/13.99.99.R0.03UndergraduateStudentAcademicDishonestyForm.pdf>

[Graduate Student Academic Dishonesty Form](#)

<http://www.tamuc.edu/academics/graduateschool/faculty/GraduateStudentAcademicDishonestyFormold.pdf>

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

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: [Office of Student Disability Resources and Services](#)

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

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.

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

Department or Accrediting Agency Required Content

Course Grading

Grading Scale: A = 90-100, B = 80-89, C = 70-79, D = 60-69, F = below 60.

Assignment Points	
Individual Major Assignments	Assignment Points
<ul style="list-style-type: none"> ● Math LP (Danielson) 	100 pts.
<ul style="list-style-type: none"> ● Science LP (5-E) 	100 pts.
<ul style="list-style-type: none"> ● Content Area Math Station Activity 	100 pts.
<ul style="list-style-type: none"> ● STEAM Activity Presentation 	100 pts.
<ul style="list-style-type: none"> ● 240Tutoring Diagnostic Assessments & Reflection <ul style="list-style-type: none"> ○ Science ○ Math 	100 pts. 50 pts (Assessment) 50 pts (Reflection)
<ul style="list-style-type: none"> ● Chapter Learning Journals (Chapter Reflections) (20 pts. each) <ul style="list-style-type: none"> ○ Entries 1-4 	100 pts
End of Course Learning Reflection	100 pts.