



ECE 460 TEACHING STEM IN ECE

COURSE SYLLABUS: FALL 2025

INSTRUCTOR INFORMATION

Instructor: Dr. Nicole Pearce

Office Location: Ed South 219

Office Hours: Email or Telephone or Virtual by Appointment

Office Phone: 903.886.5537

University Email Address: Nicole.pearce@tamuc.edu

Preferred Form of Communication: Email

Communication Response Time: Communication Response Time: 24 Hours or Less

COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings

Curriculum across the Early Childhood and Primary Years (Top Hat)

Course Description

This course emphasizes an integrated approach to early childhood curriculum development for young children. Relates early childhood pedagogy, research, and

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content areas of science, mathematics, engineering, technology and art to STEAM project-based, integrated and inquiry curriculum designs.

Student Learning Outcomes (learning objectives)

Learning Objectives/Student Learning Outcomes

SLOs/Objectives
Students will apply developmentally appropriate strategies and practices to plan effective and coherent instruction that embraces students' assets.
Students will construct developmentally appropriate, specific, and relevant learning objectives that measure student mastery of performance standards.
Students will create various assessment methods and strategies that are congruent with learning objectives and guide instructional planning.
Students will design an instructional plan that promotes a mutually respectful and collaborative class of actively engaged learners.
Students will incorporate the effective use of current technology to plan, organize, deliver, and evaluate instruction.

COURSE REQUIREMENTS

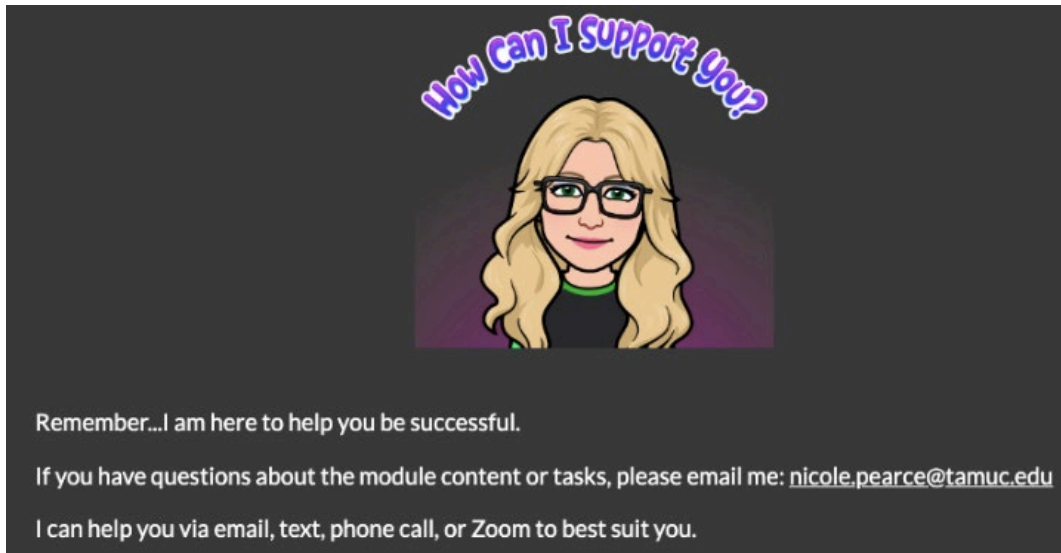
Minimal Technical Skills Needed

Students will need reliable computer and internet access for this course. Students must be able to effectively use myLeo email, myLeo Online D2L, and Microsoft Office.

Instructional Methods

This course is an online course. To be successful in this course, all content and course modules should be read and reviewed. All assignments must be completed. Please contact the instructor by email for any assistance.

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Student Responsibilities or Tips for Success in the Course

To be successful in this course, all content and course modules should be read and reviewed. All assignments (both graded and not graded) should be completed. Please contact the instructor by email for any assistance.

GRADING

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

A = 90%-100%

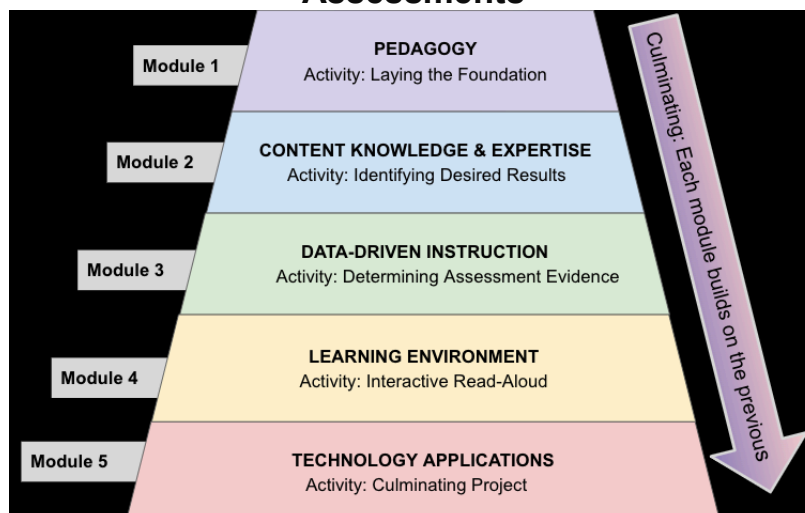
B = 80%-89%

C = 70%-79%

D = 60%-69%

F = 59% or Below

Assessments



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Each module task integrates 3 types of skills:

	Critical Thinking Skills	Analytical Skills	Information Literacy Skills
Definition	Critical thinking involves the ability to think clearly and rationally, understanding the logical connection between ideas. It encompasses various cognitive processes such as reasoning, evaluating evidence, and reflecting on assumptions, biases, and beliefs.	Analytical skills refer to the ability to deconstruct information into smaller parts to understand its structure, identify patterns, and solve problems. It involves the systematic examination of data or situations to draw logical conclusions.	Information literacy involves the ability to locate, evaluate, use, and communicate information in various formats effectively. It includes understanding the need for information, knowing how to find it, and critically assessing its quality and relevance.
Core Components	<ul style="list-style-type: none"> Identifying and evaluating arguments or claims. Recognizing inconsistencies or gaps in reasoning. Making informed judgments and decisions based on evidence. Reflecting on one's thought processes and assumptions 	<ul style="list-style-type: none"> Breaking down complex information or problems into smaller, manageable parts. Identifying relationships, patterns, and trends in data. Using logic and reasoning to understand how different elements connect. Developing hypotheses or solutions based on analysis. 	<ul style="list-style-type: none"> Recognizing when information is needed and determining the scope and type of information required. Searching for information efficiently using various tools and strategies. Evaluating the credibility, reliability, and bias of information sources. Effectively using and ethically sharing information.
Application	Used to solve complex problems, make decisions, and evaluate the credibility of information. Critical thinking is applicable across all disciplines, from science to humanities, and in daily life decision-making.	Frequently used in fields that require data interpretation, such as science, mathematics, engineering, finance, and research, to identify patterns, solve problems, or make predictions.	Essential for academic research, workplace tasks, and personal decision-making where credible and accurate information is needed. It is a foundational skill in navigating the information-rich digital age.

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

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.

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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 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

This is an online course; therefore, expect most communication to be online as well. Correspondence will always be through university email (your “myLeo” mail) and announcements in myLeo online (D2L). The instructor will make every effort to respond to emails within 24 provided the correspondence follows the requirements listed below. Students are encouraged to check university email daily.

All emails from students should include:

- Course name and subject in the subject line (ex. ECE 358 – Module 1)
- Salutation
- Proper email etiquette (no “text” emails – use proper grammar and punctuation)
- Student name and CWID after the body of the email

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COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

This is an online course... 100% of the class is delivered online.

- There are no campus visits or visits to designated sites.

An online course uses a computer and the Internet to deliver lessons and for interaction between the instructor and the student and the student to other students.

For students who are unable to attend classes on the A&M-Commerce campus because of distance or time conflicts, online classes allow flexibility of time and place while the objectives and content of the courses are essentially the same as those offered in the traditional classroom setting.

In an online course, the student accepts responsibility for learning outcomes.

The instructor's role is that of a facilitator and guide.

- Rather than face-to-face lectures, the instructor will provide information through online course materials and learning activities that are accessed through the Internet.
- Presentation of course materials will vary according to instructor design.
- The instructor will provide feedback and evaluation as the student completes weekly class sessions.

Online learning emphasizes the process. That is, online learning involves more than the accumulation and memorization of information.

- In online courses, high levels of collaboration and interactivity are required to seek, evaluate, and process the almost limitless amount of available and useful information.
- Online courses present students with opportunities to acquire the knowledge and skills necessary in the 21st-century workplace.

The time you should spend on this course per week:

Time per week over 15 weeks • Fall & Spring Semesters	9 hours per week
Time per week over 5 weeks • Summer I & Summer II Semester	27 hours per week

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>

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>

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ETAMU 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

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@tamuc.edu

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

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

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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 East Texas A&M University 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 East Texas A&M University campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

ETAMU Supports Students' Mental Health

The Counseling Center at East Texas A&M University, 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/counseling-center

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.

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Department or Accrediting Agency Required Content

Alignment of Assignments to Learning Objectives to TEA Standards

Module	Assignments/Tasks	Learning Objectives/SLOs	TEA Teacher Standards
Module 1 Pedagogy	Laying the Foundation <ul style="list-style-type: none"> Context for Learning STEAM overview 	Students will be able to apply developmentally appropriate strategies and practices to plan effective and coherent instruction that embraces students' assets.	EC-3 Core Test Framework: III.006 C PPR Standards: 1.16-19k, 1.21k, 1.6-19s, PPR Test Framework: I.003.A-H,
Module 2 Content Knowledge & Expertise	Identifying Desired Results <ul style="list-style-type: none"> TEKSs Learning Objective 	Students will be able to construct developmentally appropriate, specific, and relevant learning objectives that measure student mastery of performance standards.	PPR Standards: 1.7k, 1.6s, 1.8-1.11k, 1.7-11s, 1.12-15k, 1.12-15s
Module 3 Data-driven instruction	Determining Assessment Evidence <ul style="list-style-type: none"> Performance Task Rubric 	Students will be able to create various assessment methods and strategies that are congruent with learning objectives and guide instructional planning.	TEKS Standards: 5 PPR Standards: 1.29k, 1.25 & 1.27s
Module 4 Learning Environment	Interactive Read-Aloud <ul style="list-style-type: none"> Interactive Read-Aloud CRP Rubric 	Students will be able to design an instructional plan that promotes a mutually respectful and collaborative class of actively engaged learners.	TEKS Standards: 6 PPR Test Framework: I.003.A-H EC-3 Core Test Framework: III.006.A-B Teacher Preparation Standards: 1.E.i-iii
Module 5 Technology Applications	Culminating Project <ul style="list-style-type: none"> Digital presentation:STEAM project Self & Peer Evaluation 	Students will be able to incorporate the effective use of current technology to plan, organize, deliver, and evaluate instruction.	19 TAC §228.35(b)(2)(G) PPR Test Framework: III.009.A & D-F Technology Applications:1.1-3k, 1.1-5s, 2.1-4k, 2.1-10s, 3.1-3k, 3.1-7s, 4.1-3k, 4.1-4.12s, 6.4k, 7.1-3k, 7.3-5s, 7.7s, 7.11s, 7.14s Prekindergarten Guidelines: X.A.1-5

References

Module 1	<ol style="list-style-type: none"> American Psychology Association. (n.d.). Education and Socioeconomic Status. Retrieved August 03, 2020, from https://www.apa.org/pi/ses/resources/publications/education Edgar, D. W. (2012). Learning theories and historical events affecting instructional design in education: Recitation literacy toward extraction literacy practices. <i>Sage Open</i>, 2(4), 2158244012462707. Masters, G. (2018, August 27). The role of evidence in teaching and learning. Retrieved August 03, 2020, from https://www.teachermagazine.com.au/columnists/geoff-masters/the-role-of-evidence-in-teaching-and-learning
Module 2	<ol style="list-style-type: none"> Hoque, M.E. (2016). Three Domains of Learning: Cognitive, Affective and Three. <i>The Journal of EFL Education and Research</i>, 2(2). Minero, E. (2015, December 15). Giving Students the Opportunity to Drive Lessons. Retrieved August 03, 2020, from https://www.edutopia.org/practice/inquiry-based-learning-teacher-guided-student-driven Wiggins, G., Wiggins, G. P., & McTighe, J. (2005). <i>Understanding by design</i>. Ascd.

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Module 3	<ol style="list-style-type: none"> 1. Dugas, D. (2017). Group dynamics and individual roles: A differentiated approach to social-emotional learning. <i>The Clearing House: A Journal of Educational Strategies, Issues and Ideas</i>, 90(2), 41-47. 2. "Enhancing and Practicing Executive Function Skills with Children from Infancy to Adolescence." Center on the Developing Child at Harvard University. Retrieved from: https://developingchild.harvard.edu/resources/activities-guide-enhancing-and-practicing-executive 3. Rogoff, B. (1990). <i>Apprenticeship in thinking: Cognitive development in social context</i>. New York: Oxford University.
Module 4	<ol style="list-style-type: none"> 1. Bishop, R. S. (1990). Mirrors, windows, and sliding glass doors. <i>Perspectives: Choosing and Using Books for the Classroom</i>, 6(3): ix-iv. 2. Cooperative Children's Book Center. (2019). Publishing statistics on children's books about people of color and first/native nations and by people of color and first/native nations authors and illustrators. Retrieved from https://ccbc.education.wisc.edu/books/pstats.asp#USonly 3. DeVries, R., & Zan, B. (1994). <i>Moral classrooms, moral children: Creating a constructivist atmosphere in early education</i> (Vol. 47). Teachers College Press.

Bibliography

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Erikson, E.H. (1982). *The Life Cycle Completed*. New York: W.W.Northan & Company.

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Hyun, E. (2006). Transforming instruction into pedagogy through curriculum negotiation. *Journal of Curriculum and Pedagogy*, 3(1), 136-164. doi:10.1080/15505170.2006.10411587

Krogh, S. L., & Morehouse, P. (2020). *The early childhood curriculum: Inquiry learning through integration*. Routledge.

Ladson-Billings, G. (1994). *The dreamkeepers: Successful teachers of African American children*. San Francisco, CA: Jossey-Bass.

Lake, K. (1994). Integrated curriculum, School improvement research series. *Portland: Northwest Regional Education Laboratory's*.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge [England: Cambridge University Press.

Marlowe, B. A., & Page, M. L. (2005). *Creating and Sustaining the Constructivist Classroom*. Thousand Oaks, CA: Corwin Press.

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COURSE OUTLINE / CALENDAR

Module	Dates	16 Weeks	Tasks
Start Here	Jan 13-Jan 26	Week 1-2 • 2 weeks total	<ol style="list-style-type: none"> 1. Read & Explore Module Materials 2. Purchase <i>Top Hat</i> textbook 3. Activity: Syllabus Acknowledgment (20 points) 4. Activity: Survey on AI (20 points) <p>*Tasks due Sunday, January 26 at 11:59 pm</p>
1	Jan 27-Feb 16	Weeks 3-5 • 3 weeks total	<ol style="list-style-type: none"> 1. Read & Explore Module Materials 2. Top Hat: Module 1 (20 points) 3. UDL: Framework (20 points) 4. Activity: Laying the Foundation (40 points) <p>*Tasks due Sunday, February 16 at 11:59 pm</p>
2	Feb 17-Mar 9	Weeks 6-8 • 3 weeks total	<ol style="list-style-type: none"> 1. Read & Explore Module Materials 2. Top Hat: Module 2 (20 points) 3. UDL: Multiple Means of Engagement (20 points) 4. Activity: Identifying Desired Results (40 points) <p>*Tasks due Sunday, March 9 at 11:59 pm</p>
3	Mar 10-Mar 30	Weeks 9-11 • 3 weeks total	<ol style="list-style-type: none"> 1. Read & Explore Module Materials 2. Top Hat: Module 3 (20 points) 3. UDL: Multiple Means of Representation (20 points) 4. Activity: Determining Assessment Evidence (40 points) <p>*Tasks due Sunday, March 30 at 11:59 pm</p>
4	Mar 31-Apr 20	Weeks 12-14 • 3 weeks total	<ol style="list-style-type: none"> 1. Read & Explore Module Materials 2. Top Hat: Module 4 (20 points) 3. UDL: Multiple Means of Action & Expression (20 points) 4. Activity: STEAM Hook Learning Plan (40 points) <p>*Tasks due Sunday, April 20 at 11:59 pm</p>
5	Apr 21-May 4	Weeks 15-16 • 2 weeks total	<ol style="list-style-type: none"> 1. Read & Explore Module Materials 2. STEAM project Digital Presentation (60 points) 3. Self Evaluation (20 points) <p>*Tasks due Sunday, May 4th at 11:59 pm</p>

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