



WACO, TEXAS

**COURSE SYLLABUS
AND
INSTRUCTOR PLAN**

Math and Science for Early Childhood

CDEC 2307 H1

Emily Stottlemire

Note: This is a 16-week course.

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Course Description:

Explores the principles, methods, and materials for teaching young children math and science concepts through discovery and play. All Child Development (CDEC or TECA) courses must be passed with a grade of C or better for graduation. 25% of the requirements must be completed at McLennan. 2.000 Minimum GPA required for graduation. Semester Hours 3 (2 lec/2 lab)

Prerequisites and/or Corequisites:

No prerequisite.

Course Notes and Instructor Recommendations:

CDEC 2307 is typically offered in the Spring and Summer 1 semester.

A “hard copy” of all assignments is due at the beginning of each class on the due date. Emailing assignments will not be accepted. Exceptions will be made at the discretion of the professor.

Criminal Record Check: A criminal background check will be done during advising or during the first week of class. If the check reveals a conviction in your name, you may be dropped from class. Persons who have convictions must not work in a school/child-care facility.

Instructor Information:

Instructor Name: Emily Stottlemire
MCC Email; estottlemire@mclennan.edu
Office Telephone; 254/299-8523
Office Location: CSC Child Development Center
Office Hours: Mondays, 5:00 pm – 6:00 pm
(on Face to Face meeting dates) or by appointment

Required Text & Materials:

Title: ***Worms, Shadows, and Whirlpools,***
Author: Karen Worth and Sharon Grollman
Publisher: NAEYC

Title: ***Exploring Math and Science in Preschool,***
Publisher: NAEYC
ISBN: 978-1-938113-09-3

Title: Math and Science for Early Childhood Course Pack

MCC Bookstore Website: <http://www.mclennan.edu/bookstore/>

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Student Support/Resources:

MCC provides a variety of services to support student success in the classroom and in your academic pursuits to include counseling, tutors, technology help desk, advising, financial aid, etc. A listing of these and the many other services available to our students is available at <http://www.mclennan.edu/campus-resource-guide/>

College personnel recognize that food, housing, and transportation are essential for student success. If you are having trouble securing these resources, we encourage you to contact a success coach by calling (254) 299-8226. Students can visit the Completion Center Monday-Friday from 8:00 a.m.-5:00 p.m. to meet with a success coach and receive additional resources and support to help reach academic and personal goals. Paulanne's Pantry (MCC's food pantry) is open 12:00 p.m.-1:00 p.m., Monday-Friday, without an appointment. The Completion Center and pantry are located on the Second Floor of the Student Services Center (SSC).

Minimum Technical Skills:

Students should have basic computer skills, knowledge of word processing software, and a basic understanding of how to use search engines and common web browsers.

Backup Plan for Technology:

In the event MCC's technology systems are down, you will be contacted/notified through your MCC student email address. Please note that all assignments and activities will be due on the date specified in the Instructor Plan, unless otherwise noted by the instructor.

* [Click Here for the Minimum System Requirements to Utilize MCC's D2L|Brightspace](http://www.mclennan.edu/center-for-teaching-and-learning/teaching-commons/requirements)
(www.mclennan.edu/center-for-teaching-and-learning/teaching-commons/requirements)
Click on the link above for information on the minimum system requirements needed to reliably access your courses in MCC's D2L|Brightspace learning management system.

Methods of Teaching and Learning:

The content and information for this course will be presented in a blended format. This means that some class sessions will be face to face in the classroom, and some class sessions will be online.

The information will be presented through power point, lectures, videos, discussions and "hands on" planning/implementation of activities that can be done with young children.

It is the student's responsibility to participate in class (online and face to face) and to do the assigned readings/assignments, etc. to prepare for class.

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Course Objectives and/or Competencies:

By the end of the course, the student will be able to:

1. Relate the sequence of cognitive development to the acquisition of math and science concepts.
 - a. Summarize the sequential development of mathematical concepts.
 - b. Outline appropriate science concepts for children.
 - c. Describe how the development of mathematical concepts promotes children's thinking skills.
 - d. Explain how to promote children's cognitive development and understanding of their world through active, hands-on exploration of science concepts and processes.
 - e. Compare theories of cognitive development as they relate to math and science.
 - f. Summarize how brain development affects concept formation.
 - g. Compare gender similarities and differences in the acquisition of math and science concepts.
2. Describe the scientific process and its application to the early childhood indoor and outdoor learning environments.
 - a. Explain how to encourage all children to view themselves as competent scientific explorers.
 - b. Describe ways to promote all children's ability to think scientifically (e.g., by providing opportunities to observe, describe, classify and order).
 - c. Summarize ways to nurture all children's natural curiosity by encouraging them to explore and make discoveries about their world (e.g., by using their senses to gain information, draw conclusions and report outcomes).
3. Develop strategies which promote thinking and problem-solving skills in children.
 - a. Explain how instructional methods involving the use of various types of thinking (e.g., exploration, discovery learning, problem solving) can enhance children's mathematical and scientific understanding.
 - b. Describe how to integrate curriculum content through a variety of learning experiences so children make connections across disciplines.
 - c. Explain techniques for integrating math and science throughout the curriculum.
 - d. Plan developmentally appropriate methods that include play, small group projects, open-ended questioning, group discussion, problem solving, cooperative learning and inquiry experiences to help children develop intellectual curiosity, solve problems, make decisions and become critical thinkers.
 - e. Brainstorm strategies to encourage girls to feel competent in math and science.
4. Utilize observation and assessment as a basis for planning discovery experiences for the individual child.
 - a. Review a variety of assessment strategies.
 - b. Explain how assessment information is interpreted and used to provide developmentally appropriate learning activities.
 - c. Use a variety of assessment strategies to monitor children's progress in achieving outcomes and planning learning activities.

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5. Create, evaluate and/or select developmentally appropriate materials, equipment and environments to support the attainment of math and science concepts.
 - a. Evaluate children's books, software, manipulatives, music, blocks and other materials which enhance math and science concepts for developmental appropriateness.
 - b. Describe how to create indoor and outdoor environments that encourage emergent numeracy and scientific literacy by offering children varied, meaningful and concrete learning experiences.
 - c. Discuss how technology can be philosophically and physically integrated to support development of math and science concepts in the curriculum.
 - d. Explore community resources, including cultural, available for enhancing math and science concepts.
 - e. Make and use developmentally appropriate, culturally diverse and nonsexist activities and materials to support development of specific math and science concepts.
 - f. Adapt math and science activities, materials, equipment and environments for children

The Secretary's Commission on Achieving Necessary Skills (SCANS) was appointed by the Secretary of Labor to determine the skills our young people need to succeed in the world of work. The Commission's fundamental purpose is to encourage a high-performance economy characterized by high-skill, high-wage employment. The learning objectives of this course have been linked to the scans Competencies and Foundational Skills. (To view this report, see Attachment A.)

Course Outline or Schedule:

See Brightspace for course schedule.

Course Grading Information:

Assignments: Assignments are due at the beginning of class. Place them in the envelope and sign the envelope. Be sure to keep all returned assignments.

Tests: There will be 3 tests and a final exam. Tests will be accessed online through Brightspace.

Activity Plan/Presentation: You will write an activity plan, for a science activity or for a math activity. You will present a math or a science activity to the class. A rubric will be provided.

Article Reviews: You will write a review of videos and articles assigned in class. See assignment rubric for specific requirements.

Observation/Assessment Assignment: Assessment of various activities for appropriateness. This will be an in-class assignment designed to assess if activities are meeting children's needs.

Classroom Environment Observation: Observe an early childhood classroom environment and determine how the environment promotes learning in math and science.

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Reflection Papers: You will reflect on lectures/articles and ideas assigned.

*See individual assignment sheets for details/requirements.

Evaluation/Grading: Students are responsible for knowing material in reading assignments and information presented in class by the instructor, special speakers, and other students. _____

- Class Involvement – 15%
Attendance, Discussion Boards, Participation in class activities, Interest
- Tests - 30%
3 tests
- Final Exam – 10%
- Classroom Environment Observation Assignment – 10%
Is it math or science?
- Class Presentation with Activity Plan – 10%

- Reflection Papers/Article Reviews – 15%
Assigned Articles – Instructor Choice (Articles will be on Brightspace)
- Observation/Assessment Assignment – 10%

Evaluation/Grading The system of grading will be based on the general standard of:

Letter Grade	A	B	C	D	F
Total Points	100 – 90	89 – 80	79 – 70	69 – 60	59 or Below

A minimum final grade of C is required in all CDEC classes for graduation.

W Withdrew - this grade is given for an instructor or student initiated course withdrawal through the 12th week of a semester (fourth week, Summer day term; sixth week, Summer nine-week term). After the 12th week or until the end of the semester (fourth week, Summer day term; sixth week, Summer nine-week term), if a student withdraws from a course the instructor will either assign a W if passing work was being accomplished or an F if the student was doing failing work.

I Incomplete - is given when a course is incomplete because of a student's absence caused by reasons acceptable to the instructor. To be eligible, the student must have essentially completed the course. If work is not made up within the following long semester, the "I" will be changed to an "F" and the course must be repeated if credit is to be given.

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Late Work, Attendance, and Make Up Work Policies:

No late work will be accepted. Students have the responsibility of keeping up with due dates.

Tests:

Tests will be administered/accessed/taken online through Brightspace. See Course Schedule. Tests must be submitted by stated deadlines. If deadlines are missed, make-up tests will be arranged on a case to case basis. It is the responsibility of the student to contact the instructor to make the arrangements to make up a test.

***Reminders:**

- Late assignments will not be accepted.
- To receive an incomplete, you must have a passing grade in the class.
- Keep all returned assignments.
- It will be important to log in and participate in online classes. Information and reminders for preparing for face to face classes are important.

Student Behavioral Expectations or Conduct Policy

In general, students are expected to maintain classroom decorum that includes respect for other students and the instructor, prompt and regular attendance, and an attitude that seeks to take full advantage of the education opportunity. The Highlander Guide describes the rights, privileges, and obligations of students affiliated with MCC. The complete guide may be accessed by clicking here: [Highlander Guide](#)

Ethics: It is the student's responsibility to read the General Conduct Responsibility Policy in the Highlander Guide (MCC Student Handbook) and the Child Development Code of Conduct Guidelines. Any breeches of conduct will result in disciplinary action. Acts of dishonesty and disruptive behavior will not be tolerated. Students may be asked to leave class if necessary.

Distractions: Cell phones and other electronic devices must be turned off during class. I welcome and encourage appropriate and pertinent questions, comments and discussion. I also encourage professional, mature behavior. Use time outside of class to catch up on personal conversations.

Tardiness: Students are expected to arrive at class on time and to remain for the entire class period. Arriving after class begins or leaving prior to the end of the class period will affect his/her grade. Two late arrivals or early departures equals one absence.

<p>Points will be deducted if students repeatedly leave class while class is in progress and/or does not return after a break.</p>

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* [Click Here for the MCC Academic Integrity Statement](#)
(www.mclennan.edu/academic-integrity)

The link above will provide you with information about academic integrity, dishonesty, and cheating.

* [Click Here for the MCC Attendance/Absences Policy](#)
(www.mclennan.edu/highlander-guide/policies)

Click on the link above for the college policies on attendance and absences. Your instructor may have guidelines specific to this course.

Accommodations/ADA Statement

Any student who is a qualified individual with a disability may request reasonable accommodations to assist with providing equal access to educational opportunities. Students should contact the Accommodations Coordinator as soon as possible to provide documentation and make necessary arrangements. Once that process is completed, appropriate verification will be provided to the student and instructor. Please note that instructors are not required to provide classroom accommodations to students until appropriate verification has been provided by the Accommodations Coordinator. Instructors should not provide accommodations unless approved by the Accommodations Coordinator. For additional information, please visit mclennan.edu/disability.

Students with questions or who require assistance with disabilities involving physical, classroom, or testing accommodations should contact:

disabilities@mclennan.edu

254-299-8122

Room 319, Student Services Center

* [Click Here for more information about Title IX](#)
(www.mclennan.edu/titleix)

We care about your safety, and value an environment where students and instructors can successfully teach and learn together. If you or someone you know experiences unwelcomed behavior, we are here to help. Individuals who would like to report an incident of sexual misconduct are encouraged to immediately contact the Title IX Coordinator at titleix@mclennan.edu or by calling Dr. Drew Canham (Vice President for Student Success) at 299-8645. Individuals also may contact the MCC Police Department at 299-8911 or the MCC Student Counseling Center at MCC by calling 299-8210. The MCC Student Counseling Center is a confidential resource for students.

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McLennan's Title IX webpage (<http://www.mclennan.edu/titleix/>) contains more information about definitions, reporting, confidentiality, resources, and what to do if you or someone you know is a victim of sexual misconduct, gender-based violence or the crimes of rape, acquaintance rape, sexual assault, sexual harassment, stalking, dating violence or domestic violence.

** You will need to access each link separately through your Web browser (for example: Internet Explorer, Mozilla, Chrome, or Safari) to print each link's information.*