COURSE SYLLABUS

Tunxis Community College

Education That Works For a Lifetime

Course Title:	Science & Math for Children	**Date submitted:**	May 2019 (AAC: 19-25)
Department:	Social Sciences		
Curriculum:	Early Childhood Education		

Course Descriptors: Make certain that the course descriptors are consistent with college and Board of Trustees policies, and the current course numbering system.

Course Code: (eg. ACC 101)	ECE*109
Course Type:	L

A: Clinical B: Lab D: Distance Learning
I: Individual/Independent L: Lecture N: M: Seminar Internship
P: Practicum U: Studio
X: Combined Lecture/Lab Y: Combined Lecture/Clinical/Lab Z: Combined Lecture/Studio

Prerequisites:

C- or better in Integrated Reading and Writing I (ENG*065) or placement into Integrated Reading and Writing II (ENG*075) OR Introduction to College Reading & Writing (ENG*093) OR Introduction to College English (ENG*096) OR Reading & Writing VI (ESL*162) or Composition (ENG*101)
AND C- or better in Prealgebra & Elementary Algebra (MAT*085) or Introductory Algebra (MAT*094) or Elementary Algebra Foundations (MAT*095) **OR** placement into any credit-level mathematics course.

Elective Type:	G

E: English FA: Fine Arts HI: History FL: Foreign Language
G: General HU: Humanities LAS: Liberal Arts & Sciences M: Math
S: Science SS: Social Science

Credit Hours:	3
Developmental: (yes/no)	No
Contact Hours: Lecture:	3
Clinical:	0
Lab:	0
Studio	0
Other:	0
TOTAL:	3
Class Maximum:	35
Semesters Offered:	F/S

Corequisites:

None

Other Requirements:

None

Catalog Course Description:

The focus is on mathematics and science for young children. Students will acquire knowledge of materials and methods for integrating math and science concept development into the curriculum. Emphasis will be on understanding these areas from a child development perspective. Active participation working with children will be required.

Topical Outline: List course content in outline format.

1. Concept development in mathematics and science
   a. How concepts develop
   b. How concepts are acquired

c. Promoting young children's concept development through problem solving
d. Assessing the child's developmental level
e. The basics of science
f. How young scientists use concepts

2. Fundamental concepts and skills
   a. One-to-one correspondence
   b. Number sense and counting
   c. Logic and classifying
   d. Comparing
   e. Shape
   f. Spatial sense
   g. Parts and wholes
   h. Language and concept formation
   i. Fundamental concepts in science
3. Integrating the curriculum through dramatic play and thematic units and projects
4. The math and science environment
   a. Materials and resources for math and science
   b. Math and science in action
   c. Math and science in the home

Outcomes:
Describe measurable skills or knowledge that students should be able to demonstrate as evidence that they have mastered the course content.

Upon successful completion of this course, the student will be able to do the following:

COURSE:

1. demonstrate an understanding of the background and curricular areas of math and science as they relate to Early Childhood Education;
2. describe commonalties between mathematics and science;
3. understand the importance of the Professional standards for mathematics and science
4. use the CT Preschool Curriculum Framework (Logical Content Standards—Mathematical/Scientific Thinking) as a guide to create experiences and activities, which provide children with opportunities to: a. express wonder, ask questions and seek answers about the natural world; b. recognize and solve problems through active exploration, including trial and error and interacting with peers and adults; c. organize and express their understanding of common properties and attributes of things;
5. explore and gain familiarity with materials and methods appropriate to different developmental stages in mathematics and science;
6. develop the ability to effectively plan, implement, and evaluate mathematics and science activities for young children;
7. explain the importance of language in communicating, reasoning and making connections in regard to math and science;
8. implement strategies to encourage family involvement in developing math and science concepts;
9. recognize the importance of the home as an educational setting for math and science; and
10. relate math and science activities to a child's everyday life.

PROGRAM: *(Numbering reflects Program Outcomes as they appear in the college catalog)*

1. use knowledge of how children develop and learn in order to provide opportunities that support the physical, emotional, social, language, cognitive, and aesthetic development of all young children from birth through age 8
2. use knowledge of how young children differ in their development and approaches to learning to support the development and learning of individual children
3. c and modify environments and experiences to meet the individual needs of all children, including children with disabilities, developmental delays, and special abilities

17. actively seek out opportunities to grow professionally by locating and using appropriate professional literature, organizations, resources, and experiences to inform and improve practice

	GENERAL EDUCATION: *(Numbering reflects General Education Outcomes as they appear in the college catalog)* 5. **Information Literacy/Continuing Learning -** Students will be able to use traditional and digital technology to access, evaluate, and apply information to the needs or questions confronting them throughout their academic, professional, and personal lives. **Demonstrates**: Collects and synthesizes relevant and authoritative information resources appropriate to need and audience and utilizes current technologies to solve problems, complete projects, and make informed decisions. **Does Not Demonstrate:** Does not collect and synthesize relevant and authoritative information resources appropriate to need and audience nor satisfactorily utilize current technologies to solve problems, complete projects, and make informed decisions.
Evaluation: List how the above outcomes will be assessed.	**Assessment will be based on the following criteria:**
Instructional Resources: List library (e.g. books, journals, on-line resources), technological (e.g. Smartboard, software), and other resources (e.g. equipment, supplies, facilities) required and desired to teach this course.	Required: None Desired: None
Textbook(s)	Refer to current academic year printout.