

**I. COURSE INFORMATION**

- A. Early Childhood Education 210 Developing Math and Science in Early Childhood
- B. 3 credit hours
- C. Charlesworth, Rosalind. *Math and Science for Young Children*. 8<sup>th</sup> ed. Boston: Cengage, 2016
- D. Prerequisites: Enrollment in or completion of ECE 102 Principles of Early Childhood Education or consent of ECE coordinator

**II. COURSE DESCRIPTION**

The student will explore how to facilitate early math and science skills in young children. Both formal and informal instructional strategies will be learned. The student will become familiar with current research regarding foundational math and science skill development in the young child.

**III. LEARNING OUTCOMES** (CDA2-30 hours, CDA7-5 hours, CDA8-10 hours)

- A. Use developmentally appropriate math and science terminology correctly
- B. Use scientific inquiry and logical thinking when approaching problem solving with young children
- C. Understand how to provide math and science learning experiences in a natural setting
- D. Apply the Kansas Early Language Standards in planning math and science learning for young children
- E. Evaluate developmentally appropriate games and activities in regards to the teaching of math and science concepts
- F. Evaluate the effectiveness of teaching strategies in regards to math and science learning

**IV. MAJOR CONTENT AREAS**

- A. Foundations, principles, and standards
- B. Planning and assessment
- C. Early math concepts: matching, classification, comparing, and ordering or seriation
- D. Developing number sense
- E. Understanding our place value system
- F. Data analysis: graphing and probability
- G. Early algebra
- H. Problem solving: multiplication and division
- I. Geometry: space and shape
- J. Measurement
- K. Thematic units

**V. ASSIGNMENTS** (may include but are not limited to)

- A. Application assignments
- B. Discussions
- C. Projects
- D. Quizzes and exams

**VI. EVALUATION METHODS** (may include but are not limited to)

- A. Application assignments
- B. Discussions
- C. Projects
- D. Quizzes and exams