Bossier Parish Community College  
Master Syllabus

Course Prefix and Number: CDYC 170                              Credit hours: 3

Course Title: Math and Science for Early Childhood Educators

Course Prerequisites: Charlesworth, Rosalind and Karen Lind; Math and Science for Young Children, 7th ed., Cengage Publishing

Textbook(s): none

Course Description: This course presents an organized, sequential approach to creating developmentally appropriate math and science curricula for young children. It is designed to support children's construction of concepts and skills essential to a basic understanding of mathematics and science. Three types of learning approaches are emphasized: naturalistic, informal, and structured.

Learning Outcomes:

At the end of the course, the student will:

A. use theories and principles of concept development in mathematics and science education in early childhood;
B. apply fundamental concepts, attitudes and skills in mathematics and science;
C. demonstrate the ability to use higher-level symbols and operations in order to instill in young children a strong mathematic and scientific foundation;
D. create an environment conducive to mathematic and scientific learning.

To achieve the learning outcomes, the student will:

1. compare the learning theories of concept development and thought; (A)
2. describe how science and math concepts are interrelated; (A) (B)
3. maintain a math/ science activity file with activities that include: one-to-one correspondence, number sense and counting, sorting, classification, patterning, seriating, comparing, geometry, spatial sense, likenesses/differences, parts/wholes, measurement of volume, weight, length, time, temperature and math/ science language and literacy, technology, and logical thinking skills; (B) (D)
4. present a conservation of number problem to preschool children; (A) (B) (C)
5. explain the various types of learning experiences and learning styles; (A) (B) (C) (D)
6. create non-routine math problems and describe the steps and strategies in solving each; (A) (B) (C)
7. seek permission and assess the concept development level of young children; (A) (B)
8. discuss the impact of a quality early childhood math and science program in a child's primary grade experience. Explain how higher-level symbols and operations develop in early childhood. (A) (C)

**Course Requirements:** The following are intended to help the learner meet the stated learning outcomes of the course: students will attend class; students will be evaluated on results of semester exams; students will be required to participate in class discussions and activities.

*In addition to requirements stated herein, each instructor will communicate additional requirements unique to his/her section via the instructor’s section syllabus.*

**Course Grading Scale:**

- A 90-100%
- B 80-89%
- C 70-79%
- D 60-69%
- F 59% or below

**Attendance Policy:** The college attendance policy is available at [http://www.bpcc.edu/catalog/current/academicpolicies.html](http://www.bpcc.edu/catalog/current/academicpolicies.html)

**Course Fees:** None

**Nondiscrimination Statement:** Bossier Parish Community College does not discriminate on the basis of race, color, national origin, gender, age, religion, qualified disability, marital status, veteran's status, or sexual orientation in admission to its programs, services, or activities, in access to them, in treatment of individuals, or in any aspect of its operations. Bossier Parish Community College does not discriminate in its hiring or employment practices.

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