GROSSMONT COLLEGE

Official Course Outline

CHILD DEVELOPMENT 127 – SCIENCE AND MATHEMATICS FOR CHILD DEVELOPMENT

1. Course Number Course Title Semester Units Semester Hours

CD 127 Science and Mathematics 3 units 3 hours lecture: 48-54 hours

for Child Development 96-108 outside-of-class hours

144-162 total hours

2. Course Prerequisites

None.

Corequisite

None.

Recommended Preparation

Child Development 125.

3. Catalog Description

This course stresses the importance and value of science and mathematics in programs for young children. Students will gain an understanding of how children develop basic concepts of math and science, evaluate curriculum, and utilize appropriate methods and materials for early childhood education programs. Emphasis will be on the diverse and developmental difference of children.

1. Course Objectives

The student will:

a. Review the stages of children’s cognitive development and acquisition of mathematical and scientific understanding.

b. Assess appropriate science and mathematics curriculum for early childhood education programs that meet California preschool curriculum standards and guidelines.

c. Identify resources and innovative approaches and demonstrate skills in selecting and developing science and mathematics activities and curriculum for young children.

d. Develop materials for children to explore science and mathematical concepts in a preschool environment.

e. Compose plans to integrate science and mathematics throughout the early childhood curriculum.

f. Demonstrate science and math experiences to a group of young children.

g. Evaluate materials and tools, including technological resources, for early childhood math and science curriculum.

5. Instructional Facilities

a. Classroom with sink, water, movable tables.

b. Computer accessibility with Internet access.

6. Special Material Required Of Student

None.

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7. Course Content

a. Cognitive, physical, and social/emotional, development in young children.

b. Standards and goals for science and mathematics for children.

c. The role of the teacher in establishing an environment that promotes science and mathematical concept development for young children.

d. Exploration of a wide variety of materials and methods for presenting science and math concepts to young children.

e. Compiling science and mathematical resources for working with young children.

f. Evaluating computer software for young children.

g. Community and web resources for science and math.

h. Adapting curriculum to address the diverse and developmental differences of children.

8. Method of Instruction

a. Lecture and discussion.

b. Demonstrations, group activities.

c. Multimedia and audiovisual presentations.

9. Methods of Evaluating Student Performance

a. Student classroom demonstrations.

b. Resource materials created by student.

c. Written plans for science and math experiences.

d. Observation and evaluation of children.

e. Classroom teaching demonstration.

f. Written final exam.

10. Outside Class Assignments

a. Creation of math and science curriculum including materials.

b. Assigned readings.

c. Research on math and science resources.

d. Observation of children in a childhood education setting.

e. Demonstration and evaluation of math and science curriculum with children.

11. Texts

a. Required texts:

(1) California Department of Education *California Preschool Learning Foundations, Vol 1.* Sacramento, CA, 2008

(2) California Department of Education *California Preschool Curriculum Framework Vol 1.* Sacramento, CA, 2010

1. Supplementary texts and workbooks:

Louv, Richard; *Last Child in the Woods:Saving Our Children from Nature Deficit Disorder.* Chapel Hill, NC, Alqonquin Books, 2008

Addendum: Student Learning Outcomes

Upon completion of this course, our students will be able to do the following:

a. Develop and implement appropriate science, math and technology exploration activities for young children.

b. Compose plans to integrate science and mathematics throughout the early childhood curriculum.

c. Demonstrate science and math experiences to a group of young children.

Date approved by the Governing Board: May 17, 2011