BUTTE COLLEGE
COURSE OUTLINE

I. **CATALOG DESCRIPTION**

CDF 67 - Math and Science Curriculum for Young Children **3 Unit(s)**

Prerequisite(s): NONE
Recommended Prep: Reading Level V; English Level IV; Math Level Intro
Transfer Status: CSU
51 hours Lecture

This course surveys the philosophy, principles, and implementation of math as well as natural and physical science experiences for young children. Focused on theory of child development, this course emphasizes the process of observation, assessment and curriculum development related to math and science for early childhood programs.

II. **OBJECTIVES**

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

A. Design, prepare and evaluate developmentally appropriate science curriculum for young children.
B. Design, prepare, and evaluate developmentally appropriate math curriculum for young children.
C. Describe principles and theories of math and science as they relate to early childhood education.
D. Explain the value of math and science experiences as a part of the early childhood curriculum.
E. Assess math and science activities for developmental and age appropriateness for young children.

III. **COURSE CONTENT**

A. **Unit Titles/Suggested Time Schedule**

Lecture

Topics	Hours
1. Orientation/Introduction	3.00
2. Principles and theories of math activities	3.00
3. Principles and theories of science activities	3.00
4. Value of math experiences in the curriculum	3.00
5. Value of science experiences in the curriculum	3.00
6. Assessing curriculum and environments for developmental and age appropriateness	6.00
7. Planning and preparing math activities	9.00
8. Planning and preparing science activities	9.00
9. Implementation of math activities	6.00
10. Implementation of science activities	6.00
Total Hours	51.00

IV. **METHODS OF INSTRUCTION**

A. Lecture
B. Collaborative Group Work
C. Class Activities
D. Homework: Students are required to complete two hours of outside-of-class homework for each

hour of lecture
E. Multimedia Presentations

V. **METHODS OF EVALUATION**
A. Projects
B. Demonstration
C. Class participation
D. Written Assignments

VI. **EXAMPLES OF ASSIGNMENTS**
A. Reading Assignments
1. Read an article about the value of hands-on experiences for young children and discuss the value in the childcare environment.
2. Read an article about the importance of natural environments in learning experiences for young children and identify key factors.
B. Writing Assignments
1. Plan and prepare developmentally appropriate curriculum experiences to implement with children.
2. Prepare a math or science inquiry related to children's needs or interests and report findings in an observation report.
C. Out-of-Class Assignments
1. Collect natural materials for curriculum activities and come prepared to discuss how they are developmentaly appropriate for children.
2. Observe science and math environments in at least 2 different early childhood settings and share potential opportunities and challenges identified to classmates.

VII. **RECOMMENDED MATERIALS OF INSTRUCTION**
Textbooks:
A. Charlesworth, R. & Lind, K. Math and Science for Young Children. 7th Edition. Cengage Learning, 2012.

Created/Revised by: Carrie Roberson
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