CHLD 55.2 Course Outline as of Fall 2010

CATALOG INFORMATION

Dept and Nbr: CHLD 55.2 Title: EXPLORATIONS DISCOVERIES
Full Title: Explorations and Discoveries
Last Reviewed: 9/26/2022

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	3.00	17.5	Lecture Scheduled	52.50
Minimum	3.00	Lab Scheduled	0	17.5	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	3.00		Contact Total	52.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 105.00 Total Student Learning Hours: 157.50

Title 5 Category:	AA Degree Applicable
Grading:	Grade or P/NP
Repeatability:	00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:	
Formerly:	CHILD 55.2

Catalog Description:
This course familiarizes students with constructivist theories of cognitive development. Students will actively explore, experience, and develop math and science concepts suitable for young children. They will learn to implement age-appropriate activities for children aged 0-8.

Prerequisites/Corequisites:

Recommended Preparation:
Course Completion of CHLD 10 or (CHLD 110.1 and 110.2) and CHLD 90.4; Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Schedule of Classes Information:
Description: This course familiarizes students with constructivist theories of cognitive development. Students will actively explore, experience, and develop math and science concepts suitable for children aged 0-8. (Grade or P/NP)
Prerequisites/Corequisites:
Recommended: Course Completion of CHLD 10 or (CHLD 110.1 and 110.2) and CHLD 90.4;

Eligibility for ENGL 100 or ESL 100
Limits on Enrollment:
Transfer Credit: CSU;
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**	Effective:	Inactive:
CSU GE:	**Transfer Area**	Effective:	Inactive:
IGETC:	**Transfer Area**	Effective:	Inactive:

CSU Transfer:	Transferable	Effective:	Fall 1987	Inactive:
UC Transfer:		Effective:		Inactive:

CID:

Certificate/Major Applicable:
Certificate Applicable Course

COURSE CONTENT

Outcomes and Objectives:
Upon completion of this class students will be able to:
1. Develop, demonstrate, and assess math and science activities for young children utilizing constructivist teaching strategies.
2. Define and evaluate developmentally appropriate math and science curriculum for young children.
3. Create environments that support math and science learning for young children.
4. Identify foundational knowledge and skills necessary for learning math.
5. Evaluate awareness of traditional gender bias in the teaching of math and science, and incorporate methods that are bias-free.
6. Foster and support children's natural curiosity about the world around them.
7. Assess the possibilities of "found materials" including those occurring in nature for use in the creation of science and math projects, and develop appropriate activities.

Topics and Scope:

I. Constructivist theories of cognitive development and how children learn
   A. Theorists
      1. Piaget
      2. Vygotsky
      3. Others
   B. Developmental ranges and interests
II. Developing and assessing quality math and science experiences
   A. Identifying and building on children's experiences
   B. Developing activities and units of study
      1. Using an integrated curriculum
      2. Active involvement and hands-on curriculum techniques

3. Promoting questioning strategies on the part of both children and teachers
4. Modifying activities for developmental stages

C. Creating inviting and interesting math and science environments

D. Safety

III. Survey of math and science concepts and related activities

A. Matching, patterning
B. Number, counting, sets
C. Quantification
D. Ordering, sequence, etc.
E. Comparing, classification, graphing
F. Space, shape
G. Parts and wholes
H. Predicting, inferring
I. Physical knowledge
J. Nature education
K. How things change

IV. Utilizing resources for teaching math and science

A. Found objects
B. Natural objects and materials
C. Community resources for recycled materials
D. Appropriate games and other toys and learning materials
E. Other teaching resources including web based materials, curriculum kits and books

V. Creating a children's math and science library

A. Books and other media for children
B. Books and other media for teachers

VI. Equity issues in teaching science and math

A. Understanding bias in teaching math and science
B. Creating strategies for an inclusive curriculum

Assignment:

Assignments may include:

A. Activity reports: Written assessments of math and science activities, approximately eight assignments of 1-3 pages each.

B. Curriculum activities:

1. Development, evaluation and oral presentation of 3-4 appropriate math and science activities that include:
   a) application of developmental and constructivist theory
   b) age-appropriate use of materials
   c) incorporation of attractive, inviting environments
   d) awareness of gender equity considerations
2. Outside reading of text and handouts, approximately 15 pages per week.
3. Observation of an early childhood setting.
4. Written observation and assessment of math and science curriculum in an early childhood setting, approximately one to two assignments of 3-5 pages each.
5. Written responses to reading, approximately four of 2-3 pages each.

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Reading reports, Written assignments, observations, response papers	Writing 40 - 60%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

None	Problem solving 0 - 0%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Class performances, Field work, Curriculum activities	Skill Demonstrations 20 - 45%

Exams: All forms of formal testing, other than skill performance exams.

None	Exams 0 - 0%

Other: Includes any assessment tools that do not logically fit into the above categories.

Class participation	Other Category 15 - 25%

Representative Textbooks and Materials:
THE YOUNG CHILD AS SCIENTIST: A CONSTRUCTIVIST APPROACH TO EARLY CHILDHOOD SCIENCE EDUCATION by Christine Chaille, Lory Britain, 3rd edition, Allyn & Bacon publishing, Boston, MA, 2002.
YOUNG CHILDREN REINVENT ARITHMETIC: IMPLICATIONS OF Piaget's Theory by Constance Kamii, Teachers College Press, New York, 2000.