Montgomery County Community College
EDU 229
Teaching of Science in the Pre-School and Elementary Grades
3-3-0

COURSE DESCRIPTION:
Teaching of Science in the Pre-School and Elementary Grades (EDU 229) presents science content, teaching techniques and materials used in contemporary pre-school / elementary science programs. Students will learn ways to focus instruction on helping children understand and utilize the scientific method in order to think critically and enforce science standards throughout lessons. Students will participate in hands-on science activities.

PREREQUISITE(S):
None

CO-REQUISITE(S):
None

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

LEARNING OUTCOMES	LEARNING ACTIVITIES	EVALUATION METHODS
1. Discuss the compatibility between science studies, constructivist learning theory, and practices that promote science literacy.	Journal Assignments Classroom Discussion Lecture	Rubric for journal Assignments
2. Use diagnostic skills, instructional strategies, and classroom management techniques to foster science learning in small groups as well as whole class settings.	Lecture Group Projects (Class Presentations – Science Centers) Science Activities/Experiments Science Lesson plan	MCCC Lesson Plan rubric Teacher Observations
3. Explain the science process skills and utilize them as tools that will enable students to gather and reason about data for themselves.	Lecture Science Activities/Experiments Classroom Discussion	Midterm Exam Final Exam

LEARNING OUTCOMES	LEARNING ACTIVITIES	EVALUATION METHODS
4. Design lessons that are developmentally appropriate and sensitive to the needs, values, and interests of a diverse group of children.	Lecture Class Discussion Science Lesson plan	MCCC Lesson Plan rubric
5. Construct assessment methods that are compatible with teaching goals and methods that allow for multiple ways of representing knowledge.	Lecture Group work/activities (Class Presentations) Class Discussion Science Lesson plan	MCCC Lesson Plan rubric Teacher Observations Midterm Exam Final Exam

At the conclusion of each semester/session, assessment of the learning outcomes will be completed by course faculty using the listed evaluation method(s). Aggregated results will be submitted to the Associate Vice President of Academic Affairs. The benchmark for each learning outcome is that *70% of students will meet or exceed outcome criteria*.

SEQUENCE OF TOPICS:

1. Perspectives on science and sciencing
2. Teaching for thinking
3. Perspectives on the inter-relationship between play and sciencing
4. Organizing a science program
5. Sciencing activities/ experiments
6. Problem solving and the scientific method

LEARNING MATERIALS:

Textbook: Martin, David J. *Elementary Science Methods: A Constructivist Approach* (6th ed.). Belmont, CA: Wadsworth.

Other learning materials may be required and made available directly to the student and/or via the College's Libraries and/or course management system.

COURSE APPROVAL:

Prepared by: Helen Gingrich; Carol-Rae Sodano; D. Creciun Date: 1996

Revised by: Elizabeth Lattanzi Date: 3/1/2013
VPAA/Provost or designee Compliance Verification:
Victoria L. Bastecki-Perez, Ed.D. Date: 4/8/2013

Revised by: Elizabeth Lattanzi and Meryl Sultanik Date: 9/15/2018
VPAA/Provost or designee Compliance Verification: Date: 10/15/2018

This course is consistent with Montgomery County Community College's mission. It was developed, approved and will be delivered in full compliance with the policies and procedures established by the College.