

# Science Education Courses (Teaching and Learning) (SIED)

## SIED Courses

This is a list of courses with the subject code SIED. For more information, see Teaching and Learning (College of Education) in the catalog.

### **SIED:3001 Introduction to Museum Studies** 3 s.h.

Overview of museum history, function, philosophy, collection, and curatorial practices; governance and funding issues; exhibition evaluation and audience studies; examples from Stanley Museum of Art, Museum of Natural History, Old Capitol Museum, and Medical Museum. GE: Social Sciences. Same as ANTH:3001, EDTL:3001, MUSM:3001.

### **SIED:3164 Introduction to Global Socioscientific Challenges** 3 s.h.

Engagement in scientific inquiry methods and exploration of the core principles and evidence underlying current knowledge regarding global socioscientific challenges like climate change and freshwater access. Opportunity to gain scientific literacy and interdisciplinary understanding of life, physical, and earth sciences, alongside skills in investigation, data analysis, and decision-making processes. GE: Natural Sciences without Lab; Sustainability.

### **SIED:4102 Societal and Educational Applications of Earth Science and Environmental** arr.

Major ideas and principles of earth and environmental sciences; emphasis on common applications in today's world.

### **SIED:4103 Societal and Educational Applications of Biological Sciences** arr.

Basic conceptual themes of biology, how they have been derived; emphasis on a current social issue related to biology.

### **SIED:4105 Societal and Educational Applications of Physical Sciences** arr.

Major ideas of physics and how they have been derived; emphasis on how such ideas affect modern society.

### **SIED:4106 Societal and Educational Applications of Chemical Concepts** arr.

Principles of chemistry as applied in industry, communication, daily living.

### **SIED:4110 Exploring the Geology, Mining History, and Environmental Issues of the Colorado Rockies** 4 s.h.

Basic concepts of physical geology, historical, and environmental geology of the Rocky Mountains in context of mineral exploration, mining, and environment; collection of a teaching suite of basic igneous, sedimentary, and metamorphic rocks and rock forming minerals; scientific/educational photography, field inquiry, and curriculum development projects; students spend 10 days probing the mountains of Colorado for clues to its geologic past including mountains, seas, and volcanic activity; knowledge is tested in the field along with connecting the geology of Colorado with future teaching employment locations. GE: Natural Sciences with Lab; Sustainability.

### **SIED:4115 Directed Study** arr.

### **SIED:4135 The Nature of Science** 3-4 s.h.

Ideas on understanding and ways of thinking that are essential in a world shaped by science, technology, engineering, and mathematics; focus on increasing science literacy by examining the nature of science; comparison of characteristics specific to individual science disciplines; identification of great episodes and debates in history of science and habits that are essential for science literacy; scope and sequence of content and process skills for K-12 curriculum, instruction, and assessment.