

# Science Education Courses

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## Courses

### **SIED 5312. Environmental Education.**

Critical examination of pedagogical techniques, curricula and standards associated with environmental education. Special emphasis is placed on human induced environmental change, curriculum development and teaching in environmental education settings. All components of the course are focused on increasing the student's ability to be a highly effective environmental educator. This course includes guest speakers and single day field trips in local environments.

**Department:** Science Education

**3 Credit Hours**

**3 Total Contact Hours**

0 Lab Hours

3 Lecture Hours

0 Other Hours

### **SIED 5321. Sc Tools Stnd Tech Safty/Ethic.**

Science Tools, Standards, Technology, Safety and Ethics (3-0) Integrated, science-technology thematic learning. Develops understanding of important science teacher resources, basic science education and lab tools, state and national standards for science teaching, curriculum alignment, laboratory and classroom safety, and professional ethics for science educators.

**Department:** Science Education

**3 Credit Hours**

**3 Total Contact Hours**

0 Lab Hours

3 Lecture Hours

0 Other Hours

### **SIED 5323. Societal Context of Sc Educ.**

Societal Context of Science Education (3-0) Develops and applies understanding of field, community, and cultural resources and develop family and community partnerships in a relevant science context. Students develop a learning unit based on instructional models such as the learning cycle lesson design and the 5-E model. Explores historical perspectives of science and the role of science in societal decisions. Includes research-based principles in science learning and technology integration.

**Department:** Science Education

**3 Credit Hours**

**3 Total Contact Hours**

0 Lab Hours

3 Lecture Hours

0 Other Hours

### **SIED 5325. Inquiry Sc Ed in Biling Setting.**

Inquiry Science Education in Bilingual Settings (3-0) Provides a review of basic content in physical science, biology, and chemistry. The content will be imbedded in activities that model the inquiry approach to teaching and learning with strategies to ensure content and language development in bilingual communities. Students learn to develop curriculum using instructional models such as sheltered instruction, the learning cycle, the 5-E model, and constructivism. Content directly relates to the essential elements in the elementary, middle, and high school science curricula in Texas.

**Department:** Science Education

**3 Credit Hours**

**3 Total Contact Hours**

0 Lab Hours

3 Lecture Hours

0 Other Hours

### **SIED 5327. Chem Ed in Feminist/Mult Cntxt.**

Chemistry Education in a Feminist and Multicultural Context (3-0) Chemistry learning experiences in a relevant cultural context. A conceptual understanding of basic chemistry content including the impact of chemistry in daily life. Develops competencies necessary to provide multicultural education instruction and inclusive pedagogy and the understanding of social, economic, and political influences on access issues in science education for all students. Includes environmental chemistry labs and an environment action project.

**Department:** Science Education

**3 Credit Hours**

**3 Total Contact Hours**

0 Lab Hours

3 Lecture Hours

0 Other Hours

**SIED 6310. Inst Trends in Science Edu.**

Course examines the science content in both national and state standards taught in schools, pedagogical practices in science classrooms and various aspects of student learning in science. The emphasis of this class is one enhancing and broadening science content and process knowledge as well as making informed decisions about these areas based on research findings.

**Department:** Science Education

**3 Credit Hours**

**3 Total Contact Hours**

0 Lab Hours

3 Lecture Hours

0 Other Hours

**Major Restrictions:**

Restricted to majors of TLC

**SIED 6312. Environmental Education.**

Overview and integration of current environmental education and environmental science research. Special emphasis is placed on human induced environmental change; application of environmental education research and effective techniques for conducting environmental education research. This course includes guest speakers and single day field trips in local environments.

**Department:** Science Education

**3 Credit Hours**

**3 Total Contact Hours**

0 Lab Hours

3 Lecture Hours

0 Other Hours