# SCIENCE EDUCATION (SCED)

See Course Description Symbols and Terms (https://catalog.csuchico.edu/academic-standards-policies/course-description-symbols-terms/) for an explanation of course description terminology and symbols, the course numbering system, and course credit units.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>GE</th>
<th>Grade Basis</th>
<th>Repeatability</th>
<th>Prerequisite</th>
<th>Typically Offered</th>
<th>Grade Basis</th>
<th>Repeatability</th>
<th>Course Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCED 101</td>
<td>Introduction to Earth System Science</td>
<td>3</td>
<td>GE</td>
<td>Graded</td>
<td>You may take this course for a maximum of 3 units</td>
<td>SCED 141 or completion of GE Physical Sciences (B1).</td>
<td>Fall and spring</td>
<td>Graded</td>
<td>You may take this course for a maximum of 3 units</td>
<td>Lower Division</td>
</tr>
<tr>
<td>SCED 102</td>
<td>Introduction to Living Systems</td>
<td>3</td>
<td>GE</td>
<td>Graded</td>
<td>You may take this course for a maximum of 3 units</td>
<td>BIOL 102</td>
<td>Fall and spring</td>
<td>Graded</td>
<td>You may take this course for a maximum of 3 units</td>
<td>Lower Division</td>
</tr>
<tr>
<td>SCED 140</td>
<td>Teaching Science in a Museum Setting</td>
<td>1</td>
<td></td>
<td>Graded</td>
<td>You may take this course for a maximum of 1 unit</td>
<td>SCED 141 or completion of GE Physical Sciences (B1).</td>
<td>Fall and spring</td>
<td>Graded</td>
<td>You may take this course for a maximum of 1 unit</td>
<td>Lower Division</td>
</tr>
<tr>
<td>SCED 141</td>
<td>Concepts in the Physical Sciences</td>
<td>3</td>
<td></td>
<td>Graded</td>
<td>You may take this course for a maximum of 3 units</td>
<td>MATH 110</td>
<td>Fall and spring</td>
<td>Graded</td>
<td>You may take this course for a maximum of 3 units</td>
<td>Lower Division</td>
</tr>
<tr>
<td>SCED 142</td>
<td>Concepts in Life Science</td>
<td>3</td>
<td></td>
<td>Graded</td>
<td>You may take this course for a maximum of 3 units</td>
<td>SCED 141 or completion of GE Physical Sciences (B1).</td>
<td>Fall and spring</td>
<td>Graded</td>
<td>You may take this course for a maximum of 3 units</td>
<td>Lower Division</td>
</tr>
<tr>
<td>SCED 143</td>
<td>Explore Teaching Science in Outdoor Settings</td>
<td>1</td>
<td></td>
<td>Graded</td>
<td>You may take this course for a maximum of 1 unit</td>
<td>BIOL 102, SCED 141, or completion of GE Physical Sciences (B1).</td>
<td>Spring only</td>
<td>Graded</td>
<td>You may take this course more than once</td>
<td>Lower Division</td>
</tr>
<tr>
<td>SCED 198</td>
<td>Special Topics</td>
<td>1-3</td>
<td>GE</td>
<td>Graded</td>
<td>You may take this course for a maximum of 3 units</td>
<td>Department permission.</td>
<td>Fall and spring</td>
<td>Graded</td>
<td>You may take this course for a maximum of 3 units</td>
<td>Lower Division</td>
</tr>
<tr>
<td>SCED 300W</td>
<td>Scientific Innovations Behind Modern Technology (W)</td>
<td>3</td>
<td>GE, W</td>
<td>Graded</td>
<td>You may take this course for a maximum of 3 units</td>
<td>GE Oral Communication (A1); GE Written Communication (A2); GE Critical Thinking (A3); GE Physical Sciences (B1); GE Life Sciences (B2); GE Mathematics/Quantitative Reasoning (B4) requirements, or consent of the instructor.</td>
<td>Fall and spring</td>
<td>Graded</td>
<td>You may take this course for a maximum of 3 units</td>
<td>Upper Division; Writing Course</td>
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</table>
SCED 321W Scientific Inquiry (W) 3 Units W, GW
Prerequisite: Completion of GE Written Communication (A2) requirement, SCED 141, SCED 142.
Typically Offered: Spring only
This course engages students in inquiry into topics that span the scientific disciplines. Skills addressed include experimental design, modeling, representation, dissemination of results, and critique of peers' work. Content topics include light, color and sound, from biological, chemical and physics perspectives. 4 hours activity, 1 hour lecture. (020914)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Writing Course; Graduation Writing Assessment

SCED 342 Concepts in Earth and Space Science 3 Units
Prerequisite: SCED 141 or completion of GE Physical Sciences (B1); and SCED 142 or completion of GE Life Sciences (B2).
Typically Offered: Fall and spring
Fundamental concepts in (1) the solar system and the universe, (2) the structure and composition of the solid Earth, and (3) Earth's atmosphere and water. Intended for Science Education or Liberal Studies majors and students pursuing a single subject teaching credential in science. 4 hours activity, 1 hour lecture. (004144)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

SCED 343 Concepts in Environmental Sciences 3 Units
Prerequisite: SCED 141 or completion of GE Physical Science (B1); and SCED 142 or completion of GE Life Science (B2).
Typically Offered: Fall and spring
A course designed to introduce basic principles and concepts in environmental science. Field investigations in the local environment provide a natural setting for scientific inquiry and student research on environmental processes and conditions that shape the local landscape. Intended for Science Education or Liberal Studies majors and students pursuing a single subject teaching credential in science. 4 hours activity, 1 hour lecture. (020916)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

SCED 389 Internship 1-3 Units
Typically Offered: Inquire at department
This course is an internship. You must register directly with a supervising faculty member. 0 hours supervision. (022439)
Grade Basis: Credit/No Credit
Repeatability: You may take this course for a maximum of 15 units
Course Attributes: Upper Division; Sustainable Course

SCED 398 Special Topics 1-3 Units
Prerequisite: Department permission.
Typically Offered: Fall and spring
This course is for special topics offered for 1.0-3.0 units. Typically the topic is offered on a one-time-only basis and may vary from term to term and be different for different sections. See the Class Schedule for the specific topic being offered. 3 hours lecture. (020470)
Grade Basis: Graded
Repeatability: You may take this course more than once
Course Attributes: Upper Division

SCED 490 Natural Sciences Seminar 2 Units
Prerequisite: Senior standing.
Typically Offered: Fall only
This course is a capstone experience for Natural Sciences Majors. In this course, students reflect on their work in the program, read and discuss the relevant literature, and synthesize their accomplishments across the sciences into a professional portfolio. In addition, students are required to present a portion of their portfolio as a departmental seminar. 2 hours seminar. (021290)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 2 units
Course Attributes: Upper Division

SCED 495 Science Education Capstone 3 Units
Prerequisite: SCED 490.
Typically Offered: Spring only
This course is intended for future middle school and informal science teacher educators. Students explore and analyze discipline-based education research articles and apply the principles of behavioral sciences within a science learning environment. Students demonstrate an understanding of Physical Science, Life Science, Environmental Science, and Earth and Space Science by designing and facilitating student-centered activities using energy as a cross-cutting disciplinary concept. 3 hours lecture. (021884)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

SCED 499 Special Problems 1-3 Units
Prerequisite: Faculty permission.
Typically Offered: Fall and spring
This course is an independent study of special problems offered for 1.0-3.0 units. You must register directly with a supervising faculty member. 0 hours supervision. (021538)
Grade Basis: Credit/No Credit
Repeatability: You may take this course for a maximum of 6 units
Course Attributes: Upper Division