

# NATURAL SCIENCE

## Contact Information

### Division

Sciences and Mathematics

### Dean

Heather Roberts

### Associate Dean

Karen Warburton

### Division Office

V 211, Rocklin Campus

## Overview

Courses from the following departments are included in the interdisciplinary Natural Science associate degree:

- Agriculture
- Anthropology
- Astronomy
- Biological Sciences
- Chemistry
- Earth Science
- Environmental Studies and Sustainability
- Geography
- Mathematics
- Physics
- Psychology

## Degrees/Certificates

### Natural Science

#### AA or AS Degree

The Natural Science degree is designed for students who are pursuing transfer majors in the Natural Sciences, including Astronomy, Biological Science, Chemistry, Geography, Geology, Physics and related disciplines. In all cases, students should consult with a counselor for more information on university admission and transfer requirements. Students must fulfill the following major requirements with grades of "C" or better, complete a minimum of 60 degree-applicable semester units (12 of which must be completed at Sierra College) with a grade point average of at least 2.0 and complete one of the following three general education patterns:

- Sierra College Associate Degree Requirements (<http://catalog.sierracollege.edu/student-resources/general-education/associate-degree-requirements>);
- California State University General Education Breadth (<http://catalog.sierracollege.edu/student-resources/general-education/california-state-university-general-education-breadth-requirements>) pattern;
- Intersegmental General Education Transfer Curriculum (IGETC) (<http://catalog.sierracollege.edu/student-resources/general-education/california-state-university-general-education-breadth-requirements>).

### Required Courses

Select 18 units from the following: 18

|            |                                                           |
|------------|-----------------------------------------------------------|
| AGRI 0198  | Food, Society and the Environment                         |
| AGRI 0221  | Introduction to Soil Science                              |
| ANTH 0001  | Physical Anthropology                                     |
| ANTH 0001L | Physical Anthropology Laboratory                          |
| ANTH 0010  | Introduction to Forensic Anthropology                     |
| ASTR 0002  | Introduction to Planetary Systems                         |
| ASTR 0005  | Introduction to Stars, Galaxies, and the Universe         |
| ASTR 0007  | Life in the Universe                                      |
| ASTR 0010  | Elementary Astronomy                                      |
| ASTR 0011  | Observational Astronomy                                   |
| ASTR 0014  | Astrophotography and Imaging                              |
| ASTR 0025  | Frontiers in Astronomy                                    |
| BIOL 0001  | General Biology                                           |
| BIOL 0002  | Botany                                                    |
| BIOL 0003  | General Zoology                                           |
| BIOL 0004  | Microbiology                                              |
| BIOL 0005  | Human Anatomy                                             |
| BIOL 0006  | Human Physiology                                          |
| BIOL 0007A | Human Anatomy I                                           |
| BIOL 0007B | Human Anatomy II                                          |
| BIOL 0008A | Microbiology I                                            |
| BIOL 0008B | Microbiology II                                           |
| BIOL 0010  | Introduction to Biology                                   |
| BIOL 0011  | Concepts of Biology                                       |
| BIOL 0014  | Natural History, Ecology and Conservation (also ESS 0014) |
| BIOL 0015  | Marine Biology                                            |
| BIOL 0021  | Introduction to Plant Science (also AGRI 0156)            |
| BIOL 0024  | Wildland Trees and Shrubs (Dendrology)                    |
| BIOL 0033  | Introduction to Zoology                                   |
| BIOL 0055  | General Human Anatomy and Physiology                      |
| BIOL 0056  | Biology: A Human Perspective                              |
| BIOL 0056L | Biology: A Human Perspective Laboratory                   |
| CHEM 0001A | General Chemistry I                                       |
| CHEM 0001B | General Chemistry II                                      |
| CHEM 0002A | Introduction to Chemistry I                               |
| CHEM 0002B | Introduction to Chemistry II                              |
| CHEM 0003A | General Chemistry I - Part 1                              |
| CHEM 0003B | General Chemistry I - Part 2                              |
| CHEM 0005  | Chemistry - Quantitative Analysis                         |
| CHEM 0012A | Organic Chemistry I                                       |
| CHEM 0012B | Organic Chemistry II                                      |
| ESCI 0001  | Physical Geology                                          |
| ESCI 0001L | Physical Geology Laboratory                               |
| ESCI 0002  | California Geology                                        |
| ESCI 0003  | Historical Geology                                        |

|                      |                                                                                                                                     |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| ESCI 0003L           | Historical Geology Laboratory                                                                                                       |
| ESCI 0010            | Introduction to Earth Science                                                                                                       |
| ESCI 0010L           | Introduction to Earth Science<br>Laboratory                                                                                         |
| ESCI 0015            | Introduction to Oceanography                                                                                                        |
| ESCI 0015L           | Introduction to Oceanography<br>Laboratory                                                                                          |
| ESS 0001             | The Environment and the Human<br>Impact                                                                                             |
| ESS 0010             | Conservation of Natural Resources                                                                                                   |
| GEOG 0001            | Physical Geography                                                                                                                  |
| GEOG 0001L           | Physical Geography Laboratory                                                                                                       |
| GEOG 0004            | Weather and Climate                                                                                                                 |
| MATH 0012            | College Algebra                                                                                                                     |
| MATH 0013            | Elementary Statistics                                                                                                               |
| MATH 0016A           | Calculus for Social and Life Sciences                                                                                               |
| MATH 0016B           | Calculus for Social and Life Sciences                                                                                               |
| MATH 0027            | Trigonometry                                                                                                                        |
| MATH 0029            | Pre-Calculus Mathematics                                                                                                            |
| MATH 0030            | Analytical Geometry and Calculus I                                                                                                  |
| MATH 0031            | Analytical Geometry and Calculus II                                                                                                 |
| MATH 0032            | Analytical Geometry and Calculus III                                                                                                |
| MATH 0033            | Differential Equations and Linear<br>Algebra                                                                                        |
| MATH 0042            | Business Calculus                                                                                                                   |
| PHYS 0010            | Basic Concepts in Physics                                                                                                           |
| PHYS 0010L           | Basic Concepts in Physics Laboratory                                                                                                |
| PHYS 0105<br>& 0105L | General Physics I<br>and General Physics I Laboratory                                                                               |
| PHYS 0110<br>& 0110L | General Physics II<br>and General Physics II Laboratory                                                                             |
| PHYS 0205<br>& 0205L | Principles of Physics: Mechanics<br>and Principles of Physics Laboratory:<br>Mechanics                                              |
| PHYS 0210<br>& 0210L | Principles of Physics: Electricity and<br>Magnetism<br>and Principles of Physics Laboratory:<br>Electricity and Magnetism           |
| PHYS 0215<br>& 0215L | Principles of Physics: Heat, Waves and<br>Modern Physics<br>and Principles of Physics Laboratory:<br>Heat, Waves and Modern Physics |
| PSYC 0140            | Introduction to Biopsychology                                                                                                       |
| PSYC 0140L           | Biopsychology Laboratory                                                                                                            |

Total Units

18