

General Sciences Associate in Arts Degree

The General Sciences Associate in Arts Degree (60 units total, 20-25 units in the major) is designed to prepare students for upper-division course work after transfer to a four-year science degree program. There are several emphases to the General Sciences Degree in order to meet the needs of students interested in biology, chemistry, and physical sciences. Students will demonstrate mastery of the scientific method, including experimental and empirical methodologies characteristic of modern science.

You must complete a minimum of 60 units, including the courses listed in the major and general education requirements, with an overall GPA of 2.0 or better, and a grade of "A," "B," or "C," in all courses for the major. A minimum of 12 units must be completed at Cerro Coso Community College.

Your transfer institution may require some of the major courses to be taken for a grade. Please consult a counselor and <http://www.assist.org/> to determine any limitations on Pass/No Pass grading in major preparation courses.

Completion of the Cerro Coso local General Education Pattern DOES NOT prepare a student for transfer. If you are planning to transfer to a four-year school, depending on your transfer goal, you should select Option B or C only. For more information refer to the general education section of the catalog.

Program Learning Outcomes

Upon successful completion of the program, the student will be able to

- Demonstrate proficient preparation for upper division science courses at the appropriate transfer institution in the chosen emphasis: biology, chemistry, or physical science.
- Perform hands-on laboratory and/or field experiments of all science classes safely.
- Demonstrate mastery of the Scientific Method, including the experimental and empirical methodologies characteristic of science and the modern methods and tools used in scientific inquiry.
- Demonstrate an ability to communicate scientific results, including as appropriate graphically, verbally and in writing.

Courses

Note: Some courses within the major may have a required prerequisite. If you feel you have equivalent knowledge and skills to those included in the prerequisite course through professional experience, licensure or certification, you have the opportunity to submit a Prerequisite

Challenge to be reviewed by the faculty chair. For the Prerequisite Challenge to be considered, you must submit documentation/verification to substantiate the basis for the challenge. Please consult a counselor for more information regarding Prerequisite Challenge.

BIOLOGY EMPHASIS: The biology emphasis provides students with the core science courses needed for transfer to a four-year institution. Graduates with a biology emphasis are prepared for further studies which allow work in a variety of fields including: biochemistry, biotechnology, botany, ecology, entomology, genetics, health, immunology, medicine, molecular biology, oceanography, pharmacy, teaching, wildlife management, zoology and related clinical fields. Physics requirements for biology majors can vary among institutions. Students should check with a counselor concerning requirements for specific transfer institutions.

Complete all of the following courses:

BIOL C111	General Biology I	5 Units
BIOL C112	General Biology II	5
CHEM C111	General Inorganic Chemistry I	5
CHEM C113	General Inorganic Chemistry II	5

Complete one of the following general education patterns:

OPTION A	Cerro Coso Local General Education Pattern
OPTION B	CSU General Education Breadth
OPTION C	IGETC - Intersegmental General Education Transfer Curriculum

CHEMISTRY EMPHASIS: This emphasis provides students who are planning on majoring in chemistry, materials science, or chemical engineering at a four-year university with the first two years of their core chemistry classes. Students should check with a counselor concerning requirements for specific transfer institutions.

Complete all of the following courses:

CHEM C111	General Inorganic Chemistry I	5 Units
CHEM C113	General Inorganic Chemistry II	5
CHEM C221	Organic Chemistry I	5
CHEM C223	Organic Chemistry II	5

Complete one of the following general education patterns:

OPTION A	Cerro Coso Local General Education Pattern
OPTION B	CSU General Education Breadth
OPTION C	IGETC - Intersegmental General Education Transfer Curriculum

PHYSICAL SCIENCES EMPHASIS: Provides students who are planning on majoring in physics, geology, astronomy, or other physical sciences with the necessary lower division courses in mathematics and physics. The Math, Chemistry, and Physics requirements for transfer vary among institutions and students should check with a counselor for the specific requirements.

Complete all of the following courses:

MATH C151	Analytic Geometry and Calculus I	4 Units
MATH C152	Analytic Geometry and Calculus II	4
PHYS C111	Mechanics.....	5
PHYS C113	Electricity and Magnetism	5
PHYS C211	Waves, Optics and Modern Physics.....	5

Complete one of the following general education patterns:

OPTION A	Cerro Coso Local General Education Pattern
OPTION B	CSU General Education Breadth
OPTION C	IGETC - Intersegmental General Education Transfer Curriculum