

ENVIRONMENTAL SCIENCE, ASSOCIATE IN ARTS (AA)

The Associate in Arts degree in Environmental Studies prepares students for upper-division coursework for degrees in Environmental Science or Environmental Studies offered by many four-year institutions. In addition, earning this provides students with a knowledge base that will prepare them for work in environmental research, conservation, or consulting. In addition, earning this degree provides a well-rounded basic education to prepare students for entry-level positions in business, government, or non-governmental organizations.

Course ID	Title	Units/ Hours
Required Core Courses		
ESRM V01	Introduction to Environmental Issues	3
ESRM V02	Introduction to Environmental Science	3
ESRM V03	Introduction to Environmental Policy and Natural Resource Management	3
GEOG V01 & V01L	Elements of Physical Geography and Elements of Physical Geography Laboratory	4
GEOG/GIS V22	Fundamentals of Mapping and Geographic Information Systems	3
ECON C2002 or ECON C2001	Principles of Macroeconomics or Principles of Microeconomics	3
CHEM V120A	General Chemistry I	5
BIOL V03	Evolution, Ecology, and Organismal Biology	4
STAT C1000	Introduction to Statistics	4
MATH C2210	Calculus I: Early Transcendentals	5
Required Core Units		37
Required Additional Courses		
List A: Select 2 courses from the following:		
AG V04	Introduction to Soil Science	3
BIOL V29	Marine Biology	3
ESRM V14/AG V54A	Conservation of Natural Resources	3
GEOG V02	Introduction to Human Geography	3
GEOG V05	Introduction to Weather and Climate	3
GEOG V08	World Regional Geography	3
GEOG/GIS V26	Introduction to Geographic Information Systems Software	2
GEOL V02	Physical Geology	3
GEOL V11	Introduction to Oceanography	3
POLS V14	Global Studies	3
SOC V02	Social Problems	3
Required Additional Units		5-6
Total Major Units		42-43
VCCCD General Education Pattern		
Required Major Units		42-43
VCCCD General Education Units		24
Double-Counted Units		(9)

Elective Units	2-3
Total Units for the A.A. Degree	60

See a counselor or consult [assist.org \(http://assist.org/\)](http://assist.org/), if you plan to transfer to a UC campus or a college or university other than a CSU.

This Plan of Study applies to the VCCCD General Education Pattern and illustrates **one** sequence of courses to meet the Environmental Science, AA degree requirements in two years. Students are encouraged to meet with a counselor to design a plan of study which will best meet their specific educational needs.

Year 1		
Fall Semester		Units/Hours
CHEM V101	Elementary Chemistry (prerequisite for BIOL V03 and CHEM V120A)	5
ESRM V02	Introduction to Environmental Science	3
ENGL C1000	Academic Reading and Writing	4
Select Course...VCCCD GE Area 7		3
Units/Hours		15
Spring Semester		
BIOL V03	Evolution, Ecology, and Organismal Biology	4
ESRM V01	Introduction to Environmental Issues	3
ESRM V03	Introduction to Environmental Policy and Natural Resource Management	3
STAT C1000	Introduction to Statistics	4
Select Course...VCCCD GE Area 1B		3
Units/Hours		17
Year 2		
Fall Semester		
GEOG V01	Elements of Physical Geography	3
GEOG V01L	Elements of Physical Geography Laboratory	1
GEOG/GIS V22	Fundamentals of Mapping and Geographic Information Systems	3
CHEM V120A	General Chemistry I	5
MATH C2210	Calculus I: Early Transcendentals	5
Units/Hours		17
Spring Semester		
ECON C2002 or ECON C2001	Principles of Macroeconomics or Principles of Microeconomics	3
Select Course from Required Major List A		3
Select Course from Required Major List A		3
Select Course...VCCCD Area 3		3
Select Course...VCCCD Area 6		3
Units/Hours		15
Total Units/Hours		64

Upon successful completion of this program, students will be able to:

- analyze the impacts of modern technologies on living and nonliving systems, including the health of human and non-human animals.
- analyze the history and current use of fossil fuels, including the challenges such as global warming, associated with their use and the relevance of alternative forms of energy in the modern energy landscape.
- evaluate the properties, conservation, and role of soil and water in agriculture, including how water is consumed and managed throughout other parts of the anthroposphere.
- apply the concept of sustainability, from local through global scales including various environmental policies enacted or proposed.
- create a diagram to illustrate how water and other materials (e.g., carbon, etc.) cycle throughout the earth system.

- evaluate sources of air, land, and water pollution, including management and legislation that helps to mitigate their impacts on the ecosphere.
- analyze the relationship between population growth and environmental issues and the resulting impacts on human well-being.
- analyze how photosynthesis, cellular respiration, and thermodynamics underpin the chemistry and physics of living systems.
- compare various strategies to manage various types of waste and the role of recycling strategies to mitigate excessive waste
- critique current conservation management practices employed by government, NGO, and private organization for marine and terrestrial resources.