



## **CURRICULUM GUIDE 2012-2013**

### **ENVIRONMENTAL SCIENCE**

#### **Associate in Science in Environmental Science**

The Associate in Science in Environmental Science offered by Ohlone College is designed to prepare students for studying Environmental Science at most universities. The core courses in the Associate in Science degree in Environmental Science will fulfill the lower division requirements for most campuses of the UC and CSU systems. This program will enable students to develop a strong foundation in the life and physical sciences, as well as a foundation in the functioning of living systems including population growth, ecology, toxicology, geologic processes, energy resources, pollution, and human attitudes toward nature. Through these courses students will gain a better understanding of how humans are intimately connected with the environment and how human activities impact and are impacted by the environment. Careers in biological consultant, ecosystem and habitat restoration, environmental field or lab technician, environmental health scientist, and environmental manager all require knowledge of environmental issues and the functioning of ecosystems.

Since some curriculum requirements may vary among transfer universities, it is imperative that students entering Ohlone's Associate in Science degree program in Environmental Science meet with a counselor at the start of their academic work. Counselors will assist students in preparing a Student Education Plan that will prepare them to transfer to the university of their choice. Counselors will also advise students on the general education plan that best prepares them for the future transfer.

#### **Requirements for Associate in Science Degree:**

- a) Complete the Major Field courses with a grade of C or better.
- b) Complete Plan A, B, or C General Education requirements. These requirements are specified in the Ohlone College catalog.
- c) Complete at least 60 degree-applicable units with a 2.0 grade point average.
- d) Complete at least 12 units at Ohlone College.
- e) Complete at least 50% of the Major Field courses at Ohlone College.
- f) Complete BIOL-108, BIOL-142, ENVS-101, ENVS-102, ENVS-103, and GEOG-121 at Ohlone College.

#### **Student Learning Outcomes**

1. Recognize the social, economic, and environmental impacts of humans on the earth.
2. Apply an understanding of science and ecological principles to modern life so students may critically analyze and understand information affecting the environment.
3. Describe the effects of current, past, and future energy and resource use, and compare and contrast possible solutions to environmental problems.
4. Evaluate environmental policies, laws, and regulations, their value, implementation, and effects.
5. Consider the inherent environmental, social, and economic outcomes of living sustainably on current and future generations.

6. Gain experience with a variety of environmental field and laboratory techniques that will emphasize different fields of environmental studies.
7. Demonstrate applied environmental science techniques.

**MAJOR FIELD**

BA-102B	Principles of Economics-Microeconomics	3
BIOL-101A	Principles of Biology -- Molecular and Cellular	5
BIOL-101B	Principles of Biology -- Organisms and Systems	5
CHEM-101A	General Chemistry	5
CHEM-101B	General Chemistry	5
ENVS-101	Natural Resource Management	3
ENVS-102	Environmental Law and Regulations	3
ENVS-103	The Environment and Human Health	3
ENVS-108	Human Ecology	3
ENVS-142	Environmental Biology	4
GEOG-101	Physical Geography	4
GEOG-121	Introduction to Geographic Information Systems (GIS)	2
MATH-101A	Calculus with Analytic Geometry	<u>5</u>
Total Required Units:		50

**RECOMMENDED COURSES**

CHEM-112A	Organic Chemistry	(5)
CHEM-112B	Organic Chemistry	(5)
GEOG-122	Environmental GIS	(2)
GEOG-123	GIS Projects	(1)
GEOL-101	Introduction to Geology	(4)
MATH-101B	Calculus with Analytic Geometry	(5)
MATH-159	Introduction to Statistics	(5)
PHYS-120	Introduction to Physics I	(4)
PHYS-121	Introduction to Physics II	(4)