

ENVIRONMENTAL SCIENCE, ASSOCIATE IN ARTS

Banner Code: 1_AA_ENVS

Control Number: 41995

Financial Aid Eligible

Upon completion of the requirements for the Associate in Applied Arts Degree in Environmental Science, students will be prepared to transfer to CSU/UC and obtain a baccalaureate degree (or higher degree) in Environmental Science. This degree is also a pathway toward internships and/or entry-level opportunities within the field, e.g., environmental policy/law and environmental health monitoring). The Environmental Science major requires completion of a minimum of 35 major units, 26-31 of which are required core units. The additional 9-13 units must be taken from a list of restricted related electives from a variety of departments. The ESEC department strongly recommends that all declared Environmental Science majors get counseling to select electives that will best prepare them for their intended transfer institution as there is high variation in requirements among institutions and some of the courses listed, including core courses, have pre-requisites that will increase the number of units required to complete this degree. For students interested in an ecology, geology, and hydrology emphasis in Environmental Science, they should consider an Associated in Science Degree in Environmental Science.

The department strongly recommends that all declared Environmental Science majors complete the following courses prior to transfer: MATH A160 (Introduction to Statistics) or PSYC A160 (Statistics for Behavioral Science) and PHYS A280 (Calculus-based Electricity and Magnetism) and PHYS A285 (Calculus-based Modern Physics). Check the requirements of the transferring institution.

Program Outcomes

1. Describe the major biological, chemical, and physical components and processes within organisms and the environment
2. Describe historical and current human activities that negatively impact the environment (energy resources, urbanization, agricultural methods, etc) and how economics, social interactions, policies, and laws affect human activity within the environment.
3. Students who complete the degree will be prepared for admission to California State University/University of California schools in environmental science.

Associate in Arts Degree Requirements

1. **UNIT REQUIREMENT** - 60 UNITS, with at least a 2.0 grade point average. At least 12 of the units must be earned at OCC, with a minimum of one course taken for a letter grade. At least 3 units in an advanced course from the program must be completed at OCC. A student must be enrolled at the time of application for graduation. Units earned at an accredited college or university on a credit/no credit basis will be counted toward the degree requirements of the college, to a maximum of 15 units.
2. **MAJOR REQUIREMENT** - Complete the AA major requirements.
3. **MATHEMATICS REQUIREMENT** - Demonstrate competence in mathematics by either obtaining a satisfactory grade (grade of "C" or better or "pass") in a mathematics course at or above the level of Intermediate Algebra as demonstrated by prior coursework, or by demonstrating competency that is comparable through the

completion of a college-level math course that has Intermediate Algebra as a prerequisite: Psychology A160 or Math A100 or higher, with the exception of Math A220.

4. **GENERAL EDUCATION REQUIREMENT** - Students may choose to complete Option 1 (OCC AA GE) (<https://catalog.cccd.edu/orange-coast/general-education-patterns/associate-arts-general-education-option-1/>), Option 2 (CSU GE) (<https://catalog.cccd.edu/orange-coast/general-education-patterns/associate-degree-general-education-option-2/>), or Option 3 (IGETC (<https://catalog.cccd.edu/orange-coast/general-education-patterns/associate-degree-general-education-option-3/>)) to satisfy the general education requirement. See the General Education Patterns section of this catalog for more information.
5. **GLOBAL AND MULTICULTURAL REQUIREMENT** (*Required for AA degree only*) Some of the courses listed in this requirement can also be used to meet General Education Requirements. Courses that are repeatable for credit can only be used once in this area. - Select one or more courses from the following totaling 3 units: Anthropology A100*, A100H*, A102*, A190*, Art A108*, Communication Studies A155*, Counseling A107*, A107H*, Dance A130*, A133*, A135*, A137*, A138*, Early Childhood A126, English A152*, A173*, Ethnic Studies A100*, A150*, Fashion A125, Food, and Nutrition A185, Geography A185*, History A101*, A110*, A141, A142, A145,* A150*, A151*, A152*, A161*, A161H*, A162*, A162H*, Philosophy A120*, Psychology A105*, Religious Studies A110*, A120*, A140*, A150*, A160, Sociology A100*, A100H*, A115*, A150*, A190* *Denotes courses that fulfill CSU GE Breadth and/ or IGETC requirements.

Course	Title	Units
Required Courses		
ESEC A100	Introduction to Environmental Science	3
or ESEC A100H	Introduction to Environmental Science Honors	
ECON A170	Microeconomics	3
or ECON A170H	Microeconomics Honors	
ECON A175	Macroeconomics	3
or ECON A175H	Macroeconomics Honors	
Select Lecture/Lab combination		4
GEOL A110	Physical Geology	
GEOL A105 & A105L	General Geology and General Geology Laboratory	
GEOL A105H & GEOL A105M	General Geology Honors and General Geology Laboratory Honors	
Select BIOL A100, BIOL A100H, BIOL A180 or Zoology/Botany set:		4-8
BIOL A100	Principles of Biology	
or BIOL A100H	Principles of Biology Honors	
or BIOL A180	Introduction to Biology for Majors 1: Cell and Molecular Biology	
OR		
BIOL A182	Zoology	
or BIOL A182H & BIOL A182L	Zoology Honors and Zoology Lab	
BIOL A183 & A183L	Botany and Botany Lab	
CHEM A110	Introduction to Chemistry	5
or CHEM A180	General Chemistry A	
Select one Math course:		4-5
MATH A140	Business Calculus	

Course	Title	Units
MATH A160 or PSYC A160	Introduction to Statistics Statistics for the Behavioral Sciences	
MATH A180 or MATH A180H	Calculus 1 Calculus 1 Honors	
MATH A182H	Calculus 1 and 2 Honors	
MATH A185 or MATH A185H	Calculus 2 Calculus 2 Honors	
Subtotal		26-31
<i>Restricted Electives</i>		<i>9-13</i>
Select a minimum of 9 units		
ESEC A110	Island Ecology	
ESEC A121 or MRSC A121	Marine Intertidal Ecology Marine Intertidal Ecology	
ESEC A124 or MRSC A124	Ecology of the Gray Whale Ecology of the Gray Whale	
ESEC A140	Mediterranean Biome Ecology	
ESEC A141	Desert Ecology	
GEOL A131	Weather and Climate	
GEOL A160	Environmental Geology	
GEOL A250	Water Resources and Society	
MRSC A187	Marine Mammals	
MRSC A188	Marine Mammal Field Studies	
MRSC A195	Marine Policy and Conservation	
ARCH A142	Environmental Advocacy	
ARCH A143	Resource Management and Zero Waste for Communities	
BIOL A172	Nature of Birds	
BUS A118 or BUS A118H	Introduction to International Business Introduction to International Business Honors	
GEOG A190	Digital Mapping: Introduction to GIS	
<i>Program Major Units</i>		<i>35-44</i>
<i>AA General Education Option 1, 2, or 3</i>		<i>Varies</i>
<i>Transferable electives as needed to satisfy unit requirement</i>		<i>Varies</i>
Total Minimum Degree Units		60-62

Program Sequence

These sequences at Orange Coast College are general course curriculum maps for students to finish all major and general education requirements for two-year completion of degrees, and/or fulfillment of transfer requirements. The course sequence may include course prerequisites and other placement requirements. **Students are advised to meet with an Orange Coast College Counselor to review course selections and sequences to ensure that completion of this program will meet a student's transfer and career goals.**

Course	Title	Units
Year 1		
Semester 1		
ESEC A100 or ESEC A100H	Introduction to Environmental Science or Introduction to Environmental Science Honors	3
ECON A170 or ECON A170H	Microeconomics or Microeconomics Honors	3

Course	Title	Units
MATH A140 or MATH A160 or PSYC A160 or MATH A180/A180H or MATH A182H or MATH A185/A185H	Business Calculus or Introduction to Statistics or Statistics for the Behavioral Sciences or Calculus 1 or Calculus 1 and 2 Honors or Calculus 2	4-5
OCC AA GE AREA A1- CHOOSE ONE		3
Units		13-14
Semester 2		
ECON A175 or ECON A175H	Macroeconomics or Macroeconomics Honors	3
OCC AA GE AREA C1 - CHOOSE ONE ¹		2-4
OCC AA GE AREA C2 - CHOOSE ONE ¹		.5-4
ELECTIVE (DEGREE APPLICABLE) ²		4
Select Geology Lecture/Lab Combination:		
GEOL A110	Physical Geology	4
GEOL A105 & A105L	General Geology and General Geology Laboratory	
GEOL A105H & GEOL A105M	General Geology Honors and General Geology Laboratory Honors	
Units		13.5-19
Year 2		
Semester 1		
CHEM A110 or CHEM A180	Introduction to Chemistry or General Chemistry A	5
PSCI A180 or PSCI A180H	American Government or American Government Honors	3
ELECTIVE (DEGREE APPLICABLE) ³		3
Select BIOL A100, BIOL A100H, BIOL A180 or Zoology/Botany set:		
BIOL A100 or BIOL A100H or BIOL A180	Principles of Biology or Principles of Biology Honors or Introduction to Biology for Majors 1: Cell and Molecular Biology	4-8
OR		
BIOL A182 or BIOL A182H and BIOL A182L	Zoology or Zoology Honors and Zoology Lab	
BIOL A183 & A183L	Botany and Botany Lab	
Units		15-19
Semester 2		
HIST A170 or HIST A170H or HIST A175 or HIST A175H	History of the United States to 1876 or History of the United States to 1876 Honors or History of the United States Since 1876 or History of the United States Since 1876 Honors	3
OCC AA GE AREA D3 - CHOOSE ONE		3
OCC AA GE AREA E1 - CHOOSE ONE ⁴		.5-4
OCC AA GE AREA E2 - CHOOSE ONE ⁴		1
ELECTIVE (DEGREE APPLICABLE) ³		2
AA RESTRICTED ELECTIVES (See Requirements)		
Units		18.5-22
Total Units		60-74

- OCC AA Area C requires a minimum of 3 units to include one course from C1 and one course from C2
- CHEM A130 can be taken for prerequisite of BIOL A180 and CHEM A180 as elective units
- VARIABLES TO REACH MINIMUM 60 DEGREE APPLICABLE UNITS
- OCC AA GE AREA E requires a minimum of 3 units to include one course from E1 and one course from E2