

BIOLOGY, ASSOCIATE IN SCIENCE DEGREE

Financial Aid Eligible
Banner Code: 1_AS_BIOL
Control Number: 03957

The Biological Associate of Science degree is intended to instill a desire in our students to learn more about the biological sciences, encourage critical thinking about how life functions in the natural world, and help students become scientifically literate citizens who can make informed decisions about biologically related issues.

Program Outcomes

1. Use the scientific method to design, carry out, summarize & evaluate tests of biological hypotheses using modern laboratory equipment.
2. Describe the biological processes that occur within or among organisms (e.g., protein synthesis, cell-to-cell communication, genetic transmission, digestion, reproduction, and nutrient flow through an ecosystem).
3. Describe the variations observed in organisms and explain how populations have evolved through time.

Associate in Science 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 or AS major requirements as detailed in the Degree and Certificate section of this catalog.
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 1 (OCC AS GE) (<https://catalog.cccd.edu/orange-coast/general-education-patterns/associate-science-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/>) (<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.

Course	Title	Units
Required Courses		
<i>Core Courses-List A</i>		
Select one option of the following:		9-12
<i>Option 1</i>		
BIOL A180	Introduction to Biology for Majors 1: Cell and Molecular Biology	
BIOL A185	Introduction to Biology for Majors 2: Ecology, Evolution, Diversity, and Physiology	
<i>Option 2</i>		
BIOL A180	Introduction to Biology for Majors 1: Cell and Molecular Biology	
BIOL A182	Zoology	
BIOL A182L	Zoology Lab	
BIOL A183	Botany	
BIOL A183L	Botany Lab	
<i>Core Courses-List B</i>		
Select one of the following:		2-5
BIOL A210	General Microbiology	
BIOL A220	Human Anatomy	
BIOL A221	Anatomy-Physiology	
BIOL A225	Human Physiology	
BIOL A280	Evolutionary Ecology	
BIOL A281	Biochemistry	
BIOL A282	Molecular Biology	
BIOL A283	Genetics	
Restricted Electives		
Select a minimum of five units of Chemistry and four units of Math:		9-10
CHEM A180	General Chemistry A	
CHEM A185	General Chemistry B	
CHEM A220	Organic Chemistry A	
CHEM A220L	Organic Chemistry A Lab	
CHEM A225	Organic Chemistry B	
CHEM A225L	Organic Chemistry B Laboratory	
MATH A180/ A180H	Calculus 1	
MATH A185/ A185H	Calculus 2	
MATH A280/ A280H	Calculus 3	
MATH A285/ A285H	Introduction to Linear Algebra and Differential Equations	
Program Major Units		20-27
AS General Education Option 1, 2, or 3		Varies
Transferable electives as needed to satisfy unit requirement		Varies
Total Units		60