

BIOLOGY—ASSOCIATE IN SCIENCE IN BIOLOGY FOR TRANSFER (AS-T)

PROGRAM DESCRIPTION

The Biology program offers courses that are intended to create interest and enrichment through the study of living organisms and the basic biological principles. The major courses provide a strong background in the biological sciences for students transferring to four-year institutions who are interested in careers such as agriculture, health, research, and teaching. Prerequisite courses for nursing and other allied health programs are also offered.

FOR MORE INFORMATION, CONTACT: Alexander Edens at (831) 770-7055, aedens@hartnell.edu, N-14
 Rebecca Fields at (831) 755-6921, rfields@hartnell.edu, N-14
 Jeffery Hughey at (831) 770-7054, jhughey@hartnell.edu, N-26C
 Nancy Wheat (831) 755-6881, nwheat@hartnell.edu, N-5
 Ann Wright at (831) 770-6112, awright@hartnell.edu, N-14

PROGRAM OUTCOMES

Upon successful completion of the program, a student should be able to:

- apply the scientific method to problem solving, devising a research plan, and evaluating data and findings.
- describe the structure and function of biological molecules, cells and organelles, and tissues and organ systems of plants and animals.
- apply the principles of heredity at the molecular, cellular, and organismal levels.
- explain the mechanism and evidence of evolution through natural selection.
- apply taxonomic principles to the classification of organisms.
- describe the flow of energy within organisms and within ecosystems.



California Community Colleges are now offering associate degrees for transfer to the CSU. These may include Associate in Arts (AA-T) or Associate in Science (AS-T) degrees. These degrees are designed to provide a clear pathway to a CSU major and baccalaureate degree. California Community College students who are awarded an AA-T or AS-T degree are guaranteed admission with junior standing somewhere in the CSU system and given priority admission consideration to their local CSU campus or to a program that is deemed similar to their community college major. This priority does not guarantee admission to specific majors or campuses.

Students who have been awarded an AA-T or AS-T are able to complete their remaining requirements for the 120-unit baccalaureate degree within 60 semester or 90 quarter units.

In order to earn this degree, students must complete the Associate Degree for Transfer requirements:

1. Completion of 60 semester units or 90 quarter units that are eligible for transfer to the California State University, including both of the following:
 - (A) The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education – Breadth Requirements.
 - (B) A minimum of 18 semester units or 27 quarter units in a major or area of emphasis, as determined by the community college district.
2. Obtainment of a minimum grade point average of 2.0."

ADTs also require that students must earn a C or better in all courses required for the major or area of emphasis. A "P" (Pass) grade is not an acceptable grade for courses in the major.

✓	REQUIRED MAJOR COURSES	Course No.	C-ID	Course Title	Units
	Required Major Course	BIO-1+	BIOL 135S	Fundamental Biological Concepts	5.0
	Required Major Course	BIO-2+		General Zoology	5.0
	Required Major Course	BIO-3		General Botany	5.0
	Required Major Course	CHM-1A+	CHEM 120S	General Chemistry	5.0
	Required Major Course	CHM-1B		General Chemistry	5.0
	Required Major Course	MAT-3A	MATH 210	Analytic Geometry and Calculus I	4.0
	Required Major Course	PHY-2A/2B PHY-4A/4B or	PHYS100S PHYS 205/210	College Physics I & II or General Physics/Mechanics & Electricity & Magnetism	8.0 8.0
				SUBTOTAL UNITS (37.0)	
✓	RECOMMENDED MAJOR ELECTIVES (Select from the following; none required)	Course No.	Course No.	Course Title	Units
	Recommended Major Elective	CHM-12A	CHEM 150	Organic Chemistry I	5.0
	Recommended Major Elective	CHM-12B	CHEM 160S	Organic Chemistry II	5.0
	Recommended Major Elective	MAT-13	MATH 110	Elementary Statistics	5.0
	Recommended Major Elective	MAT-3B	MATH 220	Analytic Geometry and Calculus II	4.0
	Recommended Major Elective	MAT-3C	MATH 230	Analytic Geometry and Calculus III	4.0
	Recommended Major Elective	PHY-4C	PHYS 215	General Physics/Waves, Heat, Light and Modern Physics	4.0
✓	REQUIRED GENERAL EDUCATION COURSES (Students can double count General Education courses with major courses.)				Units
	A. Minimum units to meet CSU-GE for STEM breadth certification requirements (33 units); OR				33.0
	B. Minimum units to meet IGETC for STEM (31 units) certification requirements				31.0
	AS-T Biology for Transfer Required Major and Restricted Electives				37.0
	<i>Total Double-counted units</i>				(10.0)
	Electives(Courses numbered 1-99) required when degree units plus GE units total fewer than 60.0				2.0
	TOTAL				60.0

Students can double-count required degree courses and courses for General Education

TRANSFER STUDENTS: Students planning to transfer to a university should follow the requirements of the four-year university. Information on course equivalencies and major preparation requirements for the University of California (UC) and California State University (CSU) systems are available online at www.assist.org. Please consult with a Hartnell College counselor to review transfer requirements.