

# Narrative for the Associate in Science in Biology for Transfer Degree Los Medanos College

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## Criteria A. Appropriateness to Mission

### Item 1. Statement of Program Goals and Objectives

This proposal is to add a new major: Associate in Science in Biology for Transfer degree. The ADT in Biology degree will provide lower division education for students pursuing a baccalaureate degree in biology at the California State University System.

The ADT in Biology is designed to provide students with education comparable to lower division coursework completed in the first two years as a biology major in the California State University system. Students will transfer well prepared, enabling them to succeed in upper division coursework and complete a baccalaureate degree in biology.

The Associate in Science in Biology for Transfer degree curriculum meets the lower division requirements to transfer to the California State University system baccalaureate degree programs in biology, fulfills lower division general education requirements for transfer to the CSU system.

The Program Level Student Learning Outcomes for the Associate in Science in Biology for Transfer degree are:

1. Utilize the scientific method to develop hypotheses, conduct scientific experiments, critically analyze experimental data, and communicate results through written reports and oral presentations.
2. Identify and/or describe the correlation between structure and function in living organisms including the functional roles of the internal and external structures of cells, the basic relationship between DNA, proteins, and the transmission of traits, and the similarities and differences between metabolic processes and structures of diverse living organisms that allow them to exhibit distinctive characteristics of life.
3. Explain how evolution provides a framework for understanding the unity, diversity, and interdependency of living organisms.
4. Evaluate aspects of ecology and the interactions among the life forms on Earth - including the implications of human economic and cultural practices on the Earth's natural resources. Ultimately students will comprehend the numerous ethical implications and applications of bioscience concepts in their everyday lives.

### Item 2. Catalog Description

The Associate in Science in Biology for Transfer degree at Los Medanos College prepares students to transfer into a curriculum at a CSU to pursue a baccalaureate degree in biology. The ADT in Biology will introduce students to many areas of study including cytology, biochemical cycles, proteomics, genomics, reproduction, embryonic development, ecology, comparative anatomy and physiology and evolution.

To achieve the Associate in Science in Biology for Transfer degree from Los Medanos College students “(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.

## Program Requirements

**(32 units)**

### Required Core:

BIOSC- 020 (5 units) Principles of Biology: Cellular Processes  
BIOSC- 021 (5 units) Principles of Biology: Organismal

### List A:

CHEM- 025 (5 units) General College Chemistry  
CHEM- 026 (5 units) General College Chemistry  
MATH-050 (4 units) Calculus and Analytic Geometry I

### OR

MATH-037 (4 units) Applied Calculus

PHYS- 035 (4 units) College Physics I  
PHYS -036 (4 units) College Physics II

### OR

PHYS -040 (4 units) Physics for Scientists and Engineers I  
PHYS -041 (4 units) Physics for Scientists and Engineers II

Total Units for the Major: 32  
Total Units for the Degree: 60

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.

Important Note: Education Code section 66746 subdivision (b) prohibits a community college district from imposing any additional course requirements for a student to be eligible for an ADT, and subdivision (e) prohibits allowing remedial non-collegiate level coursework to be counted toward the units required for an ADT. If the college normally requires students to complete additional graduation requirements to obtain an associate degree, the catalog description must clearly state that the ADT does not require them.