**Narrative for the Associate in Science in Biology for Transfer Degree**

**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. This degree will provide lower division education for students pursuing a baccalaureate degree in biology at the California State University System.

This program 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 proposed associate 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 Biology for Transfer 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 at Los Medanos College prepares students to transfer into a curriculum at a 4 year institution to pursue a baccalaureate degree in biology. This major will introduce students to many areas of study including cytology, biochemical cycles, proteonomics, genenomics, reproduction, embryonic development, ecology, comparative anatomy and physiology and evolution.

To achieve the Associate in Science in Biology for Transfer from Los Medanos College students must (1) complete the Biology degree requirements; (2) fulfill CSU-General Education requirements; or IGETC (3) complete 60 college transferrable units; and (4) obtain a minimum grade point average of 2.0.

*“(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 32 semester units or 48 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.”*

**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

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.