Mathematics

DEGREE–Associate in Science for Transfer Degree

Mathematics

Associate Degree for Transfer

The Associate in Science in Mathematics for Transfer at Los Medanos College prepares students to transfer into a curriculum at a 4 year institution to pursue a baccalaureate degree in Mathematics. To achieve the degree students must:

1. Complete 60 semester 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 in the Mathematics major, 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 COURSES:		UNITS
MATH-050	Calculus with Analytic Geometry I	**4**
MATH-060	Calculus with Analytic Geometry II	**4**
MATH-070	Calculus with Analytic Geometry III	**4**
TOTAL UNITS		**12**

CHOSE A MINIMUM OF 6 UNITS FROM THE LISTS BELOW, WITH AT LEAST 3 UNITS FROM LIST A		
LIST A: (SELECT 1-2 COURSES)		
MATH-080	Differential Equations	**3**
MATH-075	Linear Algebra	**3**
TOTAL UNITS		**3-6**

LIST B: SELECT ONE COURSE (2-4 UNITS)		
MATH-160	Discrete Math	**4**
PHYS-040	Physics for Scientists & Engineers	**4**
MATH-034	Introduction to Statistics	**4**
COMSC-044	Intro to C++ Programming Part I	**3**
or		
ENGIN-020	Programming with C++ for Engineers and Scientists	**4**
or		
COMSC-132	Programming and Methodologies II	**3**
TOTAL UNITS		**3-4**

TOTAL UNITS FOR THE MAJOR	**18-19**
TOTAL UNITS FOR THE DEGREE	**60**

Program Student Learning Outcomes

1. Preparation and mathematical maturity: Be prepared for the mathematical or statistical reasoning required in upper division work in their major, including the ability to generalize mathematical concepts and comprehend increasing levels of mathematical abstraction.
2. Mathematical literacy:
   Communicate using mathematics:
   a. Read with comprehension documents having mathematical content and participate cogently in discussions involving mathematics;
   b. Clearly articulate mathematical information accurately and effectively, using a form, structure and style that suit the purpose (including written and face-to-face presentation).
3. Problem-solving ability:
   a. Reason with and apply mathematical concepts, principles and methods to solve problems or analyze scenarios in real-world contexts relevant to their major;
   b. Use technology effectively to analyze situations and solve problems;
   c. Estimate and check answers to mathematical problems in order to determine reasonableness, identify alternatives, and select optimal results.
4. Modeling ability:
   a. Construct and interpret mathematical models using numerical, graphical, symbolic and verbal representations with the help of technology where appropriate in order to draw conclusions or make predictions;
   b. Recognize and describe the limits of mathematical and statistical methods.
5. Effective learning skills:
   a. Independently acquire further mathematical knowledge without guidance, take responsibility for their own learning, determine appropriateness and correctness of their own work and function effectively in different learning environments.
   b. Succeed in different learning environments, particularly in a group setting of working collaboratively with others.