

## DEGREES & CERTIFICATES

### MATHEMATICS ASSOCIATE IN SCIENCE FOR TRANSFER (AS-T)

#### About the Program

The Las Positas College Mathematics program offers courses that lead to an Associate in Science in Mathematics for Transfer degree. The major requirements for the Associate in Science in Mathematics for Transfer degree align with the Intersegmental Transfer Model Curriculum (TMC) for Mathematics. Students will have guaranteed admission to a California State University (CSU) campus upon successful completion of the program requirements. Students should consult with a counselor to determine whether this degree is the best option for their transfer goals. General education requirements should be selected carefully based on the intended transfer institution.

#### Program Goals and Objectives

The Associate in Science in Mathematics for Transfer degree is designed to prepare students for a seamless transfer into the CSU system to complete a baccalaureate degree in Mathematics. The Associate in Science in Mathematics for Transfer degree is designed to provide students with the common core of lower division courses required to transfer and pursue a baccalaureate degree in Mathematics. Upon successful completion of this program, students will be able to:

- Use symbolic, graphical, numerical, and written representations of mathematical ideas
- Read, write, listen to, and speak mathematics with understanding.
- Use mathematical reasoning to solve problems and a generalized problem solving process to work word problems.
- Learn mathematics through modeling real-world situations.
- Use appropriate technology to enhance their mathematical thinking and understanding, solve mathematical problems, and judge the reasonableness of their results.

#### Career Opportunities

The Associate in Science in Mathematics for Transfer degree is intended to provide an option for students who plan to complete a bachelor's degree in a similar major at a CSU campus, or pursue a teaching career, since teachers of mathematics are always in demand. They study of mathematics can prepare students for a variety of technical and scientific careers. The problem-solving and communication skills acquired are valuable in business, industry, and everyday life, and mathematics is an essential component of any engineering or science degree.

#### Program Outcomes

- Upon completion of the Mathematics AS-T, students are able to demonstrate the ability to use symbolic, graphical, numerical, and written representations of mathematical ideas.
- Upon completion of the Mathematics AS-T, students are able to learn mathematics through modeling real-world situations.
- Upon completion of the Mathematics AS-T, students are able to read, write, listen to, and speak mathematics with understanding.
- Upon completion of the Mathematics AS-T, students are able to use appropriate technology to enhance their mathematical thinking and understanding, solve mathematical problems, and judge the reasonableness of their results.
- Upon completion of the Mathematics AS-T, students are able to use mathematical reasoning and, when appropriate, a general problem solving process to solve problems.

#### Completion 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 CA 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.

Associate Degrees for Transfer (ADT's) also require that students must earn a "C" (or "P") or better in all courses required for the major or area of emphasis.

#### REQUIRED CORE: (15 units)

MATH 1 Calculus I.....	5
MATH 2 Calculus II.....	5
MATH 3 Multivariable Calculus.....	5

#### LIST A: Select one (3.5 units)

MATH 5 Ordinary Differential Equations.....	3.5
MATH 7 Elementary Linear Algebra.....	3.5

#### LIST B: Select one (3.5-5 units)

CS 1 Computing Fundamentals I.....	4
MATH 40 Statistics and Probability.....	4
PHYS 1A General Physics I.....	5

**TOTAL UNITS IN THE MAJOR.....22-23.5**

**GENERAL EDUCATION AND ELECTIVES.....36.5-38**