



## Mathematics for Transfer 2013-2014

Mathematics and related subjects play important dual roles in our culture. Although mathematics is a study in its own right, it is also an indispensable tool for expressing and understanding ideas in the sciences, engineering and an increasing number of other fields. Students completing this degree will be able to construct appropriate models of natural phenomena, develop those models with appropriate mathematical techniques and interpret results of those models.

The Associate in Science in Mathematics for Transfer Degree (AS-T) will prepare students to transfer to California State Universities (CSUs). Students who complete the AS-T degree will be ensured preferential transfer status to many CSUs as mathematics majors and/or majors in related disciplines. The AS-T degree requirements will fulfill the lower division major requirements at many CSUs. Students are advised, however, to meet with a counselor to assess the course requirements for a specific CSU.

### Program Learning Outcomes:

- Students will be able to clearly communicate mathematical ideas through graphs, tables of data, equations and verbal descriptions.
- Students will be able to construct appropriate mathematical models of natural phenomena, develop those models with appropriate mathematical techniques and interpret results of those models.

### Units required for Major: 90

### Associate Degree Requirements:

Associate in Science in Mathematics for Transfer requires completion of a minimum of 90 units to include:

- CSU General Education Breadth Requirements or the Intersegmental General Education Transfer Curriculum (IGETC) (53-58 Units) (full certification is required)
- Core & support courses (30-31 Units)
- transferable electives necessary to meet the 90-unit minimum requirement.

NOTE: All courses pertaining to the major must be taken for a letter grade and must be completed with a grade of "C" or better. In addition, the student must obtain a minimum GPA of 2.0.

### Program Types:

**AST = Associate in Science for Transfer Degree.**

**UT = May be transferable to a four - year university.**

### Core Courses: 20 Unit(s)

- MATH 1A Calculus (5 units)
- MATH 1B Calculus (5 units)
- MATH 1C Calculus (5 units)
- MATH 1D Calculus (5 units)

### Support Courses: 10-11 Unit(s)

Select ONE course each from List A and List B:

List A:

- MATH 2A Differential Equations (5 units)
- MATH 2B Linear Algebra (5 units)

List B:

- \*MATH 2A Differential Equations (5 units)
- \*MATH 2B Linear Algebra (5 units)
- MATH 22 Discrete Mathematics (5 units)
- MATH 10 Elementary Statistics (5 units)
- PHYS 4A General Physics (Calculus) (6 units)
- C S 1A Object-Oriented Programming Methodologies in Java (5 units)
- C S 2A Object-Oriented Programming Methodologies in C++ (5 units)

\* MATH 2A or 2B may be used to satisfy List B requirement if they were not used to meet the requirement for List A.