DEGREES, CERTIFICATES, AND TRANSFER PREPARATION INFORMATION

MATHEMATICS

Mathematicians use symbolic languages to set up and analyze relationships among quantities and qualities of things, events, and places. Pure mathematicians develop the theories to further the science of mathematics. Possible careers include actuary, computer engineer, cryptographer, satellite communications expert, robotics programmer, statistician and teacher.

Programs Offered

- Transfer Preparation
- Associate Degree for Transfer
  - Mathematics
    Students may satisfy the requirements of this degree with approved courses (which may be fewer units) taken at other California Community Colleges. The courses listed below are SMC courses. If completed entirely at SMC, the academic path requires 21 units.

Associate Degree for Transfer Requirements

- Completion of 60 semester units or 90 quarter units of degree-applicable courses,
- Minimum overall grade point average of 2.0,
- Minimum grade of "C" (or "P") for each course in the major, and
- Completion of Cal-GETC.

Transfer Preparation

Many colleges/universities offer baccalaureate degrees in this field. Students planning to transfer to a four-year college or university should complete the lower-division major requirements and the general education pattern for the specific transfer institution. SMC has articulation agreements with the many UC and CSU campuses, as well as several private and out-of-state institutions.

Exact major requirements for UC and CSU campuses can be found online at *assist.org*.

A listing of private, nonprofit California colleges and universities can be found online at *aiccu.edu*. For articulation agreements between SMC and some of these institutions see *smc.edu/articulation*.

SMC offers the **Mathematics Associate Degree for Transfer**. Students completing this degree are eligible for priority transfer admission consideration in the majors at many California State University campuses. In addition, students will be required to complete no more than 60 semester/90 quarter CSU units of coursework after transfer to complete the baccalaureate degree.

NOTE: Students considering transfer to a UC, private, or out-of-state school should consult a counselor BEFORE applying to transfer, as the transfer requirements may be different from those required for the Mathematics AS-T.

The most current list of CSU campuses accepting this Associate Degree for Transfer is available online at *CalState Associate Degree for Transfer Major & Campus Search*

The University of California system has a transfer pathway for any UC campus that offers Mathematics. For more information, visit UC Transfer Pathways Guide.

Mathematics, Associate Degree for Transfer

Upon successful completion of the Santa Monica College's AS-T in Mathematics, the student will have a strong academic foundation in the field and be prepared for upper-division baccalaureate study. This coursework will satisfy most of the lower-division Mathematics requirements at many institutions at both the University of California and the California State University systems. This degree is intended for students who are interested in the theory of Mathematics and are planning to transfer to a four-year university and majoring in Mathematics, Physics, Engineering, or Computer Science.

Program Learning Outcomes: Upon completion of the program, students will demonstrate an appreciation and understanding of mathematics in order to develop creative and logical solutions to various abstract and practical problems. Furthermore, given a mathematical situation, the student will be able to critically analyze it, determine an appropriate strategy to address it, and implement the strategy to find the solution.

Area of Emphasis: (21 units)

Required Core Courses: (18 units)
MATH 7, Calculus 1 (5)
MATH 8, Calculus 2 (5)
MATH 11, Multivariable Calculus (5)
MATH 13, Linear Algebra (3)
Select at least 1 course from the following: (3 units minimum)
MATH 10, Discrete Structures *(strongly recommended)* (3)
MATH 15, Ordinary Differential Equations *(strongly recommended)* (3)
PHYSCS 8, Calculus-based General Physics 1 with Lab (4)
PHYSCS 21, Mechanics with Lab (5)