

NARRATIVE & DOCUMENTATION

Program Title: Associate in Science in Mathematics for Transfer (AS-T)

(Revised 8/26/13)

Criteria A. Appropriateness to Mission

1. Statement of program Goals and Objectives

This program is designed for students planning to transfer to a similar major at California State University (CSU) campuses.

Since mathematics is the language of science, studies in mathematics provided training necessary for many careers. Specifically this AS-T degree develops students' skills in differential and integral calculus as well as their proficiency with mathematical jargon and notation. These skills are needed to continue on to a bachelor's degree in mathematics, but are also foundation skills needed in nearly all STEM degrees and careers.

Studies in mathematics also improve students' general critical thinking skills. Students learn to read and analyze deductive arguments. They learn to create logical proofs. They develop skills for solving both routine and non-routine problems. These skills serve them well in all aspects of their education, their career and their life.

2. Catalog Description

The AS-T degree in Mathematics is designed specifically for the student preparing to transfer to a similar major at California State University (CSU) campuses. The study of mathematics improves the student's critical thinking and problem solving skills. A degree in mathematics opens doors to careers in many fields including engineering, medicine, actuarial science, research, computer science and education. Coursework includes a minimum of three semesters of calculus and additional courses in college-level mathematics and/or closely related fields.

Courses for the Transfer Degree

Students who wish to obtain the Associate in Science in Mathematics for Transfer must meet the following requirements:

1. 60 semester units of CSU-transferable courses including completion of one of the following General Education patterns:
 - a. California State University General Education (CSU-GE) pattern (40 units)
 - b. Intersegmental General Education Transfer Curriculum-CSU Version (IGETC-CSU pattern (37 units)
2. Minimum grade point average (GPA) of 2.0 in all CSU-transferable coursework.
3. Completion of 24 units of major coursework in Associate in Science in Mathematics for Transfer as detailed above with a minimum grade of "C" in each course.

Course substitutions are not permitted for this degree.

3. Program Requirements

~~COURSES WITHIN THE MAJOR~~

~~Complete 20-21 units within the major. Each course must be completed with a grade of 'C' or better.~~

~~Core Requirements—Complete 13 units.~~

~~MATH 001—Calculus (5.0)~~

~~MATH 002—Calculus (4.0)~~

~~MATH 003—Vector Calculus (4.0)~~

~~Area 2—Complete a minimum of 3 units.~~

~~MATH 004—Differential Equations (4.0)~~

~~MATH 005—Linear Algebra (3.0)~~

~~Area 3—Complete a minimum of 3 units.~~

~~MATH 004—Differential Equations (4.0)~~

~~MATH 005—Linear Algebra (3.0)~~

~~MATH 012—Introduction to Probability and Statistics (4.0)~~

~~MATH 022—Discrete Mathematics (4.0)~~

~~PHYS 004A—Principles of Physics: Mechanics (4.0)~~

~~Minimum Units: 60~~

Major Total	19-21
CSU or IGETC pattern	35-46
Electives	As required to meet degree total of 60 units
Double Counted	5
Degree Total (maximum)	60

4. Background and Rationale

The Associate in Science in Mathematics for Transfer to CSU is being developed as mandated by SB 1440. Major requirements are aligned with the TMC in order to allow students with a major in Mathematics to transfer to CSU as smoothly as possible. Discipline faculty, the Articulation Officer, Curriculum Committee collaborated in the development of this degree.

Criteria B. Need

5. Enrollment and Completion Projections

Not Applicable

6. Place of Program in Curriculum/Similar Programs

~~The AS-T degree in Mathematics will be offered in addition to the AS degree in Mathematics and the Interdisciplinary Studies degree (Math and Science Option). The AS-T degree is specifically designed to create a smooth transfer path for students planning to transfer to CSU campuses.~~

~~7. Similar Programs at Other Colleges in Service Area~~

~~As mentioned above, San Joaquin Delta College does also offer an AS degree in Mathematics. While the two degrees have similar course requirements, only the AS-T degree is fully aligned with the TMC to ensure easy transfer to CSU campuses.~~

~~8. Labor market information & Analysis (CTE only)~~

~~Not Applicable~~

~~9. Employer Survey (CTE only)~~

~~Not Applicable~~

~~10. Explanation of Employer Relationship (CTE only)~~

~~Not Applicable~~

~~11. List of Members of Advisory Committee (CTE only)~~

~~Not Applicable~~

~~12. Recommendations of Advisory Committee (CTE only)~~

~~Not Applicable~~

~~Attachment: Labor/Job Market Data (CTE only)~~

~~Attachment: Employer Survey (CTE only)~~

~~Attachment: Minutes of Key Meetings~~

Criteria C. Curriculum Standards

~~13. Display of Proposed Sequence~~

~~Not Applicable~~

~~14. Transfer Documentation (if applicable)~~

~~See attached documents.~~

~~Attachment: Outlines of Record for Required Courses should be separately attached for
———each course.~~

Attachment: Transfer Documentation (if applicable)

Criteria D. Adequate Resources

15. Library and/or Learning Resources Plan

No additional library and/or learning resources beyond the college's current resources will be required.

16. Facilities and Equipment Plan

No additional facility and/or equipment resources beyond the college's current resources will be required.

17. Financial Support Plan

Courses included in this program are already being offered and supported by the college. No additional financial, library, facility, equipment, or faculty resources are necessary to successfully implement this degree option.

18. Faculty Qualifications and Availability

All faculty members that will teach in this program meet the State minimum qualifications. No additional faculty members will be required.

Criteria E. Compliance

19. Based on model curriculum (if applicable)

Not Applicable

20. Licensing or Accreditation Standards

There are no licensing or accrediting standards that apply to this program.

21. Student Selection and Fees

No additional student selection criteria are required; this program complies with California Code of Regulations, title 5 section 55201 and 58106; and, there are no additional fees beyond those identified in California Education Code section 76300.