# Mathematics AS-T Degree

This degree is designed to meet common lower-division requirements for a major in mathematics on most California State University (CSU) campuses. Satisfactory completion of the CRC Associate in Science in Mathematics for Transfer (AS-T) degree provides a solid foundation and satisfies the standard prerequisites for upper-division coursework in mathematics at most CSU and other 4-year universities. However, it is highly recommended that students meet with a counselor since major and general education requirements vary.

**Total Units:** 62

## First Year

### Semester 1

**14 Units**

| COURSE | UNITS | PRE-REQS^ | SEMESTERS OFFERED* | GE AREA |
|---|---|---|---|---|
| **MATH 400** Z Calculus I | 5 | Precalculus or Equivalent | F, S | Cal-GETC Area 2 |
| **CalGETC Area 1A-English Composition** Z | 3 | Recommend meeting with a counselor | F, S, Su | Cal-GETC Area 1A |
| **CalGETC Area 3A-Arts** Z | 3 | | F, S, Su | Cal-GETC Area 3A |
| **CalGETC 4-Social & Behavioral Sciences**[1] Z | 3 | | F, S, Su | Cal-GETC Area 4 |

Z At least one section of this course is offered with free textbooks and is labeled as zero textbook costs (ZTC). If it is a GE area class or elective, there may be several ZTC offerings to fulfill the GE requirement. Use the Free Textbook filter to find these courses. Learn more on the ZTC page of the college website.

[1] A total of 6 units from 2 disciplines is required to meet IGETC Area 4.

### Semester 2

**15 Units**

| COURSE | UNITS | PRE-REQS^ | SEMESTERS OFFERED* | GE AREA |
|---|---|---|---|---|
| **MATH 401** Z Calculus II | 5 | MATH 400 | F, S | Cal-GETC Area 2 |

## Career Options/Outlook:

Mathematicians can pursue careers as research analysts, statisticians, or actuaries. For example, Operations Research Analysts formulate and apply mathematical modeling and other optimizing methods to develop and interpret information that assists management with decision-making, policy formulation, or other managerial functions. May collect and analyze data and develop decision support software, services, or products. May develop and supply optimal time, cost, or logistics networks for program evaluation, review, or implementation. **Career opportunities require more than an associate degree.**

## A sample of reported job titles:

Advanced Analytics Associate, Analytical Strategist, Business Analytics Director, Business Insight and Analytics Manager, Decision Analyst, Operations Research Analyst, Operations Research Director, Operations Research Group Manager, Operations Research Manager, Optimization Analyst

## Projected job openings in

| COURSE | UNITS | PRE-REQS^ | SEMESTERS OFFERED* | GE AREA |
|---|---|---|---|---|
| **CalGETC Area 1B-Critical Thinking** Z | 3 | | F, S, Su | Cal-GETC Area 1B |
| **CalGETC Area 5A-Physical Science** Z | 3 | | F, S, Su | Cal-GETC Area 5A |
| **CalGETC Area 5C-Biol/Physical Science Lab** Z | 1 | | F, S, Su | Cal-GETC Area 5C |
| **Any transferable elective**[1] | 3 | | | |

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[1] Units needed to total 60 units for graduation. Refer to Course Number for the appropriate course level necessary for the degree.

# Year 2

## Semester 3

**17 Units**

| COURSE | UNITS | PRE-REQS^ | SEMESTERS OFFERED* | GE AREA |
|---|---|---|---|---|
| **MATH 402** Z Calculus III | 5 | MATH 401 | F, S | Cal-GETC Area 2 |
| **CalGETC Area 1C-Oral Communication** Z | 3 | | F, S, Su | Cal-GETC Area 1C |
| **CalGETC Area 3B-Humanities** Z | 3 | | F, S, Su | Cal-GETC Area 3B |
| **CalGETC Area 5B-Biological Science** Z | 3 | | F, S, Su | Cal-GETC Area 5B |
| **Any transferable elective**[1] | 3 | | | |

## California (2020-2030):

800

## Projected growth in California (2020-2030):

32% growth

## Median Salary in California with advanced degree (2021):

$84,860/yr

## Source:

https://www.onetonline.org/link/summary/15-2031.00

## Transfer notes:

Please meet with a counselor for specific transfer course evaluation or transferring to a specific 4-year institution.

## General Education (GE):

Non-specified GE courses identified by CRC or Cal-GETC Area without pre- or co-requisites can be taken at any semester.

## Honors option:

The CRC Honors Program is designed specifically for academically accomplished students and for students with the potential for high achievement. Students who complete 15 units or more in honors-designated

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[1] Units needed to total 60 units for graduation. Refer to Course Number for the appropriate course level necessary for the degree.

## Semester 4

**16 Units**

| COURSE | UNITS | PRE-REQS^ | SEMESTERS OFFERED* | GE AREA |
|---|---|---|---|---|
| **MATH 410** Z Introduction to Linear Algebra | 3 | MATH 401; Advisory: MATH 402 | F, S | Cal-GETC Area 2 |
| **MATH 420** Z Differential Equations | 4 | MATH 401; Advisory: MATH 402 | F, S | Cal-GETC Area 2 |
| **CalGETC Area 4-Social & Behavioral Sciences**[1] Z | 3 | | F, S, Su | Cal-GETC Area 4 |
| **CalGETC Area 6-Ethnic Studies** Z | 3 | | F, S, Su | Cal-GETC Area 6 |
| **Any transferable elective**[2] | 3 | | | |

Z At least one section of this course is offered with free textbooks and is labeled as zero textbook costs (ZTC). If it is a GE area class or elective, there may be several ZTC offerings to fulfill the GE requirement. Use the Free Textbook filter to find these courses. Learn more on the ZTC page of the college website.

^You must have passed the prerequisite course(s) with a “C” or better; Corequisite must be taken during the same semester; Advisory means it is recommended but not required to enroll in the course.

*(O) = online available (P) = partially online

[1] A total of 6 units from 2 disciplines is required to meet IGETC Area 4.

[2] Units needed to total 60 units for graduation. Refer to Course Number for the appropriate course level necessary for the degree.

courses will earn special recognition as an Honors Scholar, a distinction that may entitle the student to guaranteed transfer and scholarship opportunities at select transfer colleges and universities.

## About this program map:

This program map represents one possible pathway to complete the program. Please see a counselor to create an education plan customized to meet your needs. This map is not a guarantee of course availability or financial aid applicability.

## Zero Textbook Costs (ZTC):

The Zero Textbook Costs designation and logo are added to any course that provides free access to all required instructional materials. These are typically shared with students through Canvas. Courses that are designated as ZTC may still require students to purchase supplemental materials such as lab coats, a calculator, art supplies, etc. See full definitions and searching tips on the Zero Textbook Costs page of the college website.

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