

Senior Year Mathematics Course Options

Excellence in Academic Preparation = College Success = More Options for More Students



STEM Pathway

Quantitative Reasoning with Advanced Mathematical Topics (QRAT) (C-Approved)

Pre-requisites:

- Integrated Math III or Intermediate Algebra II *with a passing grade*

Intended for high school seniors who place into:

- Level 4 “Exceeds Standard” on SBAC/CAASPP
- Level 3 “Standard Met” on SBAC/CAASPP
- Level 2 “Standard Nearly Met” on SBAC/CAASPP (students who placed into Level 2 may participate in the course with a counselor/math teacher recommendation)

Students who typically enroll in this course:

- Are not ready to take an AP level math/QR course.
- May have originally been placed into pre-Calculus.
- “Just got by” IM III or Intermediate Algebra II but wish to further develop their readiness for college-level math.
- May not have planned on taking a senior year math course.

STEM-Optional Pathway

Transition to Quantitative Reasoning (TQR) (G-Approved)

CSU- and UC-Bound Pre-requisites:

- Completion of “c” subject area of the “a-g” requirements

Community College or Workforce-Bound Pre-requisites:

- Algebra I and Geometry or Integrated Math I and II
- May have also taken a third year of math (e.g. transition course, 2-year course, etc.)

Intended for high school seniors who place into:

- Level 3 “Standard Met” on SBAC/CAASPP
- Level 2 “Standard Nearly Met” on SBAC/CAASPP

Students who typically enroll in this course:

- May not have planned on taking a senior year math course.
- May have originally been placed into Algebra II or IM III.
- “Just got by” Algebra I and Geometry or IM I and II but wish to further develop their readiness for college-level math.
- Are currently not considering a STEM/math intensive major.

STEM/MATH INTENSIVE MAJORS:

Anthropology, Business, Biology, Chemistry, Computer Science, Economics, Environmental Science, Family and Consumer Sciences, Geology, Kinesiology, Liberal Studies, Math, Stats, Physics, and Engineering (Civil, Computer, Electrical, Mechanical)

Either course is to be taken during the senior year of high school.

Either course may be used as part of multiple measures for *placement* once a student is admitted to a college or university. *Revised 02.11.19*

Which course option should I take my Senior Year?

The purpose of the C-Approved Course (STEM and/or math intensive pathway) is to better prepare students for the rigorous math requirements that STEM and/or math intensive majors will have to complete. Students who have met the SBAC/CAASPP standard and plan on majoring in a STEM field would benefit from enrolling in the C-Approved Course. The QRAT course can only be taken during senior year and will count as a C-Approved course.

The purpose of the G-Approved Course (Non-STEM or math intensive pathway) is to provide non-STEM or math intensive college-bound students with a pathway that prepares them for General Education college-level Quantitative Reasoning (QR). Students who have met or have nearly met the CAASPP standard and who do not plan on majoring in a STEM field would benefit from enrolling in the G-Approved Course.

What does it mean to be C-Approved or G-Approved?

C-Approved: Satisfies the Mathematics “C” area of the A-G Requirements. C-Approved is defined as “three years (six semesters) of college-preparatory mathematics [which] are required (four years are strongly recommended) including or integrating topics covering: Elementary Algebra, Advanced

Algebra, Two- and three-dimensional geometry”.

G-Approved: A yearlong elective course that satisfies the College-preparatory Elective “G” area of the A-G Requirements. The elective course can focus on math and/or QR.

Both of these courses have received Program Status from the University of California Office of the President (UCOP).

What is Program Status?

The UC Office of the President has granted both the QRAT and TQR courses with “program status” meaning that high schools throughout the state can more easily adopt these existing courses to be taught.

Why take a Senior Year math course if it is not required?

“It is particularly important that students take mathematics courses in their senior year of high school, even if they have completed three years of college preparatory mathematics by the end of their junior year. Experience has shown that students who take a hiatus from the study of mathematics in high school are very often unprepared for courses of a quantitative nature in college...” * Additionally, students who have exceeded the standard and do not seek to follow a STEM or a Calculus math track would benefit from taking either of these courses. Students who have not met the standard and have not taken

Algebra II, should plan on taking Algebra II their senior year. The California Community Colleges and the CSU encourage all students to enroll in a senior year math course rather than opting for no math class at all.

**Statement on Competencies in Mathematics Expected of Entering College Students by the Intersegmental Committee of the Academic Senates of the California Community Colleges, the CSU, and the UC (2016).*

What is “Area B4”?

Area B4 refers to the Mathematics & Quantitative Reasoning section in the CSU General Education (GE) requirements. All incoming first year students, regardless of major, need to complete the GE requirements in order to graduate from a CSU.

If I choose the non-STEM pathway G-Approved course, will I be precluded from majoring in a STEM field at a later time?

Students who take the G-Approved course always retain the option to major in a STEM/Math intensive field.

What are multiple measures?

The CSU recently eliminated placement tests (ELM and EPT) and campuses rely on multiple measures such as assessment tests (SBAC/CAASPP, ACT, SAT, AP/IB) high school grades and coursework, and other indicators to help decide which freshman English and math course a student is prepared to take. These measures are only used for placement.

How do the CAASPP/EAP levels help to inform CSU placement?

In 11th grade, students take the SBAC/CAASPP Test. These results are used by the CSU as a part of the multiple measures system to help decide which courses a student will be placed. For this reason, high school juniors should take the SBAC/CAASPP Test seriously.

All admitted students to the CSU are ready for GE requirements in English and math courses; however, some students may require a different level of support.

- **“Fulfilled Requirement”** – have fulfilled AP/IB or have college credits in a respective field; CSU GE requirements in English and/or math are fulfilled.
- **“Enroll in GE Course”** – SBAC/CAASPP Scores, SAT, ACT, GPA, coursework will determine placement; students are ready for GE English and/or math courses
- **“Enroll in supported GE Course”** – SBAC/CAASPP Scores, SAT, ACT, GPA, coursework will determine placement; students are ready for GE English and/or math courses with support; Early Start Program is recommended
- **“Early Start Program Required – Enroll in Supported GE Course”** – Based on assessment test results and high school GPA and coursework results, the student requires additional support; student are ready for GE English and/or math courses with support; Early Start Program is required.

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