UNIVERSITY OF CALIFORNIA

BERKELEY • DAVIS • IRVINE • LOS ANGELES • MERCED • RIVERSIDE • SAN DIEGO • SAN FRANCISCO

SANTA BARBARA • SANTA CRUZ

BOARD OF ADMISSIONS AND RELATIONS WITH SCHOOLS (BOARS)
Barbara Knowlton, Chair
knowlton@psych.ucla.edu

Assembly of the Academic Senate
1111 Franklin Street, 12th Floor
Oakland, CA 94607-5200

Statement on Mathematics Preparation for the University of California
UC Board of Admissions and Relations with Schools (BOARS)[1]

In support of new and innovative college-prep mathematics courses being developed in high schools across the state, the University of California announced in October 2020 an updated mathematics (area C) course policy, effective for the 2021–22 school year and onward.

Overall, the policy revisions:

- Clarify UC's expectations for college-prep mathematics courses that will help students acquire specific skills to master the subject's content and also gain proficiency in quantitative thinking and analysis;
- Align with the efforts of high schools—especially public schools that have implemented the California Common Core State Standards: Mathematics (CCSSM)—to design and deliver multiple college-prep math course options for students; and
- Invite the submission of a broader range of higher-level and/or honors-level math courses for area C consideration.

UC's Board of Admissions and Relations with Schools (BOARS) unanimously endorsed the policy changes to increase the high school mathematics course options for students as both a college preparation and equity issue. By clarifying the definition of college math readiness and expanding the choices of area C math courses students can take to be eligible for UC admissions, students should be encouraged to pursue the mathematics education most relevant to their academic and career goals.

What is UC's clarified definition of "advanced mathematics"?

UC faculty issued guidance on the types of high school mathematics courses that will qualify for the *Advanced Mathematics*, *Calculus*, *Statistics*, and *Computer Science* disciplines within subject area C. Such courses will:

- Use mathematical concepts from prerequisite courses (i.e., build upon content covered in elementary algebra, two- and three-dimensional geometry, and advanced algebra)
- Substantially align with Common Core (+) standards for higher mathematics
- Be designed for 11th and/or 12th grade levels
- Consist of pure mathematics or incorporate math in an applied form in conjunction with science or career technical education
- Strengthen students' understanding of mathematics by incorporating the depth described

[1] Rev. July 2023

in the Statement on Competencies in Mathematics Expected of Entering College Students (endorsed by faculty from UC, the California State University, and the California Community Colleges)

Examples of advanced mathematics include, but are not limited to, courses in applied mathematics (e.g., mathematics of engineering), calculus, computer science, discrete mathematics, linear algebra, pre-calculus, probability, statistics/data science, and trigonometry.

What might expanded options for college-prep math look like for students?

The revised area C policy affirms that students may complete certain mathematics courses other than Algebra II or Mathematics III in their junior year of high school to fulfill the minimum admissions requirement (i.e., three years of high school math, through Algebra II or Mathematics III). The policy revisions also welcome a wider range of college-prep courses that high schools might offer to students in either their junior or senior year to satisfy the area C requirement.

Below are sample course sequences students could complete to fulfill the area C requirement:

Example 1: Math I → Math II → Statistics
Example 2: Math I → Math II → Math III → Statistics
Example 3: Algebra I → Geometry → Algebra II → Introduction to Data Science
Example 4: Algebra I → Geometry → Algebra II → Pre-Calculus

BOARS recognizes that schools are considering different approaches to mathematics instruction, shifting from traditional course sequences to new courses and sequences, as guided by the CCSSM and the Mathematics Framework for California Public Schools: Kindergarten Through Grade Twelve. Within the CCSSM, there are various ways to address the college-ready standards, and UC encourages schools to make bold changes in mathematics that support every student's success. What matters most is that students meet the Common Core standards and UC's expectations underlying the area C subject requirement—not that they have completed a specific course sequence.

Why does UC encourage a broader scope of higher- and/or honors-level mathematics courses?

By providing access to multiple course offerings at an advanced math/honors level, schools give students ample opportunities to be recognized for taking the most challenging levels of mathematics available to them and for exceeding the minimum area C requirement for UC admissions. Further, to bolster students' college preparation and empower them for math achievement, UC recommends they study math throughout high school.

What college-preparatory math courses should a high school student take?

Students should take college-preparatory math (area C) courses that align with their academic and career goals. Students who are interested in pursuing a college major in science, technology, engineering or math (STEM), or data science and the social sciences, are strongly encouraged to consider a math course sequence that prepares them for calculus, either during high school or in their first year at UC.

Additional UC Policy Statements

- BOARS Statement on the Impact of Calculus on UC Admissions (April 2016)
- BOARS Statement on High School Mathematics Curriculum Development under the Common Core State Standards (April 2013)