

**Mathematics/Quantitative Reasoning specific FAQ
on the Revisions to EO 1100 Revised August 23, 2017
CSU General Education Breadth**

The following list of commonly raised Mathematics/Quantitative Reasoning questions and Chancellor's Office responses is provided with the release of Executive Order 1100 Revised August 23, 2017 *CSU General Education Breadth Requirements*. Questions have been received through consultation and survey feedback from faculty, students and administrators.

1. What are some of the changes to EO 1100 Revised that relate specifically to Mathematics/Quantitative Reasoning?

- Intermediate Algebra is no longer required as the uniform prerequisite for all courses in CSU General Education Breadth Area B4 Mathematics/Quantitative Reasoning.
- Approved GE Area B4 courses may now include non-algebra intensive courses such as statistics pathways, statistics for majors, computer science and personal finance, for example.
- To ensure efficient completion of lower-division certification and transfer from CCC campuses, coupled with efficient degree completion at the CSU, this policy clarifies that the nine units of upper-division GE courses are taught only in Areas B, C and D.

2. How could the provision that three units of upper-division GE must be completed in Area B impact mathematics/quantitative reasoning?

This clarification of existing requirements reflects the organization of 48 units of CSU GE Breadth, with 39 units in lower-division certification and the remaining 9 units left for upper-division completion. Students will be looking for upper-division courses in Area B, creating the potential for mathematics departments, and others, to create these courses. (See Attachment A of EO 1100 Revised for an illustration of this distribution.)

3. Can courses that meet the requirements of CSU GE Subarea B4 have a prerequisite?

Yes, the new policy allows CSU faculty to specify the prerequisites relevant to each GE math or quantitative reasoning course.

Courses in Subarea B4 shall allow students to demonstrate the abilities to reason quantitatively, practice computational skills, and explain and apply mathematical or quantitative reasoning concepts to solve problems. Courses in this Subarea shall include a prerequisite reflective only of skills and knowledge required in the course.

In practice, it will be important for students to be advised to take a Subarea B4 course that is appropriate for their major. For some majors, this will require a mathematics class such as calculus, which may have a mathematics prerequisite.

Courses meeting the GE mathematics/quantitative reasoning requirement may include traditional mathematics (e.g., algebra, trigonometry and calculus) as well as statistics. Additionally, GE math/quantitative reasoning options now may include—for example—personal finance, statistics for specific majors, or computer science, which may not be exclusively algebra based. The change allows students more flexibility in completing their bachelor's degrees, and more opportunities to apply mathematical and quantitative reasoning to the world around them.

4. Can we continue to use the specific prerequisite of “Intermediate Algebra” in any of our GE Subarea B4 courses?

No, Intermediate Algebra is equivalent to Algebra II, a high school course. It continues to be part of the a-g high school requirements for admission to the CSU.

5. The Quantitative Reasoning Task Force (QRTF) recommended specific GE mathematics/quantitative reasoning requirements. Why are those not included in the revised policy?

In defining the Subarea B4 requirement, the revised EO embraces the fundamental principles of the *QRTF Report* recommended definition, while keeping within the language conventions for EO 1100 Area definitions. The Academic Senate General Education Task Force (GETF) may discuss recommendations that fall outside the scope of this EO revision project, which focused on: (1) clarification; (2) ensuring equity; and (3) facilitating efficient degree completion.

6. Can any GE course exceed the unit count required for a Subarea?

Higher-unit GE courses may not be required, but GE courses bearing higher units may be allowed to satisfy GE Area or Subarea requirements. Major courses that double count toward satisfaction of a GE Subarea may carry a higher unit than the Subarea requires, but students need to be given the option of completing a lower-unit GE course. The most efficient path to degree completion may be through taking, for example, a 4-unit math major course that also satisfies the B4 GE Subareas. Compared to taking the 4-unit math major course and a separate 3-unit B4 GE course, the student who double counts the GE course with the major requirement would save units.

Need further assistance?

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Attachment A
Requirements for Lower- and Upper-Division
California State University General Education Breadth

GE Area	Lower-Division Semester Units	Upper-Division Semester Units	Total Semester Units*
Area A English Language Communication and Critical Thinking			
One course in each Subarea			
A1 Oral Communication			
A2 Written Communication			
A3 Critical Thinking			
Area A total semester units required:	9	0	9
Area B Scientific Inquiry and Quantitative Reasoning			
One course in each Subarea			
B1 Physical Science			
B2 Life Science			
B3 Laboratory Activity - associated with the course taken to satisfy either B1 or B2			
B 4 Mathematics/Quantitative Reasoning			
Area B total semester units required:	9	3	12
Area C Arts and Humanities			
At least one course in each Subarea			
C1 Arts: Arts, Cinema, Dance, Music, Theatre			
C2 Humanities: Literature, Philosophy, Languages Other than English			
Area C total semester units required:	9	3	12
Area D Social Sciences			
Area D total semester units required:	9	3	12
Area E Lifelong Learning and Self- Development			
Area E total semester units required:	3		3
Total GE Units	39	9	48

Note:

Students who transfer to the CSU with an Associate Degree for Transfer (ADT) or full CSU GE certification, have completed required 39 lower-division GE semester units. This includes 9 lower-division semester units each in Areas A, B, C and D, and 3 lower-division semester units in Area E. Their remaining required 9 semester units fall into CSU GE Areas B, C and D, and are to be taken at the upper-division level.

*To determine unit requirements at quarter-based campuses, multiply the semester unit requirement by 1.5.