
Validate that!

Upcoming changes to Area C
(math) validation

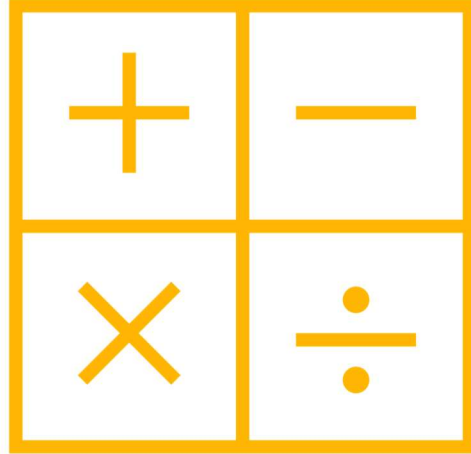
September 2024



Agenda

TOPICS FOR DISCUSSION

- Area C (math) description
- Outcomes of faculty workgroup Stage 1 & 2 reports
- Changes to Area C disciplines
- Changes to math validation rules
- Validation scenarios



Acronyms and terminology used in this session

BOARS

- Board of Admissions & Relations with Schools

ACW

- Area C Workgroup

HSA

- High School Articulation unit

VALIDATION

- When a student has successfully completed advanced work in an area of sequential knowledge, the student is presumed to have mastered the lower-level coursework.



Math requirement for first-year applicants

WHAT IS THE AREA C REQUIREMENT?

- Three years of college-prep math including or integrating topics from:
 - Elementary algebra
 - Two- and three-dimensional geometry
 - Advanced algebra
- A fourth year of math is strongly recommended

HAS THE REQUIREMENT CHANGED?

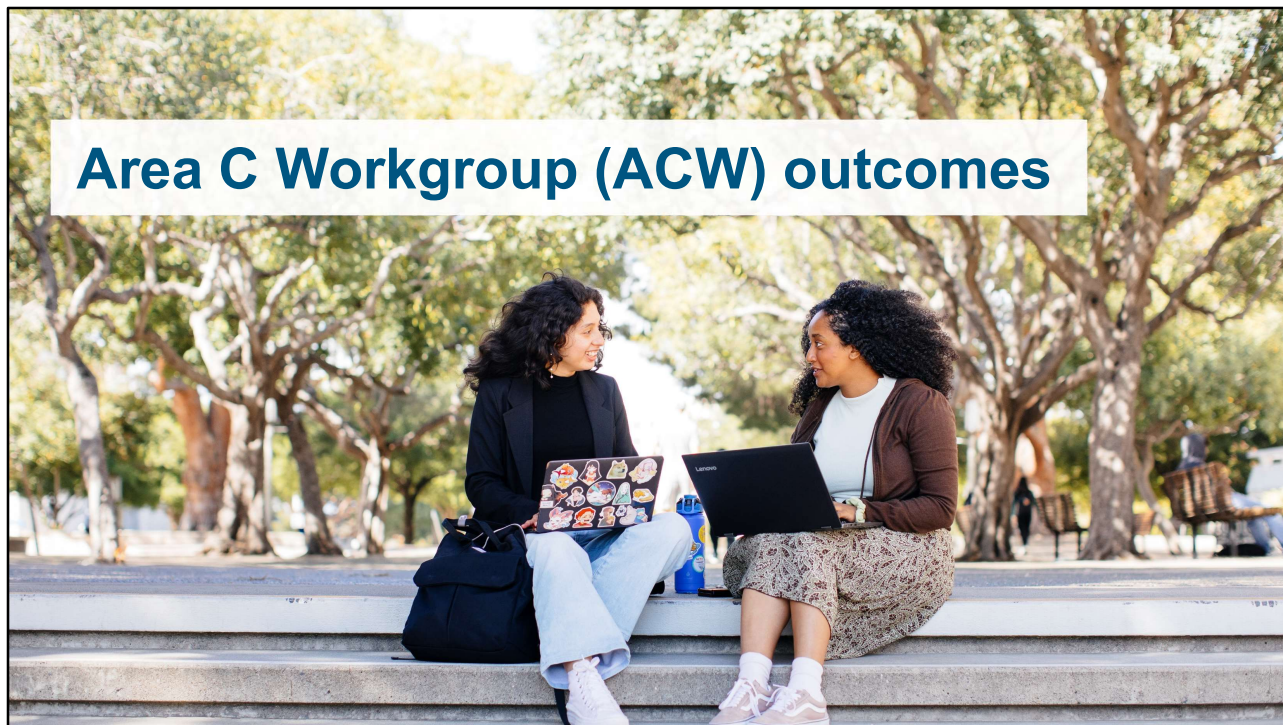
NO!

- UC will continue to accept high-school level math from 7th and 8th grade
- A geometry course – or appropriate integrated math course – must be completed



- Part of the A-G requirements, Area C represents the Math subject requirement for incoming first-year applicants.
- The minimum requirement for admission to any UC campus is 3 years of college-preparatory math including or integrating the topics found in elementary and advanced algebra as well as two- and three-dimensional geometry.
- UC faculty strongly recommend a fourth year of math, and, in fact, completing extra years in multiple subject areas is common and viewed favorably.
- We'll go into more detail shortly, but the Area C requirement was in the news frequently this past year and we do want to reassure counselors that our minimum requirement has not changed.
 - UC continues to require 3 years of foundational math.
 - We will continue to accept high school-level math courses completed in 7th and 8th grade to meet all or part of the requirement.
 - And UC continues to require a geometry course or its integrated math equivalent to be completed by all first-year applicants.

Area C Workgroup (ACW) outcomes



What prompted the review of Area C?

JULY 2023

- New California Mathematics Framework adopted
- Group of faculty from across UC contacted BOARS with concerns about current high school data science curricula
- BOARS removed their endorsement of data science in the California Math Framework and appointed a workgroup to study Area C



- When the new Math Framework was originally drafted, it included a UC endorsement of Data Science courses as a viable substitute for Algebra II/Math III, particularly since some of the Data Science curricula had been developed by UC faculty.
- The Math Framework was due to be adopted in mid-July 2023, and shortly before that a group of UC faculty expressed their concerns with allowing Data Science in lieu of Algebra II/Math III, or as a course that could validate Algebra II/ Math III.
 - Their concerns centered around the most common Data Science curricula being taught in CA high schools.
 - Many felt the content of those courses was not at a level higher than or even on par with Algebra II/Math III.
- Because of the concerns raised, BOARS removed their endorsement of Data Science from the Math Framework and appointed a workgroup to look at Area C and propose any potential revisions to the requirement, as well as determine whether Data Science courses were appropriate substitutes for Algebra II/Math III.

ACW background

OCTOBER 2023

- ACW convened to review the Area C requirement
- Members included faculty from across the 10 campuses
- Faculty primarily from Math, Statistics and Computer Science departments



- The Area C Workgroup (ACW), comprised of faculty from all 10 UC campuses, convened in October 2023 with the task of reporting findings to BOARS in two stages: one in January 2024 and one in May 2024.
- They specifically considered whether requiring the three foundational courses was still appropriate, and they looked at syllabi from various Statistics and Data Science courses approved in CA high schools.
- It should be noted that nearly all of the faculty on the ACW came from the Math, Statistics and Computer Science departments.

ACW reports

STAGE 1

- Reconfirmed three foundational years of math
- Advanced math would fall into two categories:
 - Courses that validate Algebra II/Math III
 - Courses that are appropriate for fourth year of math but do not validate Algebra II/Math III

STAGE 2

- CSU faculty added to ACW
- Examined which math coursework is most appropriate and prepares students to be successful at the University
- Proposed two additional categories to distinguish between math courses based on students' interests (major, career, etc.)

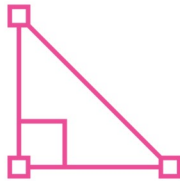


- The Stage 1 report – released in February 2024 and unanimously by BOARS – recommended clarifying two technical points about how the existing policy should be implemented as it relates to course development and approval:
 - Make clear the conditions under which another math course can substitute for (or ‘validate’) one of the three foundational courses;
 - Make clear which courses are suitable for the recommended fourth year of math – namely, courses appropriate for students in their 3rd or 4th year of high school who are already familiar with the foundational content in the three required lower-level courses.
 - This meant that higher-level courses would fall into two groups: those that validate Algebra II/Math III and those that do not.
 - The report also recommended that the recommendations take effect in the 2025-26 academic year, to give high schools ample time to review and revise courses as appropriate.
 - Importantly, students who complete a math course that validates Algebra II/Math III at the time it was taken will not be affected.
- The Stage 2 report was released in June 2024.
 - By that time, CSU faculty had been added to the ACW, since policies surrounding A-G requirements also affect CSU.
 - The Stage 2 report recommended grouping math courses into four categories, which we’ll discuss on the next slide.
 - Essentially, the Stage 2 report recommends that students take the most advanced math class available to them in their senior year of high school that aligns with their future major and career goals.
 - It’s important to remember that STEM majors and many social science majors at UC require calculus, so students considering those majors should take courses that will prepare them to complete calculus when they are at UC. And students who are undecided should try to choose courses that will give them the most options at UC.

ACW math categories: Category 1

CATEGORY 1

The required foundational math sequence



FOUNDATIONAL DISCIPLINES

- Algebra I
- Geometry
- Algebra II
- Math I
- Math II
- Math III



- As mentioned previously, the Stage 2 report recommended that Area C courses be grouped into four categories.
- Category 1 courses are those courses that meet the three foundational years of math, and it is expected that all students will complete courses from Category 1 to meet minimum admission requirements.

ACW math categories: Categories 2 & 3

CATEGORY 2

More advanced courses that validate a foundational course by requiring mastery of the content in the core sequence

- Precalculus
- Calculus
- Other Advanced Math (algebra-based)

CATEGORY 3

Courses that extend foundational knowledge but will **not** validate Algebra II/ Math III

- Statistics
- Additional Math

Courses in these two categories are particularly useful in developing the quantitative skills students are likely to need for college-level coursework



- Category 2 courses are those that require mastery of the foundational math content.
 - These courses will rely on the foundational math content, deepen this knowledge, and align with Common Core advanced math standards for calculus.
 - Category 2 courses will validate Algebra II/Math III.
 - Courses in the Precalculus, Calculus and Other Advanced Math disciplines will fall under Category 2.
- Category 3 courses are higher-level courses in areas different from the required foundational sequence and build on prior math understanding, but don't necessarily require or rely on mastery of the entire content of the core courses.
 - These courses will **not** validate Algebra II/Math III.
 - Courses in Statistics and Additional Math (a new discipline) may fall under Category 3.
- The ACW particularly noted that courses in Categories 3 and 4 are most useful for students preparing for college-level coursework

ACW math categories: Category 4

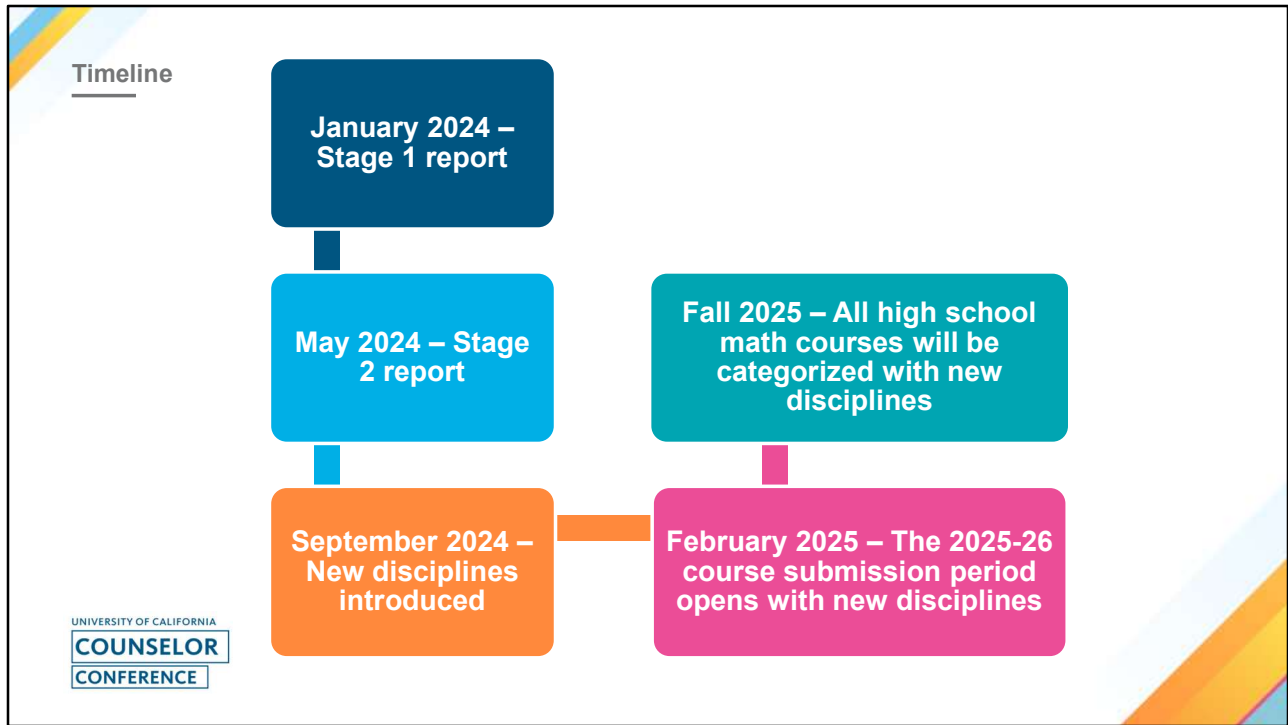
CATEGORY 4

Courses that focus on other topics in math and may align with – but do not necessarily exceed – the foundational knowledge typically found in Algebra II/ Math III; these courses will **not** validate Algebra II/ Math III

- Statistics
- Additional Math



- Finally, Category 4 courses are those courses that build on only the first or second of the foundational courses but broaden a student's interest and confidence in math.
- These courses will align with higher math Common Core standards but not the advanced math standards.
- Courses from the Statistics and Additional Math discipline may fall under Category 4.
- As you may have noticed, courses from the Statistics and Additional Math disciplines can either be Category 3 or 4 courses.



Just to sum up what we've discussed, here is the timeline of the ACW reports and when their recommendations will be implemented.



As you surely noticed from the previous slides, UC will be introducing a new math discipline, as well as revising which types of courses should be included in already existing disciplines.

Current math disciplines through 2024-25 academic year

Foundational math disciplines	Math disciplines that validate Algebra II/Math III	Math disciplines that do not validate Algebra II/Math III
<ul style="list-style-type: none">• Algebra I• Geometry• Algebra II• Math I• Math II• Math III	<ul style="list-style-type: none">• Precalculus• Calculus• Statistics• Other Advanced Math	<ul style="list-style-type: none">• Computer Science



- These are the current math disciplines in place through the 2024-25 academic year.
- Note that the academic year ends with summer 2025.
- Currently, only courses in the Computer Science discipline will not validate Algebra II/Math III.

Math disciplines beginning 2025-26 academic year

Foundational math

- Algebra I
- Geometry
- Algebra II
- Math I
- Math II
- Math III

Math disciplines that will validate Algebra II/Math III

- Precalculus
- Calculus
- Other Advanced Math

Math disciplines that will not validate Algebra II/Math III

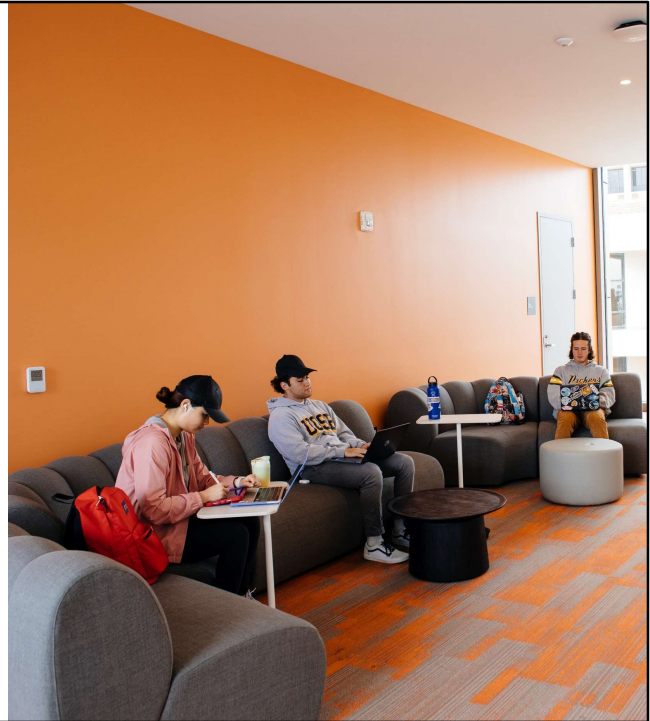
- Statistics
- Computer Science
- **Additional Math**

- Additional Math will be the only 'new' discipline created for the 2025-26 academic year and beyond (beginning fall 2025).
- All other disciplines are currently used and will continue to be used.
- However, courses in the Statistics discipline will no longer validate Algebra II/Math III.
- Courses in Additional Math will also not validate Algebra II/Math III.

The 'Additional Math' discipline

WHAT IS 'ADDITIONAL MATH'?

- Courses from categories 3 and 4 as outlined by the ACW Stage 2 report
- Courses may either extend foundational knowledge or may focus on other topics that align with foundational knowledge
- These courses will **not** validate Algebra II/Math III



- Instead of creating different disciplines for courses based on their category, UC has decided to introduce just one new math discipline: Additional Math.
- Courses from this discipline can be either Category 3 or 4 courses, but none will validate Algebra II/Math III.
- Note that UC will flag Category 4 courses in the Course Management Portal, but the category will not be displayed on the A-G course lists or in the UC application. The flag will be for reporting purposes only.
 - The emphasis for students should be on completing a fourth year of math beyond the foundational sequence, not whether the course is in Category 2, 3 or 4.

Impact on admissions

HOW WILL THESE NEW MATH DISCIPLINES AFFECT ADMISSIONS?

- Part of Comprehensive Review
- Extra courses in any subject area are encouraged and viewed positively
- No single course determines an admission decision
- Students should choose math courses that align with their major and career aspirations



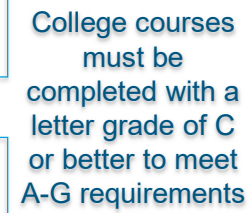
UNIVERSITY OF CALIFORNIA
COUNSELOR
CONFERENCE

- We know the most important question on your mind is probably how these new disciplines will be viewed during the admission selection process.
- Our campuses will continue to use Comprehensive Review to select students
 - Under Comp Review, multiple academic and non-academic factors are taken into consideration, as well as each student's individual circumstances or 'context'
 - One of the 13 factors of Comp Review is the number of A-G courses completed beyond the minimum requirements – this is why students are encouraged to take extra years of math, science and LOTE to be as competitive as possible in the admission process
 - Courses from any of the non-foundational math disciplines will be considered an extra year of math beyond the minimum requirements, so students should feel confident selecting courses that match their future goals
 - Note: some majors at UC, such as engineering majors, may consider a student's math trajectory and expect students to be ready for calculus in their first term at UC.
 - Because Comp Review takes into consideration so many factors, a single course or grade is rarely the sole deciding factor in admission.

What about college coursework/dual enrollment?

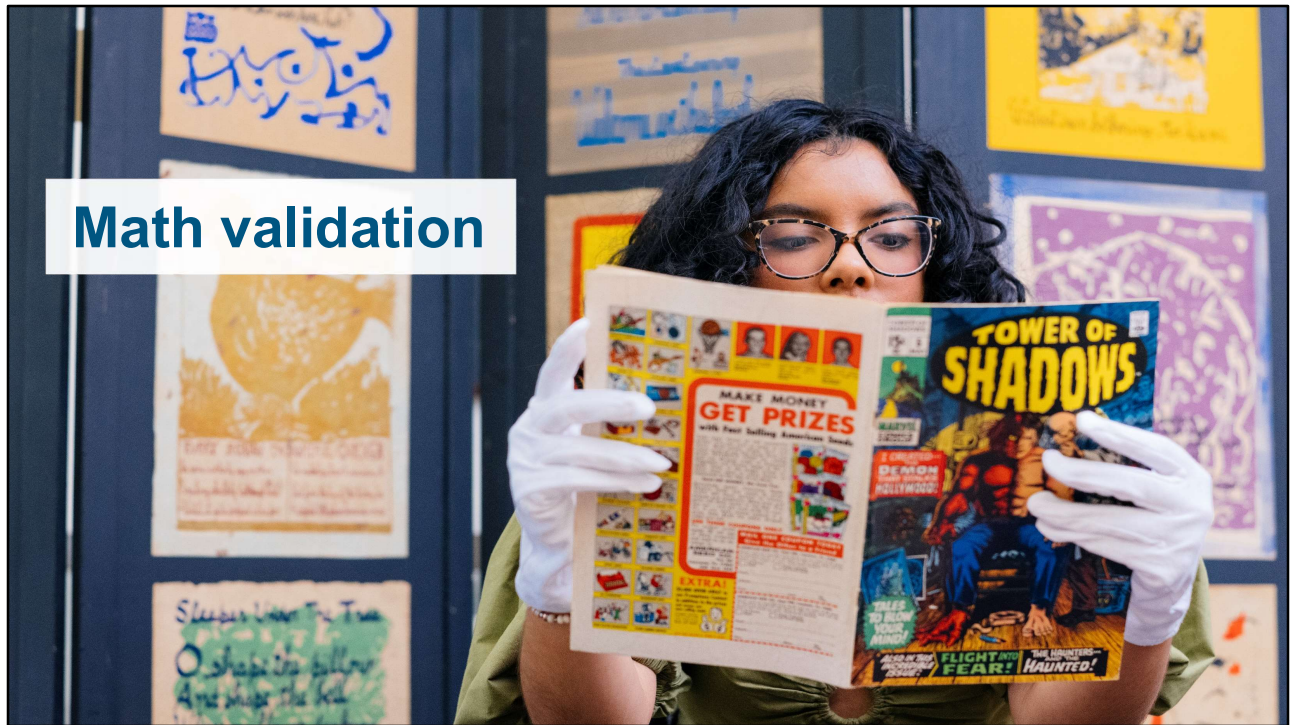
BEGINNING AY 2025-26:

- A UC-transferable course in college algebra, precalculus, calculus, linear algebra or differential equations will continue to validate Algebra II/Math III
- A non-transferable course in trigonometry will continue to validate Algebra II/Math III
- College statistics courses **will not validate** Algebra II/Math III



College courses
must be
completed with a
letter grade of C
or better to meet
A-G requirements

Math validation



We've mentioned validation quite a bit in terms of courses that will and will not validate Algebra II or Math III. Let's look more closely at math validation and how it is changing for the 2025-26 academic year.

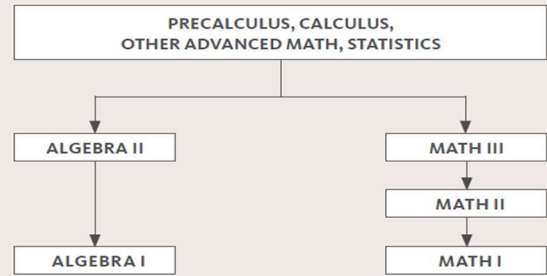
Current math validation rules

THROUGH AY 2024-25:

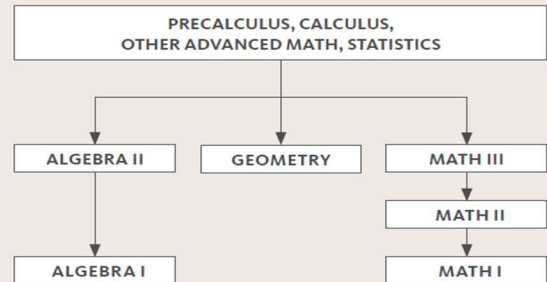
- Courses from Precalculus, Calculus, Other Advanced Math and Statistics disciplines validate Algebra II/Math III omission and/or deficient grades
- No course validates Geometry *omission*
- Courses from Precalculus, Calculus, Other Advanced Math and Statistics disciplines validate *deficient grades* in Geometry



Validation of subject omission (through summer 2025)



Validation of grade deficiencies (through summer 2025)



- There are two types of validation: validation for the omission of a course, and validation of deficient grades.
- For the **omission** of a course, the following rules currently apply and will apply through the end of the 2024-25 academic year (or summer 2025):
 - Second semester validates the first semester (except Computer Science)
 - Algebra II validates Algebra I
 - Math III validates Math II which validates Math I
 - Courses from Precalculus, Calculus, Other Advanced Math and Statistics disciplines validate Algebra II
 - No validation for Geometry omission
- For **deficient grades**, which are D and F grades for UC, the following rules currently apply and will apply through the end of the 2024-25 academic year:
 - Second semester validates the first semester (except Computer Science)
 - Algebra II validates Algebra I
 - Math III validates Math II which validates Math I
 - Courses from Precalculus, Calculus, Other Advanced Math and Statistics disciplines validate Algebra II and Geometry
- And, just a reminder: validation of deficient grades simply meets the requirement but does NOT eliminate the deficient grade(s). The only way to replace/repair a deficient grade is by repeating the course.

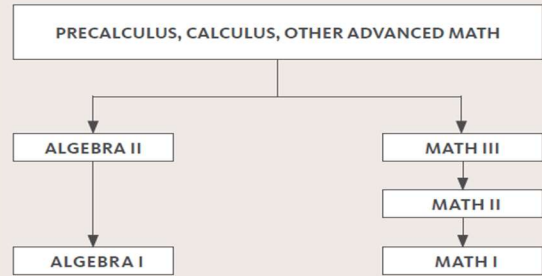
New math validation rules

BEGINNING AY 2025-26:

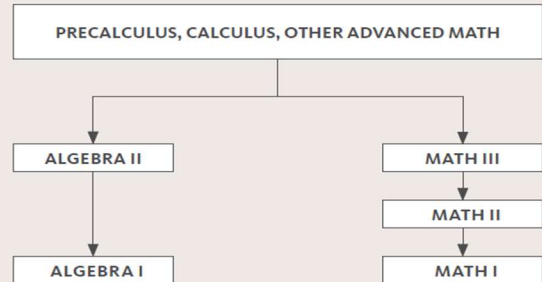
- Courses from Precalculus, Calculus and Other Advanced Math disciplines validate Algebra II/Math III omission and/or deficient grades
- **No course** validates *omission or deficient grades* in Geometry



Validation of subject omission (beginning fall 2025)



Validation of grade deficiencies (beginning fall 2025)



Beginning with the 2025-26 academic year (i.e., fall 2025), the following validation rules will apply:

- For the **omission** of a course:
 - Second semester validates the first semester (except Computer Science)
 - Algebra II validates Algebra I
 - Math III validates Math II which validates Math I
 - Courses from Precalculus, Calculus and Other Advanced Math disciplines validate Algebra II
 - No validation for Geometry omission
- For **deficient grades**:
 - Second semester validates the first semester (except Computer Science)
 - Algebra II validates Algebra I
 - Math III validates Math II which validates Math I
 - Courses from Precalculus, Calculus and Other Advanced Math disciplines validate Algebra II
 - No validation for deficient grades in Geometry

Summary of validation changes

BEGINNING FALL 2025/AY 2025-26*:

- Courses from the Statistics discipline will validate **neither** the omission of **nor** deficient grades in Algebra II
- No courses will validate deficient grades in Geometry
- No changes to validation rules for the integrated math sequence

**Fall 2025/AY 2025-26 refers to the year the course is taken, not the year a student enters UC*

UNIVERSITY OF CALIFORNIA
COUNSELOR
CONFERENCE





Validation examples

Example #1

SCENARIO

A student earns the following grades:

AY 2022-23: Algebra 1 C, D

AY 2023-24: Geometry D, D

AY 2024-25: Precalculus D, C

Has the student met the Area C requirement?

ANSWER

Yes.

The C in second semester Precalculus validates the D in the first semester of Precalculus, the omission of Algebra 2, the D grades in Geometry (through AY 2024-25), and the D grade in second semester Algebra 1.

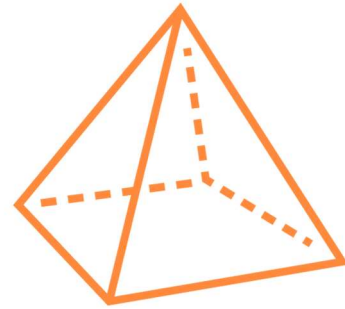
Example #2

SCENARIO

A student completes Geometry in 6th grade, Algebra 2 in 7th grade, Precalculus in 8th grade, and Calculus in 9th grade.

Question: Has the student met the Area C requirement?

Answer: No. Coursework in 6th grade cannot be used to meet any A-G requirements. Therefore, Geometry is considered an omission, and no course will validate the omission of Geometry.



Example #3

SCENARIO

In AY 2024-25, a student completes the first semester of Algebra 2 with a C grade, then drops the second semester of Algebra 2.

Which course taken in AY 2025-26 and passed with a C or better will validate Algebra 2 second semester?

- a. **Statistics**
- b. **AP Computer Science A**
- c. **Calculus**
- d. **Data Science**

ANSWER

C: Calculus

Beginning with AY 2025-26, Statistics and Data Science courses will no longer validate Algebra 2. And AP Computer Science A has never validated any lower-level coursework.

Example #4

SCENARIO

Student completes the following:

Math I B, B

Math III D, C

Question: Has the student met the minimum Area C requirement?

Answer: **Yes**, the C in Math III second semester validates the first semester of Math III and the omission of Math II.



Example #5

SCENARIO

Student completes the following:

Algebra I B, B

Math III D, C



Question: Has the student met the minimum Area C requirement?

Answer: No. When students have a combination of stand-alone and integrated math courses, UC defaults to stand-alone validation. Math III is viewed as Algebra 2, which does NOT validate Geometry.

Example #6

SCENARIO

A student earns the following grades:

AY 2024-25 Math III C, F

Summer 2025 Data Science C

Has the Algebra II/Math III requirement been met?

ANSWER

Yes.

Through summer 2025, courses from the Statistics discipline – including Data Science – will continue to validate the omission of and/or deficient grades in Algebra II/Math III.

Example #7

SCENARIO

Beginning fall 2025 (AY 2025-26), which math disciplines will validate the omission of and/or deficient grades in Algebra II/ Math III?

- a. Precalculus
- b. Other Advanced Math
- c. Calculus
- d. All of the above



Example #8

SCENARIO

Beginning fall 2025 (AY 2025-26), which math disciplines will validate the omission of and/or deficient grades in Geometry?

- a. Precalculus
- b. Other Advanced Math
- c. Calculus
- d. None of the above



Resources

**ACW Stage 1
report**



**ACW Stage 2
report**



**A-G Policy
Resource Guide**



**Quick Reference
Guide to UC
Admissions 2024**



Thank you

UNIVERSITY OF CALIFORNIA
COUNSELOR
CONFERENCE