

Office of the President

TO THE REGENTS OF THE UNIVERSITY OF CALIFORNIA:

DISCUSSION ITEM

For Meeting of September 16, 2026

UC STEM OUTCOMES AND MATH INNOVATION

EXECUTIVE SUMMARY

This written item examines the academic preparation, early performance, and persistence of incoming University of California freshmen before and after the COVID-19 pandemic and the elimination of standardized tests in admissions. By conventional measures, incoming students remain academically strong: they are completing more A–G and advanced high school courses, earning higher high school grade point averages (GPAs), and achieving higher first-year UC GPAs than earlier cohorts. First-year retention reached 93 percent and four-year graduation rate 74 percent—both record highs. Six-year graduation rates at just over 86 percent remain high.

These indicators obscure challenges in introductory mathematics. Although lower-division grades and unsuccessful course completion rates have remained relatively stable overall and across most disciplines, average grades in Calculus I, precalculus, and preparatory mathematics have declined over the past five years and D, F, withdrawal, and no-pass grades have increased. These courses account for about five percent of lower-division enrollment. Campus offerings, pathways, and outcomes in introductory math vary, as do placement practices, curricular designs, and academic supports. Despite these challenges, students entering science, technology, engineering, and mathematics (STEM) programs continue to have higher campus and program retention rates compared to non-STEM students. Four- and six-year graduation rates for STEM majors have improved overall and for freshmen staying in the original STEM major (i.e., not changing majors).

Following the presentation of systemwide data by Vice President Pamela Brown, Eric Deeds, a professor of integrative biology and physiology and vice chair for mathematics education in the life sciences core education department at UCLA, will discuss innovative ways to teach the mathematics needed for computational biology and for the life sciences.

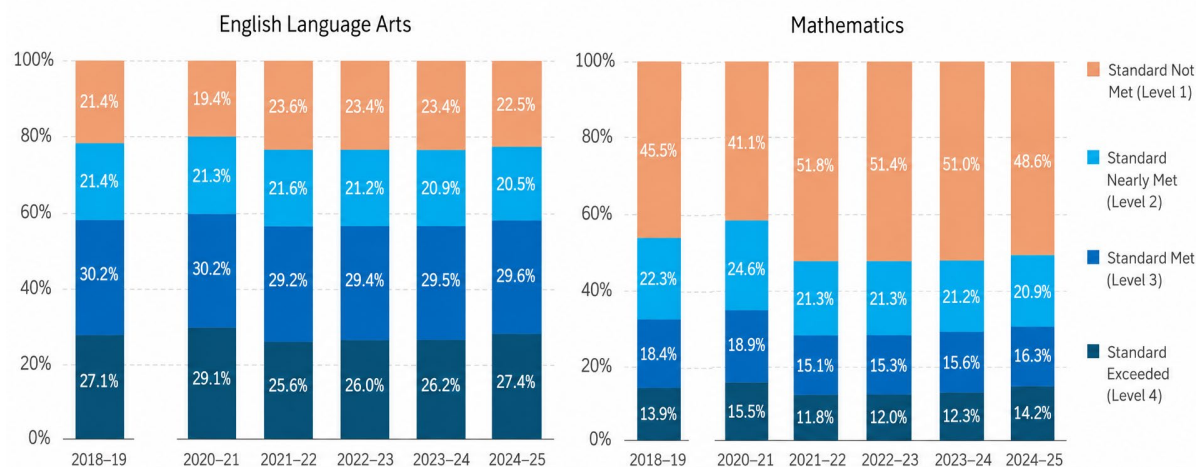
BACKGROUND

In 2025, the University of California's (UC) first-year retention rate was 93 percent, and four-year graduation rate was 74 percent—both record highs and significant achievements given the impact of the COVID-19 pandemic. Despite these strong outcomes, concerns have been raised about student academic preparation in high school and readiness for introductory UC

coursework, particularly in mathematics.

In 2025, California’s Smarter Balanced Assessment (SBAC) test scores reported 57 percent of 11th graders met or exceeded state standards in English language arts and almost 31 percent in mathematics. While SBAC proficiency rates in English and math have increased over the last few years, these rates remain below pre-pandemic levels (see Figure 1).

Figure 1. SBAC proficiency – share in English Language Arts and Mathematics for 11th graders



Source: California Department of Education, California Assessment of Student Performance and Progress

This item focuses on incoming UC freshman, specifically measures that illustrate academic preparedness, success in introductory courses, and persistence within majors. The timeframe will span before and after the pandemic period, which also coincides with the elimination of use of standardized tests. The goal is to provide additional data to illustrate trends in student preparation and performance before and after the pandemic/removal of standardized tests for all incoming freshmen and by discipline areas, particularly science, technology, engineering, and mathematics (STEM).

ACADEMIC PREPARATION OF INCOMING UC FRESHMEN

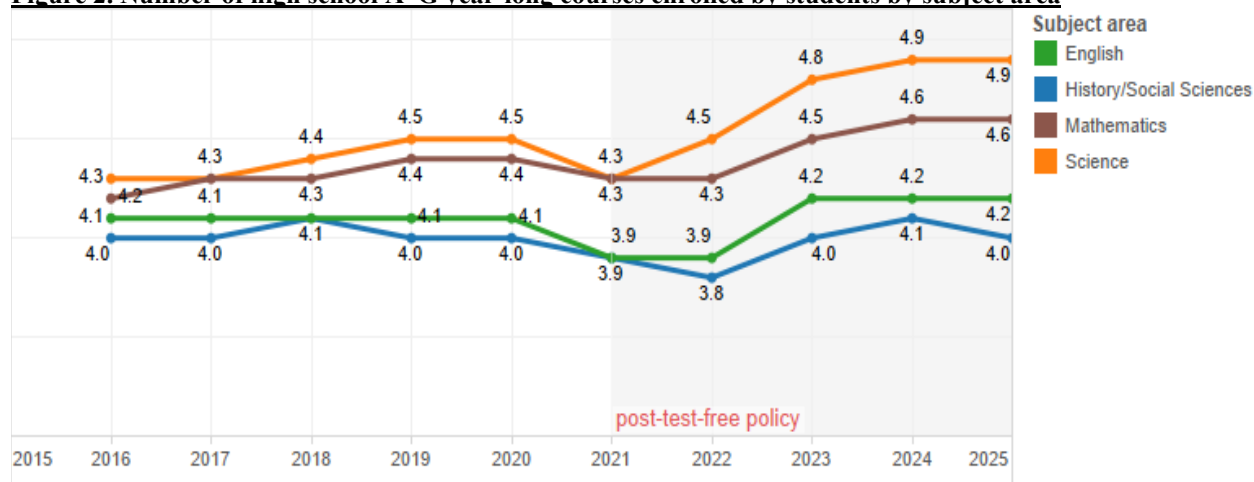
Incoming first-year students’ academic preparation remains strong by conventional measures such as high school course taking patterns and grade point average (GPA).

UC freshmen taking more A–G courses, including advanced courses

The number of high school A–G year-long courses completed before 12th grade and planned to complete in 12th grade by incoming first-year students increased across all major subject areas between 2016 and 2025 (Figure 2). The largest increases were seen in science and mathematics courses, rising from 4.3 to 4.9 courses and from 4.1 to 4.6 courses, respectively. Course-taking patterns remained relatively stable through 2020, followed by a noticeable decline in 2021 and 2022 across all subject areas during the COVID-19 pandemic period. Since then, A–G course

taking has rebounded and demonstrates that students are arriving at UC with increasingly extensive high school coursework.

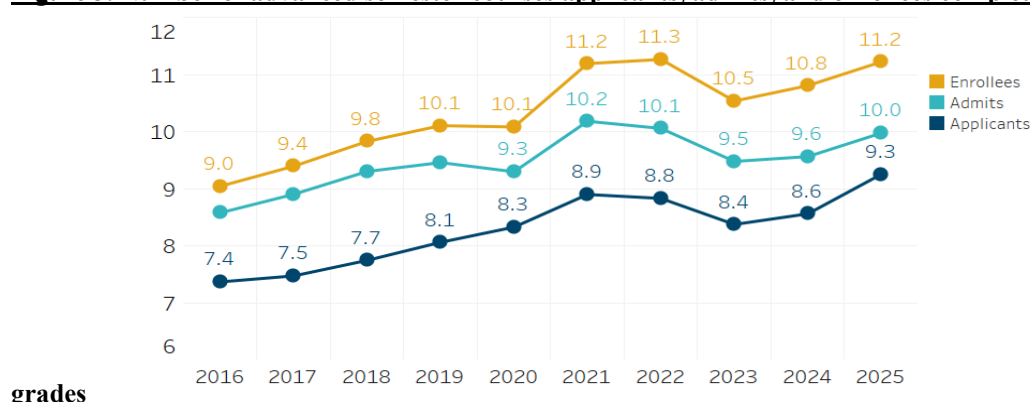
Figure 2. Number of high school A–G year-long courses enrolled by students by subject area



Source: UC undergraduate admissions file

Within A–G course totals, UC applicants, admits, and enrollees are completing more advanced courses—such as Advanced Placement (AP), International Baccalaureate (IB), college-level, and honors courses—in 10th and 11th grades (Figure 3). Course-taking increases at each stage: admits complete more advanced courses than applicants, and enrollees complete more than admits. Among incoming freshmen, the average rose from nine advanced courses in 2016 to more than 11 in 2025.

Figure 3. Number of advanced semester courses applicants, admits, and enrollees completed in 10th and 11th



grades

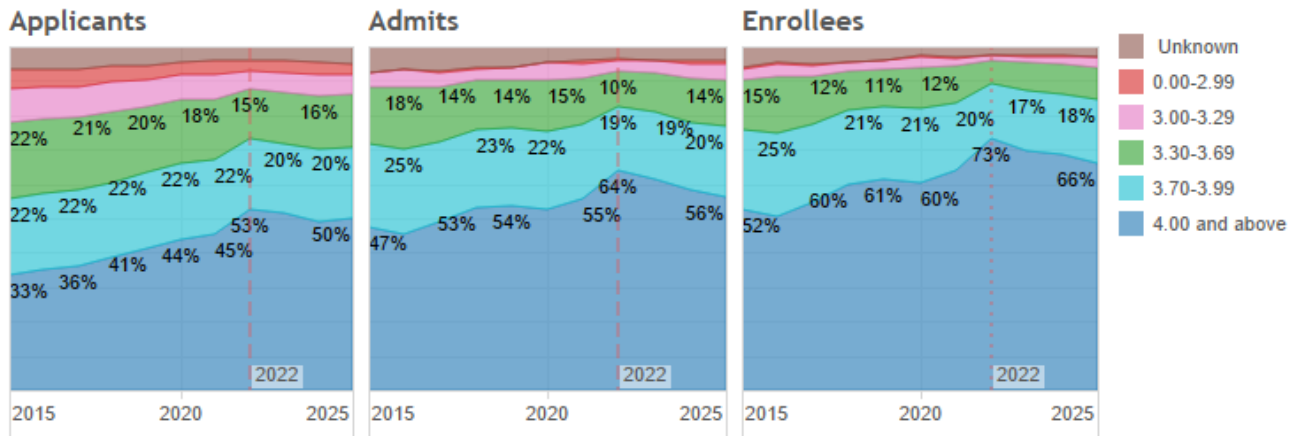
Source: UC undergraduate admissions file

Overall high school and A–G course GPA has increased over the decade

High school grade point averages (GPAs) increased among UC applicants, admits, and enrollees between 2015 and 2025 (Figure 4). The share of students with GPAs of 4.00 and above rose steadily across all three groups, with the largest increase for UC enrollees going from 52 percent in 2015 to 66 percent in 2025. As the share of students with GPAs of 4.00 and above expanded, the proportions in lower GPA categories declined over the same period. The 2022 peak likely

reflects pandemic-era grading practices that allowed greater use of pass/no pass grading, which became less prevalent in subsequent cohorts.

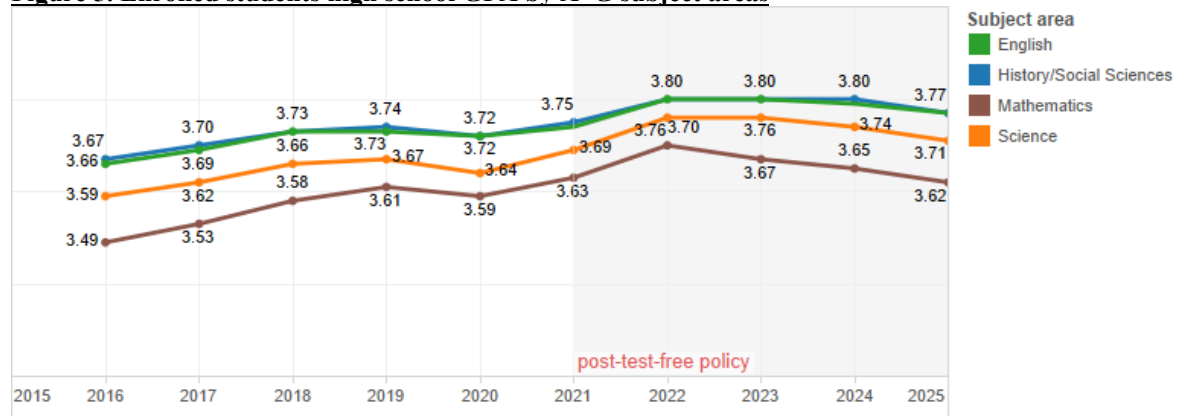
Figure 4. Change in share of applicants, admits, and enrollees by high school GPA range from 2015 to 2025



Source: UC undergraduate admissions file

There is a similar pattern for UC enrollees' A–G course grades by subject area (Figure 5). In this instance, the unweighted high school GPA, which increased from 2016 to 2022, has since declined but was still higher than before the pandemic. Between 2016 and 2025, the average GPA increased 0.1 point to 3.77 for English and history/social sciences, 0.12 points to 3.71 for science, and 0.13 to 3.62 for mathematics. The decline in GPAs from the 2022 high point is more evident in mathematics, whereby the average GPA declined by 0.8 points from 3.70 to 3.62.

Figure 5. Enrolled students high school GPA by A–G subject areas



Source: UC undergraduate admissions file

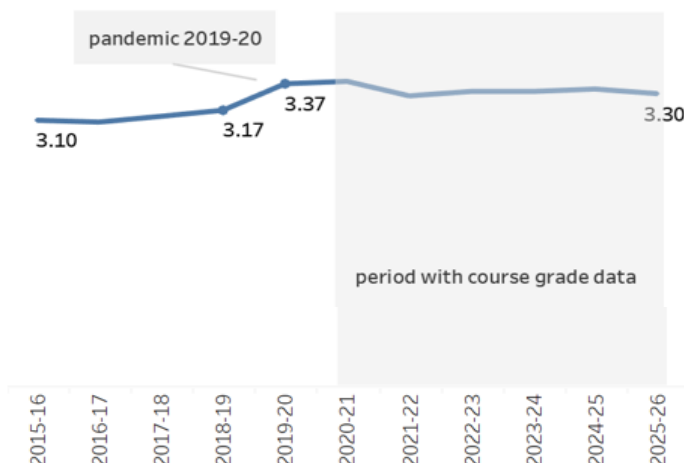
FIRST-YEAR OUTCOMES FOR INCOMING FRESHMEN

First-year performance, as measured by grade point average (GPA) at the end of the first year in lower division courses, remains strong overall and across most disciplines with the exception of mathematics.

First-year GPA for freshmen is higher than before the pandemic

Over the last decade, the average first-year GPA for incoming freshmen increased from 3.10 to 3.30 (Figure 6). GPAs rose temporarily during the COVID-19 pandemic period—again potentially due to changes in grading practices, including increased use of pass/not pass grades. Since then, first-year GPAs have remained flat, around 3.3, over the past five years.

Figure 6. First-year cumulative GPA for incoming freshmen



Source: UC end of term enrollment file

UC Office of the President (UCOP) has detailed course enrollment and grade data for the last six years. The earliest year, 2020–21, reflects the peak of the pandemic, when grading practices were more flexible and average GPAs were correspondingly higher. The following section will therefore focus on the subsequent five years.

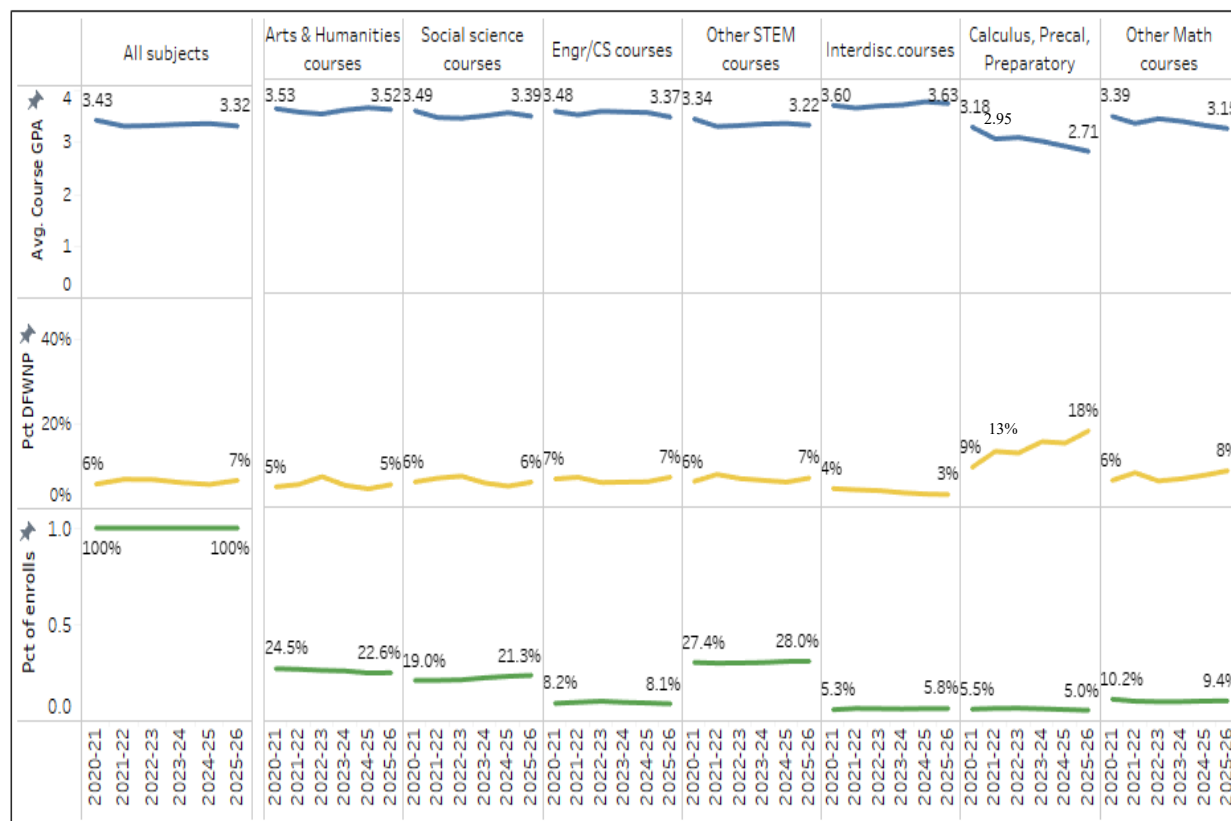
Average lower division course GPA and DFWNP rates remain steady, except for math

Lower division (LD) course grades for incoming freshman have been flat over the last five years with the average GPA around 3.32 and percent of students receiving a grade of D or F, withdrawing, or not passing (i.e., DFWNP rate) around seven percent (see Figure 7 and Appendix I for more campus and discipline detail).

For incoming freshmen, LD GPA for most disciplines also remained relatively flat, ranging from around 3.2 for other STEM courses and 3.4 for Engineering/Computer Science and Social Sciences courses to 3.5 for Arts and Humanities courses and 3.6 for interdisciplinary courses. The primary exception is mathematics, particularly in “Calculus 1¹, precalculus, and preparatory” courses where the average GPA has dropped from 2.95 to 2.71 and DFWNP rate has increased from 13 to 18 percent over the last five years.

¹ Calculus 1 is a generic reference for the first calculus course offered. Specific course numbers by campus vary.

Figure 7. Average first-year Freshman lower division course GPA, DFWNP rates, and percent of enrollment



Source: UC course enrollment file (end of term)

Note: Courses that follow “Calculus 1” and other LD math courses are included in “other math courses”. Courses in statistics or data science or math courses offered in other departments are categorized according to the department that offers the course.

CAMPUS VARIATION IN CALCULUS INSTRUCTION

Campus approaches to supporting students and providing introductory mathematics courses² vary, as illustrated in the table below. UC Davis, UC Riverside, UC San Diego, and UC Santa Cruz offer preparatory mathematics—one or more courses that precede precalculus, typically for workload credit (i.e., credit for financial aid, but not progress to degree). All UC campuses offer precalculus courses except for UC Santa Barbara, and all UC campuses offer Calculus 1 and have created at least one calculus series for business/social science, physical science, or life science majors that focuses on concepts and approaches that align with those disciplinary areas. There is further variation where campuses may offer a co-course or laboratory section that provides additional support and runs alongside calculus or precalculus. Campuses may also offer an expanded course that meets for extra hours to reinforce background concepts or an extended “stretch” version of a course that converts a standard single course into a two-course sequence.

² For the purposes of this item, introductory math courses include the first course of calculus or precalculus in a sequence, together with any preparatory courses (courses that precede precalculus) and co-courses (support courses for which students co-enroll with precalculus or calculus).

Collectively, these calculus, precalculus, and preparatory mathematics courses represent five percent of first-year freshman lower division course enrollments, ranging from two percent at UC Irvine to 12 percent at UC Merced. Appendix II provides average GPA, percent DFWNP, and share of all LD enrollment by campus for these courses. Appendix III provides a list of the campus courses included.

Table 1. Campus strategies for introductory math

Campus	Offers preparation before calculus	Offers precalculus	Offers co-course, lab, expanded, or stretch	Offers calculus paths by discipline
UCB		✓	✓	✓
UCD	✓	✓	✓	✓
UCI		✓		✓
UCLA		✓	✓	✓
UCM		✓		✓
UCR	✓	✓	✓	✓
UCSD	✓	✓		✓
UCSB			✓	✓
UCSC	✓	✓	✓	✓

Not every student must complete a calculus course at UC for their degree. Many students pursue majors that do not require calculus or, if they do require it, will enter UC having already earned equivalent credit for calculus or precalculus through Advanced Placement (AP) or International Baccalaureate (IB) credit or based on placement scores on a math diagnostic test.

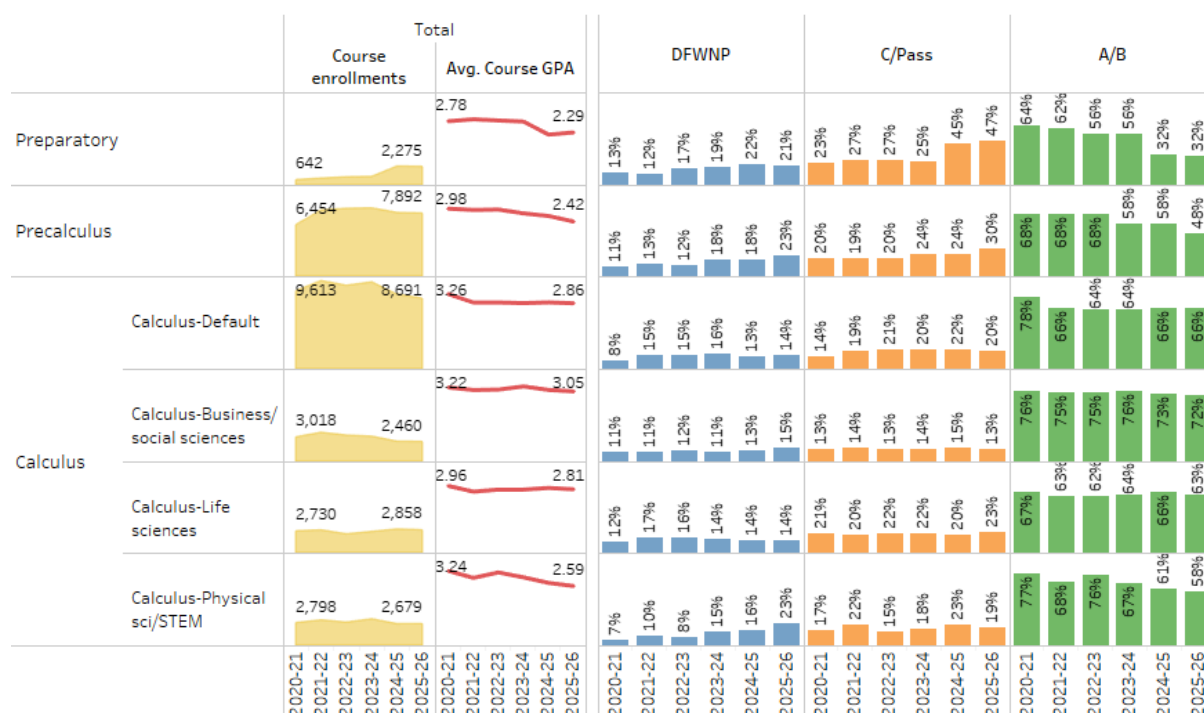
For freshmen entering in Fall 2023, 31 percent took a Calculus 1, precalculus, or preparatory math course in their first two years—20 percent starting in Calculus 1 and 11 percent starting in precalculus or preparatory math. Forty-one percent enrolled in a course beyond Calculus 1, and the remainder (28 percent) did not enroll in any course offered through the mathematics calculus pathway. Those students may have attempted another math course outside of calculus, or a quantitative methods course outside of math (e.g. statistics or data science) or some other course that meets their degree requirements, if any.

For students who do begin at or below Calculus 1, the route through the Calculus pathway is shaped not only by degree requirements but also by the number and type of courses available at their campus at each stage. Depending on a student's starting point and campus, reaching Calculus 1 can require as few as one course (at UC Santa Barbara, where students place directly into Calculus 1) or as many as five or more (as at UC Riverside or UC San Diego, which offer an articulated preparatory pathway). Longer sequences can provide needed preparation, but it also requires students to spend more time completing prerequisites before advancing to certain courses needed for their major. Preparatory mathematics makes up a small but growing share of

introductory math enrollments (approaching nine percent in 2025), as compared to precalculus and calculus courses.

As shown in Figure 8, over the most recent five-year period (excluding 2020–21), grades were comparatively stable in default Calculus and Calculus for life sciences. Outcomes declined more consistently in preparatory courses and precalculus, with the sharpest declines in Calculus for physical sciences and STEM.

Figure 8. Introductory math grades for freshmen in 1st year of enrollment



Source: UC course enrollment file (end of term)

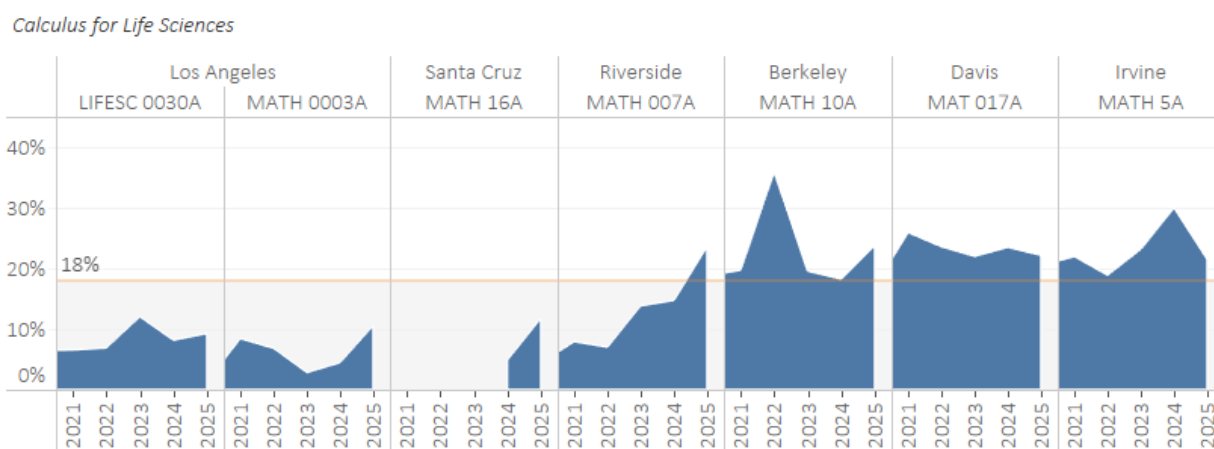
UC campuses are continuing to test how mathematics instruction can better meet the needs of today's students. At UC, this means adapting instructional approaches that can support students with a broader range of pre-college experiences and more variable exposure to advanced mathematics. It also entails connecting mathematics instruction to the skills and concepts students will need in their future careers.

The development of Calculus for Life Sciences courses provides one example of how campuses approach this issue. Eight campuses now offer such courses, which use biological examples and applications to teach calculus concepts. These courses are generally offered by mathematics departments, but at UCLA, additional courses are offered through the Life Sciences division. Life Sciences 30A and 30B were developed by Life Sciences faculty to emphasize mathematical modeling of biological systems and prepare students for advanced courses in the major. UC

Santa Cruz recently introduced a course within its math department (MATH 16A, Mathematics for Life and Environmental Sciences) that is modeled after the UCLA approach.

Outcomes in life-science calculus vary by campus and year (Figure 9). DFWNP rates in the UCLA courses have generally remained below the systemwide rate for all calculus courses, and early results for the newer Santa Cruz course appear promising. Direct comparison of offerings across campuses is not straightforward, as enrollment patterns, course placement, degree requirements and campus curricula may vary considerably. Nonetheless, instances where success rates are high suggest approaches that warrant closer examination.

Figure 9. DFWNP grades in calculus for life sciences courses



Source: UC course enrollment file (end of term)

Note: Reference line indicates 18 percent average DFWNP rate for all Calculus I courses 2021–22 through 2025–26.

PERSISTENCE IN MAJORS

As noted earlier, UC first-year retention and four-year graduation rates for incoming freshmen are at an all-time high. This section provides a deeper dive into these measures looking at incoming freshmen declaring majors³ upon entry, particularly in STEM and non-STEM programs. Declaring a major is not necessarily an admissions requirement. But across the system, incoming freshmen are increasingly likely to declare a major, particularly in high demand programs such as STEM.

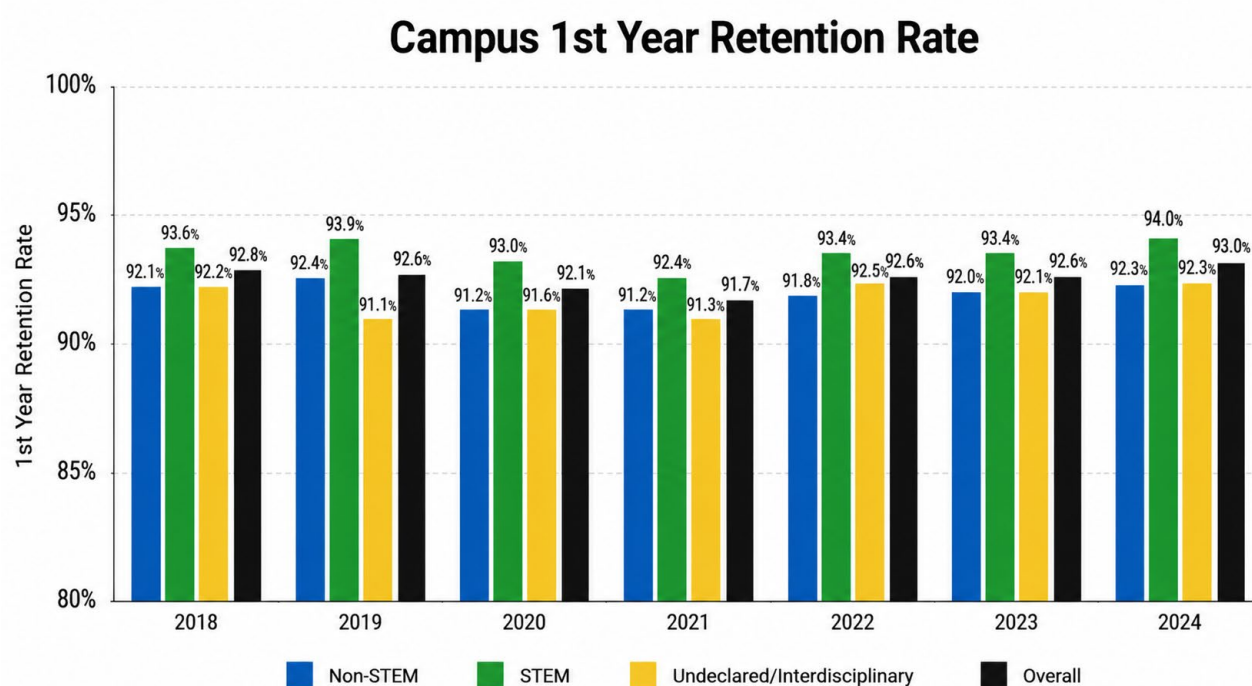
This section will examine first-year retention and GPA, along with four- and six-year graduation rates, particularly a comparison of incoming freshmen declaring STEM or non-STEM majors. It will look at overall rates compared to those who remain in initially declared majors or change an intended major, comparing these rates over time. Students may change majors for a variety of reasons, including but not limited to academic difficulty in intended major or new interests based on campus experience or exposure.

³ UC Berkeley and UC Santa Cruz have a higher proportion of undeclared students.

First-year retention is at an all-time high and remains strong for STEM, non-STEM and undeclared

Overall first-year retention rates declined during the pandemic period but have since rebounded to an all-time high of 93 percent. Similar patterns can be seen for incoming freshmen who enter with a declared major, with higher retention rates for intended STEM majors (94 percent) compared to students declaring in non-STEM programs or undeclared majors (92.3 percent). These retention rates are slightly higher than for the 2018 entry cohort.

Figure 10. First-year freshman retention rate overall and for intended STEM and non-STEM majors



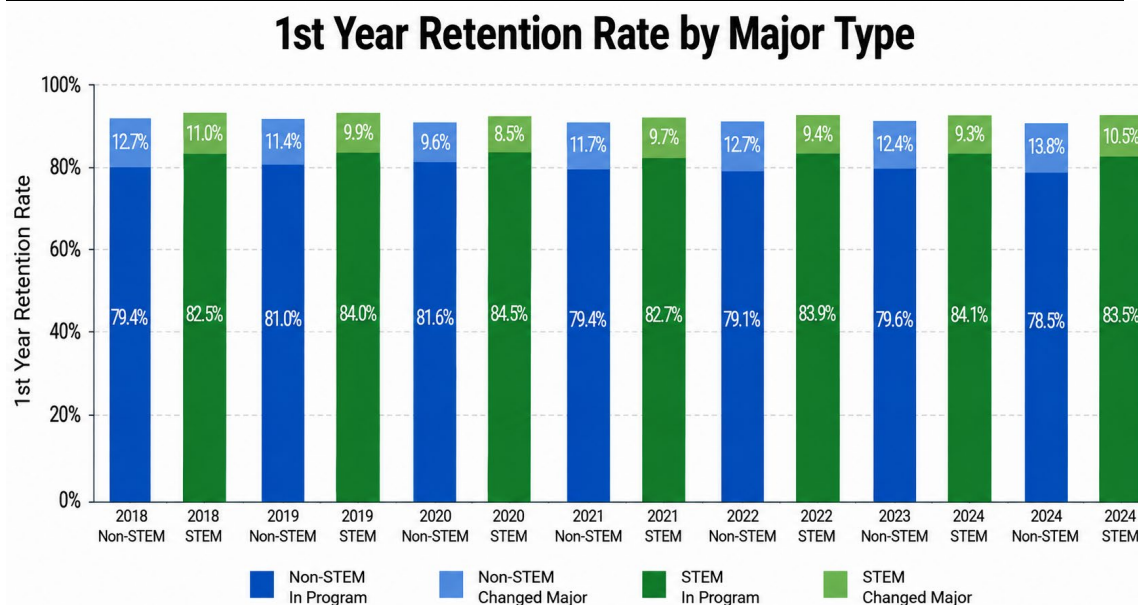
Source: UC Undergraduate Longitudinal Data files

Students who initially intend to major in STEM fields consistently have higher program retention rates than students intending to major in non-STEM fields (Figure 11, STEM and non-STEM in program). For the 2024 cohort, 83.5 percent of STEM majors remained in the same program into their second year, compared with 78.5 percent of non-STEM majors—a difference of 5.0 percentage points. STEM program retention fluctuated slightly (particularly during the pandemic period) and currently stands one percentage point higher in 2024 than in 2018.

The differences between STEM and non-STEM students are also evident from the rate at which students change majors (Figure 11, STEM and non-STEM changed major). In 2024, 10.5 percent of STEM majors changed their major, compared with 13.8 percent of non-STEM majors. While major-change rates have fluctuated for both groups, the rate among non-STEM majors increased a percentage point between 2018 and 2024, reaching its highest level in the period. In contrast,

changing among STEM majors has remained below its 2018 level. These patterns indicate greater stability in initial major choice among STEM students.

Figure 11. First-year freshman campus and program retention rate STEM and non-STEM majors



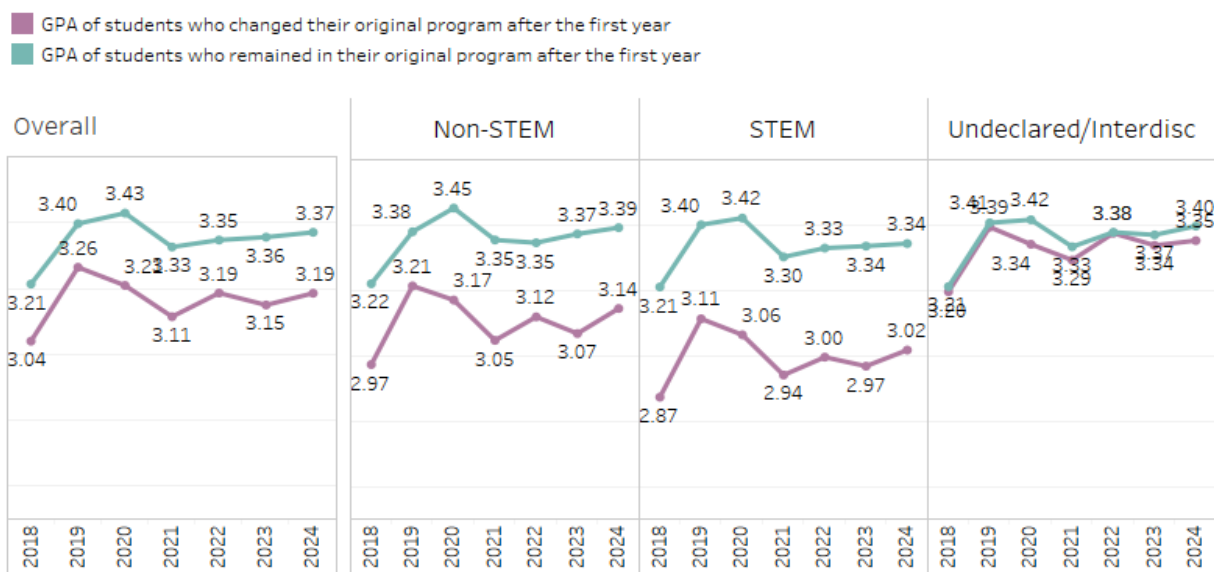
Source: UC Undergraduate Longitudinal Data files

Appendix IV provides additional detail by programs within STEM and non-STEM, along with undeclared/interdisciplinary students. Across STEM and non-STEM programs, overall freshman first-year campus retention rates consistently exceed 90 percent for most academic programs. Program retention rates exhibited greater year-to-year fluctuations in several disciplines, particularly among non-STEM fields. STEM fields, especially Engineering and Computer and Information Sciences, maintained the highest and most stable program retention rates throughout the period. For Mathematics and Statistics, program retention rates increased from 75.7 percent to 78.6 percent for the 2018 and 2024 cohorts. Among non-STEM disciplines, retention patterns were more variable, with programs such as Ethnic, Cultural, Gender, and Group Studies; Family and Consumer Sciences; and Foreign Languages having lower program retention rates for the 2024 cohort.

First-year GPA trends

Across nearly all academic disciplines, remaining in the major (not changing) was correlated with higher GPA in the first year (Figure 12). This pattern was consistent across both STEM and non-STEM fields, although the size of the GPA difference varied slightly by discipline. For STEM and non-STEM majors, the difference in first-year GPA between those remaining in the program and those changing programs has remained flat (0.34 for 2018 cohort and 0.32 for 2024 cohort for STEM majors and 0.25 for the 2018 and 2024 cohorts for non-STEM majors).

Figure 12. Comparison of first-year GPA between students who remained in their original program after their freshman year and those who changed programs



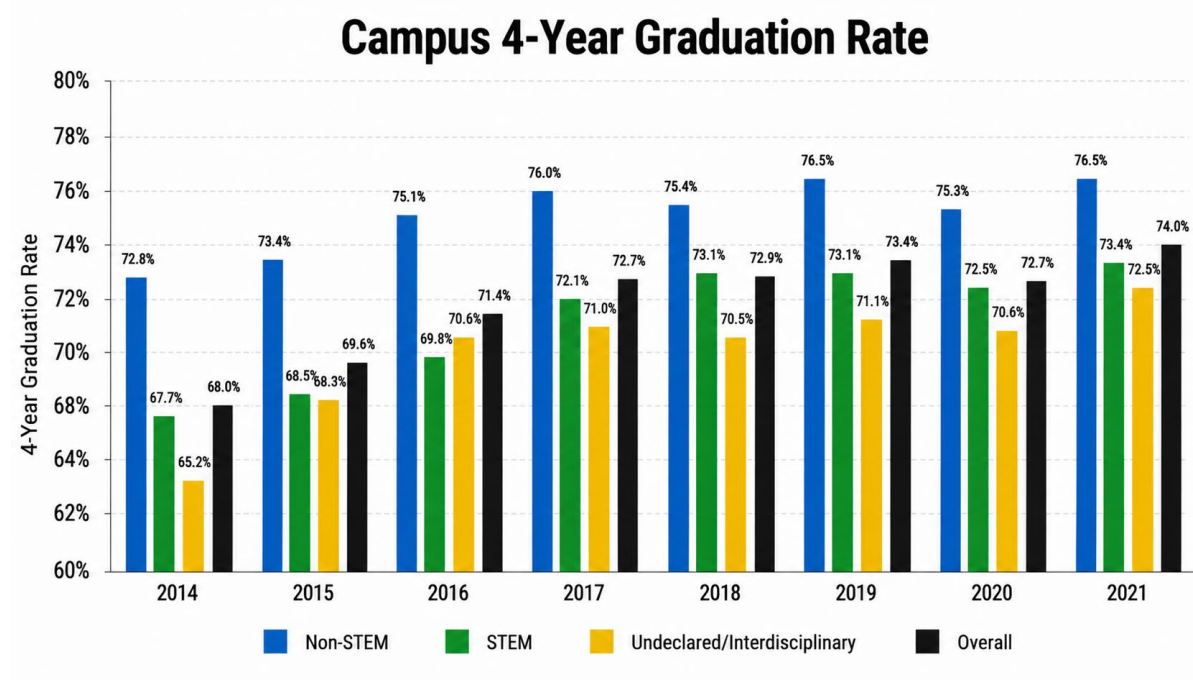
Source: UC Undergraduate Longitudinal Data files

Appendix V provides additional detail by program. Before 2021, GPA differences between students staying in a program and those changing programs were relatively stable in most disciplines, with students staying in an intended program having higher first-year GPAs. After 2021, this pattern continued, particularly among STEM disciplines such as Biological and Biomedical Sciences and Engineering. In Mathematics and Statistics and Natural Resources, both groups showed GPA increases over time for students who stayed and those who changed their program. For example, first year GPA for Mathematics and Statistics majors who remain in the program increased from 3.27 to 3.48 and for those changing majors it increased from 3.06 to 3.38 for the 2018 and 2024 cohorts. Among non-STEM disciplines, differences between the two groups were generally smaller, but remaining in the original program has continued to correlate with higher GPA across most fields.

Four-year graduation rate trends

Four-year graduation rates for all incoming freshmen increased six percentage points from 68 percent for the 2014 cohort to 74 percent for the 2021 cohort (Figure 13). Non-STEM students consistently have had higher four-year rates than STEM and undeclared/interdisciplinary freshman entrants, though that gap has narrowed. STEM four-year graduation rate increased 5.7 percentage points (from 67.7 percent for 2014 cohort to 73.4 percent for 2021 cohort) and 7.3 percentage points for undeclared/interdisciplinary (from 65.2 percent to 72.5 percent), compared 3.7 percentage points for non-STEM (from 72.8 percent to 76.5 percent)

Figure 13: Four-year freshman graduation rate overall and for intended STEM, non-STEM and undeclared majors

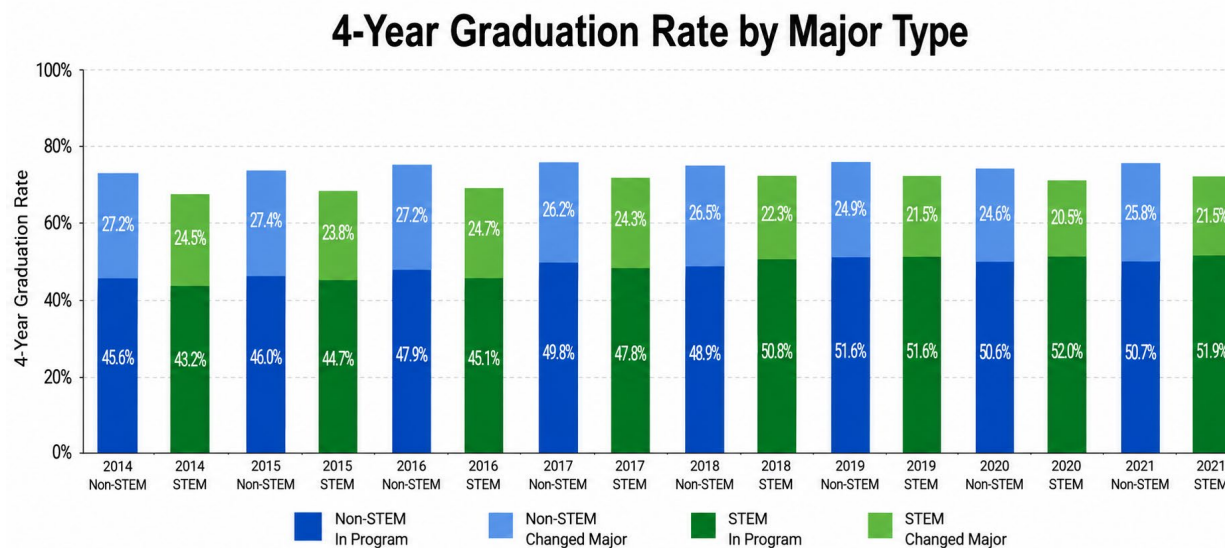


Source: UC Undergraduate Longitudinal Data files

Note: Overall four-year graduation rates are the same data presented in the July 2026 Report on Retention and Graduation Rates. The only difference is it is presented as entry year cohorts, instead of graduation cohorts (i.e., 2014 compared to 2018).

Students who initially intended to major in STEM fields are now more likely to graduate within four-years in the same academic program at the same campus, than students intending to major in non-STEM fields (Figure 14). These rates increased 8.7 percentage points for intended STEM majors (43.2 percent to 51.9 percent for 2014 and 2021 cohorts) compared to 5.1 percentage points for intended non-STEM majors (45.6 percent to 50.7 percent). Changing majors does not necessarily prolong time to degree, with a higher percentage of non-STEM intended majors graduating in different programs but still within four years.

Figure 14: Four-year freshman campus and program graduation rate STEM and non-STEM majors



Source: UC Undergraduate Longitudinal Data files

Appendix VI provides additional detail by program. Among STEM programs, campus four-year graduation rates, or the proportion of first-year students with a declared major who graduated within four years in any academic program at the same campus, were above the systemwide average for most programs. Two exceptions were Engineering and Physical Sciences, with four-year rates of 66.5 percent and 70.1 percent, respectively. For Mathematics and Statistics, the four-year rate was 74.6 percent (five percentage points higher than the 2014 cohort). Program graduation rates vary across major areas. Computer and Information Sciences had the highest program graduation rates at 72.8 percent, approaching campus graduation levels by 2021. In contrast, Engineering, Biological and Biomedical Sciences, and Natural Resources and Conservation showed moderate program graduation rates, while Mathematics and Statistics and especially Physical Sciences continued to have comparatively low program graduation rates at 46.4 percent and 34.2 percent respectively. These rates are better than earlier cohorts (40.3 percent and 28.3 percent for the 2014 cohort).

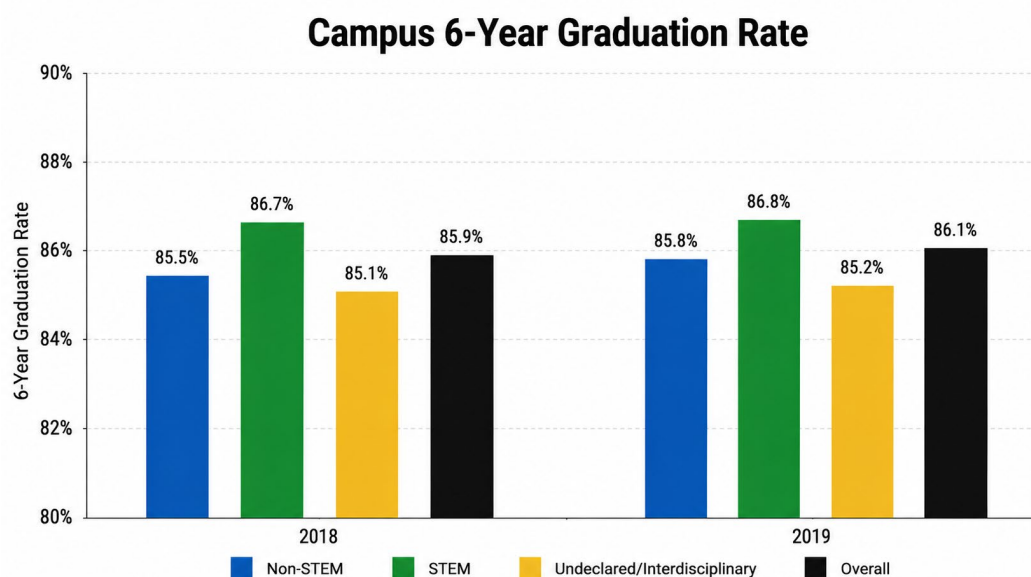
Among non-STEM programs, campus graduation rates also remained relatively high but showed greater year-to-year fluctuations than STEM disciplines. Several majors, including Business (77.8 percent), Communication and Journalism (80.1 percent), and Health Professions (79.4 percent), maintained consistently strong campus graduation rates through 2021. Programs with higher campus graduation rates also tended to have higher program graduation rates, including, Family and Consumer Sciences (86.3 percent and 63.2 percent, respectively) and Psychology (79.5 percent and 57.5 percent). Programs with relatively lower campus graduation rates also tended to have lower program graduation rates. Among these, Ethnic, Cultural, Gender, and Group Studies and Philosophy and Religious Studies, two programs with small enrollments and low campus graduation rates had the lowest program graduation rates, with Ethnic, Cultural, Gender, and Group Studies at 59.2 percent (campus) and 13.8 percent (program) and Religious Studies at 69.3 percent (campus) and 34.1 percent (program).

Overall, the results suggest that patterns of four-year campus and program graduation rates improved over time, particularly for STEM majors.

Six-year graduation rate trends

Six-year graduation rates were high and largely stable in 2018 and 2019, increasing slightly across all academic program categories (Figure 15). Intended STEM majors consistently had higher rates at 86.7 percent for 2018 cohort and 86.8 percent for 2019 cohort, compared to non-STEM majors at 85.5 percent and 85.8 percent respectively. Undeclared/interdisciplinary students had slightly lower rates (85.1 percent and 85.2 percent). Overall, the six-year graduation rate increased slightly from 85.9 percent to 86.1 percent.

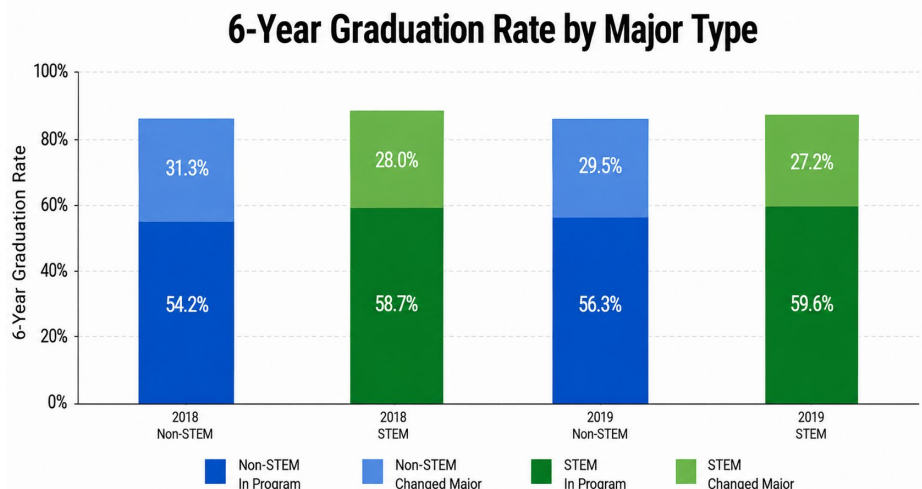
Figure 15: Six-year graduation rate overall and for intended STEM, non-STEM and undeclared majors



Source: UC Undergraduate Longitudinal Data files

Program graduation rates increased between 2018 and 2019 for both STEM and non-STEM intended majors (Figure 16). STEM students had higher program graduation rates than non-STEM students at 58.7 percent and 59.6 percent, compared to non-STEM majors at 54.2 percent and 56.3 percent. Graduation outside the original program within six years declined for both groups.

Figure 16: Six-year graduation rate within and outside program for intended STEM and non-STEM majors



Source: UC Undergraduate Longitudinal Data files

Appendix VII provides additional detail by program. For STEM majors, campus graduation rates were higher than the systemwide average and improved for most programs. For Mathematics and Statistics, campus graduation rates were slightly lower but moved up from 84.2 percent to 84.8 percent for the 2018 and 2019 cohorts, with a greater increase for program rates from 50.5 to 52.9 percent.

For non-STEM majors, there was greater variation in campus graduation rates, but six-year rates improved for most programs. Programs with higher four-year rates also showed higher six-year rates, such as Communication and Journalism (91.6 percent), Family and Consumer Sciences (90.6 percent), and Health Professions (89.4 percent). Higher program graduation rates were seen with Psychology (64.7 percent), Family and Consumer Sciences (64.1 percent), and Health Professions (63.2 percent). As noted with four-year graduation rates, Ethnic Studies and Philosophy and Religious Studies were two smaller programs with lower program and overall graduation rates. While that pattern continued for Ethnic Studies (77.3 percent overall and 27.8 percent program), Philosophy and Religious students had lower program six-year rate at 37.6 percent but higher campus six-year rate at 89 percent.

CONCLUSION

Overall, UC freshmen continue to demonstrate strong academic preparation and successful outcomes. Increases in advanced high school coursework and GPAs have been accompanied by high first-year retention, stable or improving graduation rates, and increasingly robust pathways to completing a STEM major. Students entering STEM fields show particularly strong persistence, with higher campus retention and program graduation rates than their non-STEM peers. At the same time, variation across disciplines indicates that systemwide outcomes alone do not fully capture students' experiences within individual majors.

Introductory mathematics is the clearest area warranting continued attention. Declining grades and rising DFWNP rates in Calculus 1, precalculus, and preparatory courses suggest that stronger incoming credentials do not always translate into success in these foundational courses. Campus differences and promising results from some discipline-specific calculus offerings point to opportunities for further evaluation of placement practices, course sequencing, co-curricular support, and alternative instructional models. Continued monitoring will be important to determine which approaches most effectively support students with varied levels of preparation while preserving access to STEM majors and progress toward timely graduation.

PEDAGOGICAL INNOVATIONS IN MATHEMATICS FOR LIFE SCIENCES

Eric Deeds, a professor of integrative biology and physiology and vice chair for mathematics education in the life sciences core education department at UCLA, will discuss innovative ways to teach the mathematics needed for computational biology and for the life sciences in general. Professor Deeds earned bachelor's degrees in Biochemistry and English from Case Western Reserve University and a Ph.D. in Biology from Harvard University, studying computational biophysics. His research focuses on mathematical modeling and single-cell data analysis in biological systems. He has taught at UCLA since 2019 and received the UCLA Chancellor's Distinguished Teaching Award in 2023.

The course he teaches, Mathematics for Life Scientists, takes an applied, interdisciplinary approach, using mathematical modeling, coding, and dynamical systems theory to understand complex biological phenomena such as pandemics and ecological change. Rather than emphasizing abstract calculations, it treats mathematics as an essential language for analyzing real-world scientific problems.

KEY TO ACRONYMS

DFWNP	Grades D or F, withdrawal or not passing course
GPA	Grade point average
LD	Lower division
SBAC	Smarter Balanced Assessment
STEM	Science, Technology, Engineering & Math
UC	University of California
UCOP	UC Office of the President

Appendix I: Average course GPA, DFWNP rates, and percent of LD enrollment

All Lower Division (LD) courses						
	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Avg LD GPA	3.43	3.32	3.33	3.36	3.37	3.32
% DFWNP	5.8%	7.0%	6.9%	6.2%	5.8%	6.7%
% LD enrollment	100%	100%	100%	100%	100%	100%
Arts & Humanities courses						
	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Avg LD GPA	3.53	3.47	3.43	3.51	3.55	3.52
% DFWNP	4.7%	5.3%	7.1%	5.1%	4.3%	5.2%
% LD enrollment	24.5%	24.2%	23.7%	23.4%	22.4%	22.6%
Social science courses						
	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Avg LD GPA	3.49	3.36	3.35	3.40	3.46	3.39
% DFWNP	5.9%	6.8%	7.2%	5.6%	4.9%	5.8%
% LD enrollment	19.0%	19.0%	19.2%	20.2%	20.9%	21.3%
Engr/CS courses						
	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Avg LD GPA	3.48	3.41	3.48	3.47	3.46	3.37
% DFWNP	6.6%	7.0%	5.7%	5.8%	5.9%	7.0%
% LD enrollment	8.2%	8.8%	9.2%	8.7%	8.4%	8.1%
Other STEM courses						
	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Avg LD GPA	3.34	3.19	3.21	3.24	3.25	3.22
% DFWNP	6.0%	7.6%	6.7%	6.2%	5.8%	6.8%
% LD enrollment	27.4%	27.1%	27.1%	27.3%	27.8%	28.0%
Interdisciplinary courses						
	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Avg LD GPA	3.60	3.54	3.58	3.60	3.66	3.63
% DFWNP	4.3%	4.0%	3.8%	3.3%	3.0%	2.9%
% LD enrollment	5.3%	5.9%	5.8%	5.7%	5.8%	5.8%

Calculus I, Precalculus, Preparatory courses						
	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Avg LD GPA	3.18	2.95	2.98	2.91	2.81	2.71
% DFWNP	9.2%	13.0%	12.6%	15.3%	14.9%	17.8%
% LD enrollment	5.5%	5.9%	6.0%	5.7%	5.3%	5.0%
Other Math courses						
	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Avg LD GPA	3.39	3.25	3.34	3.29	3.21	3.15
% DFWNP	6.2%	8.0%	6.1%	6.6%	7.4%	8.5%
% LD enrollment	10.2%	9.2%	9.0%	9.0%	9.3%	9.4%

Source: campus course enrollment end of term data reported to UCOP each term.

GPA and DFWNP rates tabulated from grade points and units attempted.

Note: includes summer (header), fall, winter, and spring terms and 2021-22 was during pandemic

Appendix II: Avg introductory math course GPA, DFWNP rates, and percent of LD enrollment

	Berkeley					
	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Avg. Course GPA	3.40	2.94	3.02	3.00	3.13	3.06
% DFWNP	8.0%	14.7%	16.6%	18.1%	11.1%	13.3%
% LD enrollment	5.3%	5.8%	6.0%	6.5%	5.9%	5.3%
	Davis					
	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Avg. Course GPA	2.92	2.67	2.75	2.72	2.60	2.71
% DFWNP	13.2%	17.5%	15.5%	19.1%	20.6%	18.4%
% LD enrollment	6.6%	6.3%	6.2%	6.0%	5.7%	5.0%
	Irvine					
	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Avg. Course GPA	2.88	2.53	2.63	2.44	2.67	2.87
% DFWNP	14.4%	21.5%	17.1%	20.9%	16.9%	15.9%
% LD enrollment	3.8%	4.3%	3.7%	3.5%	2.6%	2.3%
	Los Angeles					
	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Avg. Course GPA	3.74	3.38	3.21	3.27	3.21	3.17
% DFWNP	6.2%	10.4%	9.7%	9.8%	8.2%	10.7%
% LD enrollment	4.4%	4.5%	4.9%	4.6%	4.5%	4.3%
	Merced					
	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Avg. Course GPA	2.61	2.28	2.25	2.12	2.10	2.03
% DFWNP	16.1%	27.4%	29.8%	33.5%	34.7%	36.4%
% LD enrollment	13.4%	13.5%	12.5%	13.4%	12.3%	11.5%
	Riverside					
	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Avg. Course GPA	3.19	3.24	3.17	3.10	3.03	2.43
% DFWNP	5.2%	4.5%	6.1%	7.4%	8.3%	20.5%
% LD enrollment	9.5%	9.1%	8.4%	6.9%	7.4%	7.8%
	San Diego					
	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Avg. Course GPA	3.32	3.13	3.12	2.99	2.43	2.58
% DFWNP	8.1%	8.7%	9.9%	14.2%	17.6%	15.8%
% LD enrollment	4.7%	5.9%	6.9%	6.6%	6.1%	4.3%

Santa Barbara						
	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Avg. Course GPA	3.46	3.31	3.32	3.51	3.33	3.26
% DFWNP	6.8%	8.7%	9.2%	5.9%	7.5%	8.2%
% LD enrollment	3.0%	3.4%	3.4%	3.2%	3.0%	3.2%

Santa Cruz						
	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Avg. Course GPA	3.14	3.14	3.16	3.04	2.97	2.71
% DFWNP	6.1%	5.6%	5.5%	9.6%	11.6%	18.9%
% LD enrollment	6.7%	6.3%	6.3%	6.2%	6.5%	6.5%

Source: campus course enrollment end of term data reported to UCOP each term.

GPA and DFWNP rates tabulated from grade points and units attempted

Note: includes summer (header), fall, winter, and spring terms and 2020-21 was during pandemic

Appendix III: Calculus, Precalculus, and Preparatory courses by campus

Campus	Preparatory	Precalculus	Calculus (default)	Calculus for business/ social sciences	Calculus for life sciences	Calculus for physical sciences/ engineering
Berkeley		MATH 3/32	MATH 1** MATH 51	MATH 16A	MATH 10A	
Davis	MAT 000B* MAT 000C* MAT 000D*	MAT 012	MAT 021A	MAT 019A	MAT 017A	
Irvine		MATH 1A*	MATH 2A MATH 2AX**		MATH 5A	
Los Angeles		MATH 1	MATH 31A MATH 31AL ⁴		MATH 3A LIFE SCI 30A	
Merced		MATH 005 MATH 005A*/**	MATH 011			MATH 21
Riverside	MATH 003* MATH 004 MATH 004L**	MATH 005A MATH 006A-B ⁵ MATH 06LA-B**	MATH 005B MATH 009A	MATH 022	MATH 007A	
San Diego	MATH 2* MATH 3B	MATH 3C MATH 4C	MATH 10A			MATH 20A
Santa Barbara			MATH 2A MATH 3A	MATH 34A	MATH 34LA	
Santa Cruz	MATH 2S ⁶ MATH 2 MATH 2T**	MATH 3	MATH 11A		MATH 16A	MATH 19A MATH 20A ⁷

*Workload credit only

** Co-course

⁴ UCLA Math 31 AL is calculus plus lab hours.

⁵ Riverside MATH 006A-B is a two-sequence precalculus course.

⁶ UC Santa Cruz MATH 2S is an optional stretch course taken prior to MATH 2.

⁷ UC Santa Cruz MATH 20A is an honors calculus course.

Appendix IV: Comparison of first-year campus and program retention rates

STEM Status	CIP Name	Enrollment							Campus Retention Rate							Program Retention Rate						
		2018	2019	2020	2021	2022	2023	2024	2018	2019	2020	2021	2022	2023	2024	2018	2019	2020	2021	2022	2023	2024
Non-STEM	Agriculture, Agriculture Operations, and Related Sciences	359	337	417	364	392	376	385	88.9%	93.8%	88.2%	91.8%	91.3%	89.4%	93.0%	82.2%	86.6%	78.9%	83.2%	83.4%	80.6%	82.9%
	Area, Ethnic, Cultural, Gender, and Group Studies	155	176	196	218	238	207	212	89.7%	90.9%	90.3%	80.7%	88.7%	87.4%	91.5%	67.7%	71.0%	66.8%	55.5%	60.5%	56.5%	52.4%
	Business, Management, Marketing, and Related Support Services	1,946	1,750	1,853	2,281	2,414	2,611	2,638	92.6%	92.4%	92.9%	92.5%	91.1%	91.4%	92.0%	80.4%	80.8%	85.2%	81.5%	77.5%	77.6%	79.1%
	Communication, Journalism, and Related Programs	382	358	415	342	327	365	402	91.1%	93.9%	92.0%	90.6%	95.1%	95.1%	91.5%	79.6%	81.0%	81.0%	82.7%	77.4%	82.7%	76.9%
	Education	215	298	260	362	331	322	376	87.9%	93.3%	90.8%	90.1%	92.4%	93.2%	93.6%	65.1%	77.2%	79.6%	73.5%	77.6%	76.1%	76.6%
	English Language and Literature/Letters	526	416	465	466	485	536	456	91.4%	92.3%	89.7%	93.3%	90.1%	93.5%	93.9%	76.2%	82.2%	81.1%	82.0%	75.5%	76.9%	79.8%
	Family and Consumer Sciences/Human Sciences	83	64	63	95	100	125	94	88.0%	95.3%	93.7%	96.8%	96.0%	96.0%	93.6%	74.7%	81.3%	76.2%	89.5%	79.0%	81.6%	66.0%
	Foreign Languages, Literatures, and Linguistics	364	336	303	336	348	349	266	92.3%	91.7%	85.1%	88.7%	92.8%	92.3%	91.4%	75.3%	70.2%	67.7%	75.3%	66.1%	73.9%	61.7%
	Health Professions and Related Programs	530	644	641	723	776	947	1,031	94.2%	95.7%	93.1%	93.2%	92.8%	91.9%	93.1%	86.0%	85.1%	82.7%	81.9%	80.4%	80.3%	82.2%
	History	247	266	292	351	320	340	365	93.5%	94.4%	92.1%	92.0%	92.8%	94.4%	89.9%	80.2%	78.6%	80.8%	76.9%	75.0%	79.4%	72.9%
	Philosophy and Religious Studies	162	173	137	176	155	135	163	92.6%	93.6%	88.3%	86.9%	88.4%	90.4%	90.2%	58.0%	72.3%	66.4%	66.5%	70.3%	71.1%	67.5%
	Psychology	2,250	2,528	2,583	3,022	2,985	3,024	2,849	91.8%	92.9%	91.9%	91.3%	92.4%	92.1%	93.9%	80.6%	83.1%	83.4%	81.0%	82.2%	81.8%	83.7%
	Public Administration and Social Service Professions	77	123	143	142	138	162	163	98.7%	92.7%	92.3%	90.1%	95.7%	93.2%	89.0%	87.0%	80.5%	81.1%	74.6%	82.6%	84.6%	77.3%
	Social Sciences	3,744	3,735	3,952	4,398	4,060	4,210	4,221	92.5%	91.8%	91.3%	91.2%	91.5%	91.9%	91.9%	79.0%	80.5%	81.7%	78.4%	80.1%	80.3%	79.0%
	Visual and Performing Arts	1,156	1,151	1,335	1,384	1,381	1,529	1,400	92.0%	89.6%	89.0%	89.2%	91.7%	92.2%	91.2%	82.6%	81.2%	81.0%	80.3%	79.9%	81.4%	72.9%
	Total	12,196	12,355	13,055	14,660	14,450	15,238	15,021	92.1%	92.4%	91.2%	91.2%	91.8%	92.0%	92.3%	79.4%	81.0%	81.6%	79.4%	79.1%	79.6%	78.5%
STEM	Architecture and Related Services	131	143	177	197	210	210	168	97.7%	92.3%	93.8%	95.9%	96.2%	94.3%	93.5%	87.8%	88.1%	74.0%	82.2%	78.1%	82.4%	83.3%
	Biological and Biomedical Sciences	8,323	8,159	8,575	9,260	8,372	8,630	9,024	92.9%	94.2%	93.2%	92.4%	93.1%	93.4%	93.5%	82.2%	84.7%	85.4%	83.0%	83.6%	84.9%	84.2%
	Computer and Information Sciences and Support Services	1,266	1,091	1,207	1,294	1,415	1,482	1,802	96.8%	96.2%	95.8%	96.4%	94.3%	94.7%	95.8%	93.1%	91.4%	92.5%	93.0%	91.5%	89.6%	88.8%
	Engineering	5,313	5,217	5,214	6,164	5,834	6,143	6,281	94.2%	94.3%	92.6%	91.2%	93.5%	92.9%	93.9%	87.6%	87.9%	87.0%	84.5%	87.5%	87.1%	88.5%
	Mathematics and Statistics	1,955	1,815	2,031	1,924	1,669	1,797	1,985	92.9%	92.0%	91.9%	92.6%	92.0%	93.5%	94.4%	75.7%	77.9%	78.2%	77.7%	79.7%	77.9%	78.6%
	Natural Resources and Conservation	728	822	853	907	970	1,056	935	93.4%	92.0%	93.4%	94.5%	95.6%	94.6%	94.9%	79.1%	81.5%	83.6%	83.0%	82.0%	79.6%	71.2%
	Physical Sciences	2,121	2,083	1,663	1,828	1,593	1,665	1,877	93.0%	92.7%	92.2%	91.7%	92.9%	92.7%	93.9%	72.3%	73.8%	75.9%	72.7%	72.1%	73.7%	69.3%
	Total	19,837	19,330	19,720	21,574	20,063	20,983	22,072	93.6%	93.9%	93.0%	92.4%	93.4%	93.4%	94.0%	82.5%	84.0%	84.5%	82.7%	83.9%	84.1%	83.5%
Undeclared/Interdisc	Undeclared/Interdisciplinary	14,713	14,337	14,030	15,696	14,273	14,853	13,649	92.2%	91.1%	91.6%	91.3%	92.5%	92.1%	92.3%	67.8%	68.7%	71.5%	70.2%	69.6%	69.7%	67.5%
	Total	14,713	14,337	14,030	15,696	14,273	14,853	13,649	92.2%	91.1%	91.6%	91.3%	92.5%	92.1%	92.3%	67.8%	68.7%	71.5%	70.2%	69.6%	69.7%	67.5%
Grand Total		46,746	46,022	46,805	51,930	48,786	51,074	50,742	92.8%	92.6%	92.1%	91.7%	92.6%	92.6%	93.0%	77.1%	78.4%	79.8%	78.0%	78.3%	78.6%	77.7%

**ACADEMIC AND STUDENT
AFFAIRS COMMITTEE
September 16, 2026**

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Appendix V: Comparison of first-year GPA between students who remained in their original program and those who changed programs

STEM Status	CIP Name	Enrollment							GPA of students who remained in their original program after the first year							GPA of students who changed their original program after the first year						
		2018	2019	2020	2021	2022	2023	2024	2018	2019	2020	2021	2022	2023	2024	2018	2019	2020	2021	2022	2023	2024
Non-STEM	Agriculture, Agriculture Operations, and Related Sciences	359	337	417	364	392	376	385	3.03	3.11	3.15	3.11	3.15	3.09	3.04	2.73	2.90	3.07	2.92	3.00	2.93	2.92
	Area, Ethnic, Cultural, Gender, and Group Studies	155	176	196	218	238	207	212	3.01	3.27	3.39	2.91	3.15	3.19	3.23	2.80	3.15	3.21	2.99	3.08	3.19	3.31
	Business, Management, Marketing, and Related Support S...	1,946	1,750	1,853	2,281	2,414	2,611	2,638	3.21	3.39	3.45	3.36	3.33	3.35	3.37	2.67	3.09	2.98	2.73	2.87	2.74	2.80
	Communication, Journalism, and Related Programs	382	358	415	342	327	365	402	3.28	3.50	3.42	3.46	3.44	3.49	3.55	3.18	3.41	3.36	3.21	3.41	3.49	3.50
	Education	215	298	260	362	331	322	376	3.14	3.31	3.37	3.23	3.26	3.35	3.34	2.85	3.00	3.28	2.87	2.97	3.09	3.17
	English Language and Literature/Letters	526	416	465	466	485	536	456	3.37	3.46	3.50	3.47	3.46	3.49	3.53	3.11	3.28	3.03	3.13	3.13	3.19	3.14
	Family and Consumer Sciences/Human Sciences	83	64	63	95	100	125	94	3.18	3.45	3.49	3.32	3.30	3.31	3.30	2.92	3.32	3.06	3.13	3.54	3.54	3.38
	Foreign Languages, Literatures, and Linguistics	364	336	303	336	348	349	266	3.29	3.37	3.41	3.35	3.34	3.38	3.31	3.16	3.36	3.16	3.19	3.28	3.32	3.23
	Health Professions and Related Programs	530	644	641	723	776	947	1,031	3.13	3.26	3.43	3.27	3.21	3.24	3.34	2.62	2.90	3.14	2.71	3.02	2.97	3.01
	History	247	266	292	351	320	340	365	3.32	3.43	3.45	3.51	3.55	3.57	3.48	2.96	3.27	3.19	3.20	3.28	3.54	3.29
	Philosophy and Religious Studies	162	173	137	176	155	135	163	3.13	3.34	3.39	3.30	3.17	3.33	3.40	3.12	3.15	3.36	3.01	3.04	3.19	3.34
	Psychology	2,250	2,528	2,583	3,022	2,985	3,024	2,849	3.20	3.38	3.49	3.35	3.33	3.34	3.39	2.96	3.16	3.16	3.05	3.05	3.01	3.17
	Public Administration and Social Service Professions	77	123	143	142	138	162	163	3.25	3.44	3.50	3.37	3.29	3.44	3.35	3.61	3.40	3.50	3.23	3.10	2.69	2.77
	Social Sciences	3,744	3,735	3,952	4,398	4,060	4,210	4,221	3.20	3.38	3.46	3.36	3.36	3.39	3.40	3.10	3.30	3.22	3.17	3.25	3.18	3.21
	Visual and Performing Arts	1,156	1,151	1,335	1,384	1,381	1,529	1,400	3.36	3.46	3.49	3.42	3.45	3.48	3.50	3.06	3.35	3.17	3.20	3.24	3.21	3.36
	Total	12,196	12,355	13,055	14,660	14,450	15,238	15,021	3.22	3.38	3.45	3.35	3.35	3.37	3.39	2.97	3.21	3.17	3.05	3.12	3.07	3.14
STEM	Architecture and Related Services	131	143	177	197	210	210	168	3.25	3.50	3.53	3.41	3.41	3.36	3.36	3.13	3.23	3.43	3.36	3.42	3.46	2.99
	Biological and Biomedical Sciences	8,323	8,159	8,575	9,260	8,372	8,630	9,024	3.18	3.37	3.40	3.30	3.29	3.31	3.33	2.78	3.04	2.96	2.87	2.91	2.85	2.86
	Computer and Information Sciences and Support Services	1,266	1,091	1,207	1,294	1,415	1,482	1,802	3.39	3.61	3.61	3.49	3.53	3.54	3.52	2.83	3.03	3.14	3.04	2.96	3.19	3.12
	Engineering	5,313	5,217	5,214	6,164	5,834	6,143	6,281	3.19	3.38	3.40	3.22	3.29	3.26	3.27	2.75	3.00	2.91	2.75	2.78	2.74	2.74
	Mathematics and Statistics	1,955	1,815	2,031	1,924	1,669	1,797	1,985	3.27	3.51	3.48	3.47	3.48	3.50	3.48	3.06	3.31	3.29	3.26	3.32	3.35	3.38
	Natural Resources and Conservation	728	822	853	907	970	1,056	935	3.23	3.40	3.44	3.36	3.44	3.45	3.41	3.03	3.19	3.25	3.24	3.36	3.27	3.46
	Physical Sciences	2,121	2,083	1,663	1,828	1,593	1,665	1,877	3.18	3.36	3.38	3.24	3.27	3.32	3.31	3.04	3.26	3.26	3.10	3.19	3.10	3.23
	Total	19,837	19,330	19,720	21,574	20,063	20,983	22,072	3.21	3.40	3.42	3.30	3.33	3.34	3.34	2.87	3.11	3.06	2.94	3.00	2.97	3.02
Undeclared/Interdisc	Undelared/Interdisciplinary	14,713	14,337	14,030	15,696	14,273	14,853	13,649	3.21	3.41	3.42	3.33	3.38	3.37	3.40	3.20	3.39	3.34	3.29	3.38	3.34	3.35
	Total	14,713	14,337	14,030	15,696	14,273	14,853	13,649	3.21	3.41	3.42	3.33	3.38	3.37	3.40	3.20	3.39	3.34	3.29	3.38	3.34	3.35
Grand Total		46,746	46,022	46,805	51,930	48,786	51,074	50,742	3.21	3.40	3.43	3.33	3.35	3.36	3.37	3.04	3.26	3.21	3.11	3.19	3.15	3.19

Appendix VI: Comparison of four-year campus and program graduation rates

Comparison of Four-Year Campus and Program Graduation Rates

STEM Status	CIP Name	4-Year campus graduation rate								4-year program graduation rate							
		2014	2015	2016	2017	2018	2019	2020	2021	2014	2015	2016	2017	2018	2019	2020	2021
Non-STEM	Agriculture, Agriculture Operations, and Related Sciences	57.4%	62.9%	66.7%	69.6%	68.5%	65.0%	59.7%	67.9%	38.0%	43.3%	51.1%	50.0%	48.7%	45.7%	42.7%	49.5%
	Area, Ethnic, Cultural, Gender, and Group Studies	66.4%	58.9%	63.7%	64.7%	64.5%	67.6%	65.8%	59.2%	24.1%	18.4%	30.7%	22.9%	25.8%	25.0%	25.0%	13.8%
	Business, Management, Marketing, and Related Support Serv...	76.7%	78.2%	80.6%	80.5%	79.1%	77.7%	78.5%	77.8%	43.4%	45.0%	41.4%	45.7%	43.3%	44.5%	41.8%	44.2%
	Communication, Journalism, and Related Programs	75.1%	73.9%	77.9%	75.7%	77.5%	84.4%	77.8%	80.1%	40.3%	42.3%	35.4%	39.4%	50.3%	50.6%	49.6%	55.3%
	Education	70.0%	68.0%	66.3%	72.4%	70.7%	75.2%	73.8%	74.9%	15.7%	29.7%	27.1%	26.3%	36.7%	44.6%	45.0%	46.1%
	English Language and Literature/Letters	72.9%	71.5%	75.0%	78.5%	73.4%	77.6%	74.2%	78.3%	47.4%	45.6%	49.5%	55.4%	47.0%	52.6%	54.4%	54.7%
	Family and Consumer Sciences/Human Sciences	75.5%	73.3%	72.7%	74.0%	73.5%	84.4%	79.4%	86.3%	60.4%	48.9%	48.5%	54.0%	53.0%	60.9%	50.8%	63.2%
	Foreign Languages, Literatures, and Linguistics	71.2%	70.9%	73.8%	72.8%	71.4%	72.9%	62.0%	72.9%	37.5%	37.8%	43.8%	42.2%	37.9%	37.5%	32.3%	35.4%
	Health Professions and Related Programs	77.1%	74.6%	78.4%	80.3%	80.8%	81.8%	78.5%	79.4%	57.6%	55.4%	59.6%	64.1%	63.8%	60.4%	45.4%	58.4%
	History	73.5%	71.2%	75.3%	76.9%	72.5%	74.1%	73.6%	78.6%	45.0%	45.5%	54.5%	48.7%	48.2%	47.4%	48.3%	50.7%
	Philosophy and Religious Studies	63.0%	53.1%	67.0%	70.1%	69.8%	75.1%	69.3%	69.3%	42.6%	29.6%	33.0%	34.4%	21.0%	32.9%	32.8%	34.1%
	Psychology	73.2%	75.5%	75.7%	77.7%	77.4%	79.7%	79.7%	79.5%	46.0%	50.0%	50.3%	55.5%	53.8%	61.0%	61.6%	57.5%
	Public Administration and Social Service Professions	51.4%	79.4%	75.6%	64.6%	92.2%	82.9%	69.9%	75.4%	22.9%	38.2%	36.6%	37.5%	53.2%	43.1%	35.7%	35.2%
	Social Sciences	73.8%	72.8%	74.7%	75.1%	75.6%	75.4%	76.2%	76.4%	48.0%	46.0%	49.9%	51.1%	50.6%	51.4%	53.4%	52.4%
	Visual and Performing Arts	66.7%	70.5%	69.5%	70.1%	68.3%	70.6%	68.2%	71.5%	46.6%	48.4%	52.4%	48.8%	49.1%	53.1%	50.4%	49.1%
	Total	72.8%	73.4%	75.1%	76.0%	75.4%	76.5%	75.3%	76.5%	45.6%	46.0%	47.9%	49.8%	48.9%	51.6%	50.6%	50.7%
STEM	Architecture and Related Services	78.7%	75.6%	76.7%	72.0%	75.6%	76.9%	76.8%	81.2%	47.8%	45.5%	42.6%	47.2%	48.1%	46.2%	44.1%	50.8%
	Biological and Biomedical Sciences	69.8%	70.0%	72.4%	74.2%	75.1%	75.0%	74.4%	76.5%	42.7%	44.3%	45.7%	47.8%	51.6%	53.0%	52.7%	54.4%
	Computer and Information Sciences and Support Services	70.5%	74.3%	79.0%	79.7%	81.6%	81.9%	79.0%	81.5%	57.0%	62.9%	65.3%	67.3%	71.1%	72.1%	69.8%	72.8%
	Engineering	63.5%	63.5%	64.0%	67.2%	68.7%	69.4%	68.5%	66.5%	47.7%	49.2%	48.9%	51.9%	54.6%	54.6%	55.1%	50.9%
	Mathematics and Statistics	69.6%	71.6%	71.8%	75.1%	72.9%	72.2%	71.9%	74.6%	40.3%	39.4%	39.4%	42.6%	45.5%	46.7%	44.2%	46.4%
	Natural Resources and Conservation	73.7%	75.3%	73.4%	75.0%	74.9%	74.7%	76.8%	79.1%	46.2%	48.1%	45.6%	44.3%	47.9%	49.6%	51.7%	51.6%
	Physical Sciences	63.8%	66.1%	66.3%	68.7%	70.5%	70.3%	68.9%	70.1%	28.3%	30.4%	28.8%	31.3%	31.9%	33.5%	36.4%	34.2%
	Total	67.7%	68.5%	69.8%	72.1%	73.1%	73.1%	72.5%	73.4%	43.2%	44.7%	45.1%	47.8%	50.8%	51.6%	52.0%	51.9%
Undeclared/Interdisc	Undelared/Interdisciplinary	65.2%	68.3%	70.6%	71.0%	70.5%	71.1%	70.6%	72.5%	8.2%	7.8%	8.3%	7.9%	9.1%	8.6%	9.8%	12.6%
	Total	65.2%	68.3%	70.6%	71.0%	70.5%	71.1%	70.6%	72.5%	8.2%	7.8%	8.3%	7.9%	9.1%	8.6%	9.8%	12.6%
Grand Total		68.0%	69.6%	71.4%	72.7%	72.9%	73.4%	72.7%	74.0%	31.0%	32.2%	33.1%	35.1%	37.1%	38.2%	39.0%	39.7%

Note: The grand total data is the same four-year graduation rates as presented in the July 2026 Report on Retention and Graduation Rates. The only difference is it is presented as entry year cohorts, instead of graduation cohorts (i.e., 2014 compared to 2018).

Appendix VII: Comparison of six-year campus and program graduation rates

STEM Status	CIP Name	Enrollment		6 Year Campus Grad Rate		6 Year Program Grad Rate	
		2018	2019	2018	2019	2018	2019
Non-STEM	Agriculture, Agriculture Operations, and Related Sciences	359	337	83.0%	84.6%	56.3%	55.8%
	Area, Ethnic, Cultural, Gender, and Group Studies	155	176	76.1%	77.3%	29.0%	27.8%
	Business, Management, Marketing, and Related Support Services	1,946	1,750	88.0%	85.4%	47.4%	47.3%
	Communication, Journalism, and Related Programs	382	358	86.4%	91.6%	53.9%	52.8%
	Education	215	298	80.5%	85.2%	40.0%	47.7%
	English Language and Literature/Letters	526	416	85.0%	85.8%	52.5%	57.2%
	Family and Consumer Sciences/Human Sciences	83	64	83.1%	90.6%	57.8%	64.1%
	Foreign Languages, Literatures, and Linguistics	364	336	81.3%	85.4%	43.4%	43.5%
	Health Professions and Related Programs	530	644	89.6%	89.4%	68.9%	63.2%
	History	247	266	84.6%	83.5%	54.7%	52.3%
	Philosophy and Religious Studies	162	173	82.1%	89.0%	26.5%	37.6%
	Psychology	2,250	2,528	86.4%	87.1%	59.3%	64.7%
	Public Administration and Social Service Professions	77	123	94.8%	88.6%	53.2%	46.3%
	Social Sciences	3,744	3,735	85.2%	85.4%	55.4%	57.2%
	Visual and Performing Arts	1,156	1,151	83.2%	82.5%	58.0%	60.8%
	Total	12,196	12,355	85.5%	85.8%	54.2%	56.3%
STEM	Architecture and Related Services	131	143	89.3%	89.5%	58.0%	51.7%
	Biological and Biomedical Sciences	8,323	8,159	86.9%	86.9%	57.5%	59.2%
	Computer and Information Sciences and Support Services	1,266	1,091	91.9%	92.2%	79.0%	79.9%
	Engineering	5,313	5,217	86.7%	87.0%	67.8%	67.2%
	Mathematics and Statistics	1,955	1,815	84.2%	84.8%	50.5%	52.9%
	Natural Resources and Conservation	728	822	88.2%	87.6%	55.2%	56.1%
	Physical Sciences	2,121	2,083	84.5%	84.8%	37.3%	39.2%
	Total	19,837	19,330	86.7%	86.8%	58.7%	59.6%
Undeclared/Interdisc	Undelared/Interdisciplinary	14,713	14,337	85.1%	85.2%	10.6%	10.1%
	Total	14,713	14,337	85.1%	85.2%	10.6%	10.1%
Grand Total	Total	46,746	46,022	85.9%	86.1%	42.4%	43.3%

Note: The grand total data is the same six-year graduation rates as presented in the July 2026 Report on Retention and Graduation Rates. The only difference is it is presented as entry year cohorts, instead of graduation cohorts (i.e., 2019 compared to 2025).