



PPIC

PUBLIC POLICY
INSTITUTE OF CALIFORNIA

NOVEMBER 2020

Jacob Jackson

with research support from
Courtney Lee

*Supported with funding
from the Bill and Melinda
Gates Foundation and the
Sutton Family Fund*

Getting to Graduation on Time at California State University



© 2020 Public Policy Institute of California

PPIC is a public charity. It does not take or support positions on any ballot measures or on any local, state, or federal legislation, nor does it endorse, support, or oppose any political parties or candidates for public office.

Short sections of text, not to exceed three paragraphs, may be quoted without written permission provided that full attribution is given to the source.

Research publications reflect the views of the authors and do not necessarily reflect the views of our funders or of the staff, officers, advisory councils, or board of directors of the Public Policy Institute of California.

SUMMARY

CONTENTS

| | |
|--|----|
| Introduction | 5 |
| On-time Graduation and Course-taking at CSU | 6 |
| Gaps in Course-taking and On-time Graduation | 15 |
| Looking Forward | 21 |
| References | 24 |
| About the Author | 25 |
| Acknowledgments | 25 |

Technical appendices to this report are available on the PPIC website.

The majority of freshmen entering California State University (CSU) system graduate, but most do not do so within four years. Graduating later has many costs—from the tuition and associated costs for extra years of schooling to forgoing years of entering the workforce—and students from low-income families as well as students of color are more likely to graduate later than their peers.

Through system-wide policies like the Graduation Initiative 2025 and the California Promise Program, CSU is promoting strategies to help more students graduate on time. One key strategy is to support student efforts to take a full course load early in their college career.

Using a combination of campus-wide and student-level data, we examine the relationship between course-taking and on-time graduation. We present the following findings:

- **Many students do not take enough units to graduate on time.** Students take an average of 13 units per term, with many taking the minimum 12 units to be considered full-time for financial aid. Historically, only about a third of students enrolled in a full course load of 15 units, but recent increases show almost half now enroll in a full course load.
- **More students may graduate on time if they take a full course load in their first term and first year.** Students who enroll in a full course load in their first year—or even first term—are more likely to persist and graduate on time than students who do not. Across all student demographics, a strong relationship exists between first-term and first-year course loads and on-time graduation.
- **More freshmen are enrolling in full course loads, but gaps remain.** Over half of all freshmen now take a full course load thanks to programs and policies aimed at graduating students on time. These changes may help CSU reach ambitious graduation goals. But course-taking gaps remain between historically underrepresented students and their peers.
- **Students in all groups benefit from full course loads, but in different ways.** Four-year graduation rates have increased, but gaps between underrepresented students and their peers have grown. Those increased gaps are mirrored by the gaps in course-taking. However evidence suggests that students across groups benefit in other outcomes, such as persistence, by taking full course loads, and helping these students take on more courses could help to close gaps in on-time graduation.

More students may succeed and get to graduation on time if California can find ways to incentivize and support full course loads. For universities, this could mean aligning state funding around the goal of more course-taking. For

students, this could range from stronger advising to extra financial support for those working to help their families or working to pay college costs.

While campuses that have seen enormous changes in course-taking behavior can serve as models for others, all colleges must monitor opportunity gaps to ensure equitable course-taking and support for students who might need it. And as the state continues to adapt to COVID-19, colleges must focus on providing the necessary courses that will allow students to continue working toward their degrees.

Introduction

California colleges and universities serve as engines of economic mobility, as workers with college degrees see enormous benefits compared to those with a high school education or only some college. Attending college is not enough: average annual earnings for workers in the state who earn bachelor's degrees exceed \$100,000—about double what those who start, but do not complete college earn (Johnson and Cuellar Mejia 2020). Given the benefits of finishing a college degree, the timing of degree receipt also matters. Students who finish earlier often accrue less college debt, start their work trajectories sooner, and then potentially earn more during their lifetimes as a result.

The good news is that most students who attend California universities graduate. Graduation rates at California private nonprofit colleges (73%), University of California (84%), and California State University (59%) are near or above the national average, which is about 62 percent (Jackson, Cook, Johnson 2019).

Far fewer students, however, graduate in just four years. The national average for graduation within four years is estimated at 44 percent (National Center for Education Statistics 2019). And while the rates for private nonprofits (61%) and University of California (69%) are above average, the California State University falls well below the national average, at 28 percent (California State University 2020; University of California 2020).

The California State University (CSU) is the largest university system in the nation, enrolling nearly half a million students per year (California State University 2020). The top third of high school graduates in the state are eligible for CSU. It accounts for 18 percent of all college enrollment in California and 40 percent of all enrollment at four-year institutions in the state (Cuellar Mejia and Johnson 2019). CSU serves a diverse body of students that largely reflects California's racial and ethnic diversity in a way that the University of California does not (Rodriguez, Cuellar Mejia, and Johnson 2019).

CSU also serves as an economic ladder for Californians. Forty-seven percent of all students at CSU receive Pell Grants, which are federal grants reserved for the lowest-income students to attend higher education. Over 32 percent of CSU students are the first generation in their family to attend any college, and 55 percent of students would be the first to earn a bachelor's degree if they finish.¹

Taking an extra year or more to graduate, however, comes with additional costs. First, the cost of tuition, fees, and books for one year at CSU (among the least expensive universities in California) may cost a student an average of \$6,000 to \$10,000 a year, depending on the campus. Accounting for housing, transportation, and other associated costs puts the total at over \$25,000 per year (CSU 2019). Even students from the lowest-income families, who generally receive state and federal grant aid, can see costs of \$10,000 for an extra year of college (The Institute for College Access and Success 2020). Financial aid, which can help defray the cost of college, may also run out if a student takes too long. The state's Cal Grants run out after the equivalent of the student's fourth year, increasing the amount students need to pay or borrow each extra semester.

Often the biggest cost for an extra year or two of college, however, is the opportunity cost of not being in the workforce full time. Students who graduate from CSU earn an average of \$45,500 per year within their first two years of working, and students who take extra time are delaying their earnings trajectory in the workforce, potentially impacting their lifelong earnings.²

¹ CSU also serves as an important part of the economic ladder for California Community College students, who make up about half of all baccalaureates at the CSU as transfers.

² Annual salary within two years of graduation, according to [CSU Labor Market Outcomes Dashboard](#).

Many factors influence how long a student takes to finish a degree, but one critical factor is course-taking. In most majors, students must accumulate about 120 units (180 units in schools on the quarter system) to graduate, which divides evenly into 15 units per term each term (not including summers). However, “full time” status means different things for different purposes. For financial aid eligibility, a student must take 12 units per term, which is enough units to graduate in five years instead of four.

Taking more courses early influences whether or not a student ever completes at community and four-year colleges (Adelman 2006; Attewell, Heil and Reisel 2012; Attewell and Monaghan 2016; Belfield, Jenkins, and Lahr 2016; Moore, Shulock, and Offenstien 2009). We examine whether early course-taking connects to long-term outcomes such as persistence, completion, and on-time graduation at CSU. Do some students seem to benefit more than others by enrolling in more units early in their career?

Finally, COVID-19 likely has influenced course-taking and on-time graduation. Health concerns linked to the pandemic displaced students from campuses in the spring and summer terms. A quarter of students dropped at least one course in spring 2020 (California Student Aid Commission 2020). The fall term will clearly be affected, changing the number and types of courses available, along with the number in which students enroll. Those altered course loads may alter the likelihood of graduation—preliminary evidence shows that students already think the pandemic may affect their ability to take a full load of courses (California Student Aid Commission 2020) or graduate on time (Ed Trust West 2020). While this report cannot determine the impact of COVID-19 on long-term outcomes, we highlight challenges and opportunities related to course-taking and on-time graduation that campus leaders have indicated may be emerging from the switch to distance learning.

On-time Graduation and Course-taking at CSU

With a full course load of at least 15 units per term, students earn the necessary credits to graduate within four years. When students take fewer than 15 units, to stay on track they must do extra coursework in a later term, over a summer, or perhaps obtain credits elsewhere, such as AP courses in high school. But extra summer terms cost extra money and may use up financial aid, leaving students ineligible in later terms.

Generally, when students enter college they intend to graduate in four years. Nationally, almost 90 percent of freshmen expect to earn a bachelor’s degree within four years (Stolzenberg et al. 2019), and about 77 percent of entering freshmen at the University of California say it is essential or very important.³ CSU recognizes the importance of improving four-year graduation rates and has set ambitious goals to help more students reach this mark.

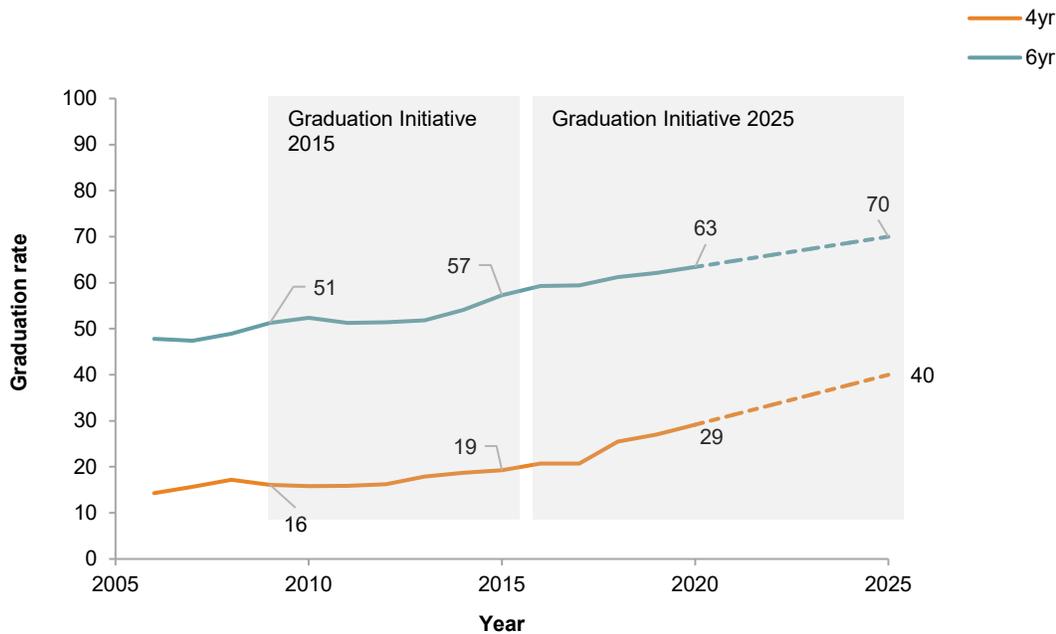
On-time Graduation Rates Are Rising at CSU

From 2009 to 2015, CSU engaged its first Graduation Initiative, an initiative to increase six-year graduation rates and close gaps in graduation rates between racial and ethnic groups. Despite achieving their six-year goal, four-year rates remained well below average (Jackson and Cook 2015). In 2016, CSU launched the Graduation Initiative 2025, with goals to increase four- and six-year graduation rates for first-time freshmen, close equity gaps, and increase graduation rates for transfer students. The 2025 goals of 70 percent for six-year rates and 40 percent for four-year rates would put CSU at or above current national averages. (Figure 1).

³ From [University of California Undergraduate Experience Survey Data Tables, 2018](#)

FIGURE 1

CSU set ambitious goals for its 2025 initiative and is making progress



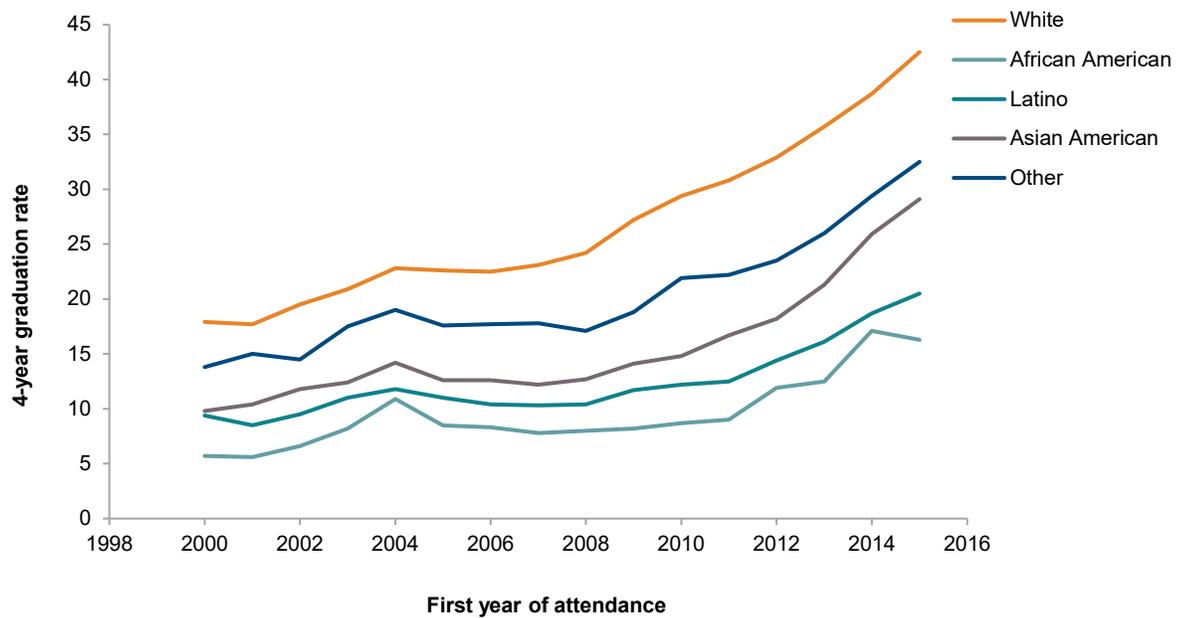
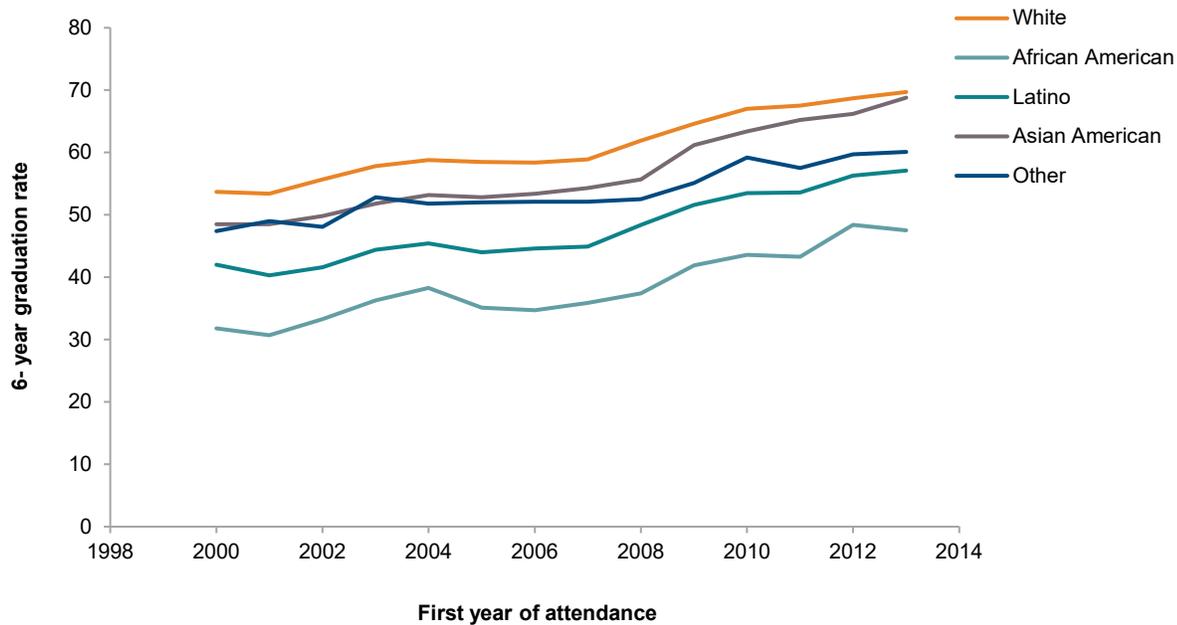
SOURCE: CSU Institutional Research and Analysis.

NOTE: Graduation Initiative 2015 ran from 2009 to 2015. Graduation Initiative 2025 runs from 2016 to 2025.

However, despite climbing graduation rates overall, gaps between student groups persisted or widened. Across all campuses, the six-year graduation gap between African American and white students remained around 22 percentage points for almost two decades, while the Latino/white gap rose from 12 to 13 percentage points. Even as four-year graduation rates improved for each racial group, gaps between groups grew, with the four-year gap between African American and white students growing from 12 percent to 26 percent, and the white/Latino gap growing from 9 to 22 percent (Figure 2). As a part of the Graduation Initiative 2025, CSU has identified factors that contribute to this gap, and made them targets for intervention.

FIGURE 2

As graduation rates increased overall, gaps in 6-year rates remained, while gaps in 4-year rates grew



SOURCE: CSU Institutional Research and Analysis.

NOTE: Graduation rates for first-time freshmen only.

The CSU system has implemented strategies to help students reach graduation and to shrink graduation gaps. To better prepare students for the rigors of college coursework, CSU established the Early Start Program in 2012, which places students in courses that can strengthen their writing and quantitative skills before their first fall enrollment. In 2018, CSU eliminated prerequisite remedial courses and instead placed all students in college-level courses while providing additional supports as needed.

Each of the 23 campuses drafted a plan to meet Graduation Initiative 2025 goals, with varying strategies to increase graduation rates, reduce the time for students to receive degrees, and close achievement gaps. Common strategies included the following:

- Reform advising to help students enroll in the number and types of classes they need to graduate
- Leverage data and and/or additional staff to offer more in-demand courses
- Add student supports to or redesign courses with high failure rates
- Targeted advising for students who are close to graduation or off-track to graduate
- Reform Early Start and/or orientation programs
- Redesign majors that require excess units

Many campus-level strategies to raise on-time and overall graduate rates involved heavier student course loads. The state also created the California Promise Program (SB 412), which does the same. Through this legislation CSU campuses could establish programs where students pledge to graduate in four years—for making this pledge, they receive benefits like priority registration as long as they take the right number of courses each year to graduate on time (30 units). Fourteen campuses have participated in the California Promise Program since 2017, though other campuses have similar programs under different names. One concern with this strategy, however, is that more advantaged students will be able to maintain the pledge and thereby receive priority registration at the expense of students with work or family obligations that prevent them from enrolling in a full load.

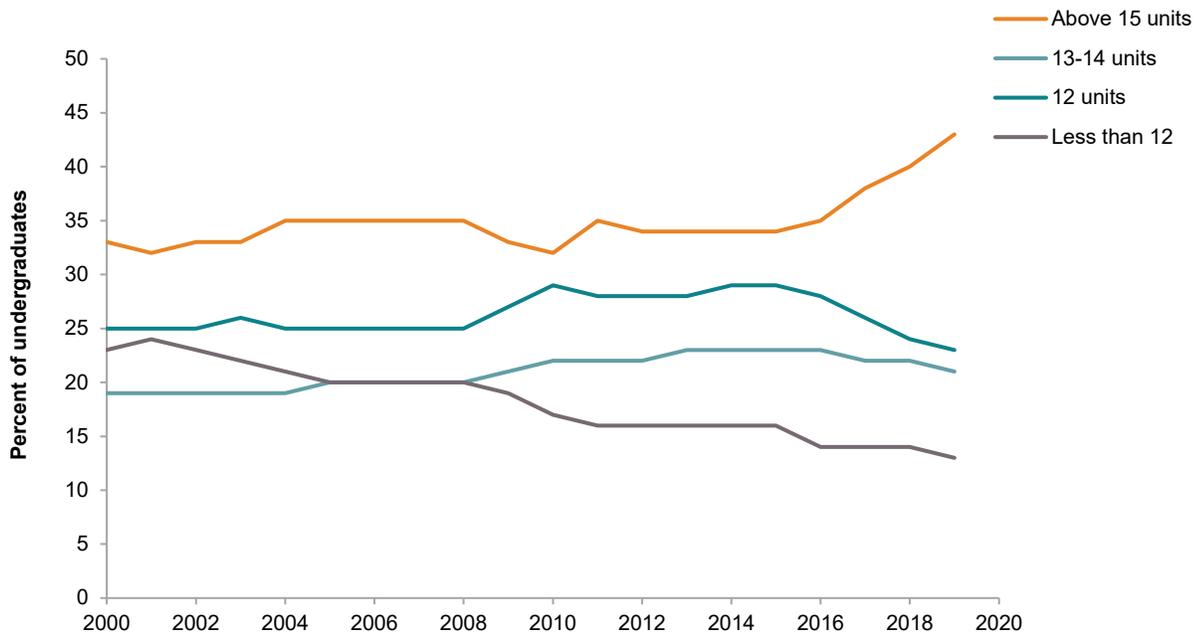
Most Students Do Not Take Enough Courses to Graduate On Time

We use CSU system-wide data to examine trends in course-taking.⁴ Students at CSU often take fewer courses than necessary to graduate on time without using summer terms or other sources of credits (Advanced Placement, etc.). In 2019, the typical CSU undergraduate took an average of 12.8 units per term. Historically, only about a third of students have taken at least 15 units in fall term. However, under Graduation Initiative 2025, the share of students taking a full load of 15 or more units grew from 35 to 43 percent (Figure 3).

⁴ The data were extracted from the California State University's [Enrollment dashboard](#).

FIGURE 3

Most students take less than a full course load, although rates have started to change



SOURCE: CSU Institutional Research and Analysis.

NOTE: Fall term unit loads for all undergraduates.

Many factors can determine whether a student enrolls in enough courses. Campus officials pointed to financial issues, advising, course availability, and campus culture as potential barriers. Several campus officials acknowledged that, in the past, some students were counseled to take fewer courses if they were less prepared or taking a slate of difficult courses; then in later terms the student would be expected take more courses to compensate—either during the summer or other terms. If the courses students need for their major are not available, they may not enroll for a full course load. When this happened, campus officials noted that they had to strategically increase course availability.

Campus culture may also influence when students take lower course loads. If most students on a campus were taking less than a full course load, students may have assumed they were not expected to take 15 units. That culture is changing, and many campuses now see a majority of first-time students taking full course loads. Lastly, students who must work or have family responsibilities may be more likely to take fewer courses.

Not all students can enroll in full course loads or in summer courses. Those who work or have family obligations may need extra support to have the time to enroll in more coursework. CSU estimates that in 2014, 29 percent of freshmen worked while enrolled, and on average had slightly lower persistence rates as well as lower and slower graduation outcomes.

A Full Course Load Is a Cost-effective Path to On-time Graduation

For students and for their universities, taking more units has financial implications. A student can move from enrolling in 12 to enrolling in 15 units in a term essentially for free because their base tuition covers up to 18 units. And students who enroll in 30 units over their first year may pay around 20 percent less for their degree (Belfield, Jenkins, and Lahr 2016).

Summer courses can also help students reach graduation by supplementing low course loads in fall and spring with extra units (Attewell, Heil, and Reisel 2012). However, CSU offers far fewer courses in summer, and those terms cost students extra tuition (Legislative Analyst’s Office 2017; Legislative Analyst’s Office 2019). Even for students receiving state grant aid, summer courses can be especially expensive in the long run given that they can use up a term of financial aid eligibility—leaving students without financial aid in later years (California Student Aid Commission 2019).

For colleges, students enrolling in more courses can cost more. CSU is funded by the state on a full-time equivalent (FTE) basis, meaning for each 15 units students collectively take per term, the state funds one student. Thus the FTE can differ vastly from the headcount of students. For example, two campuses can take different approaches to generating four FTE. Campus A could enroll four students who each take 15 units per term, while campus B could enroll five students who each take 12 units per term. Both campuses generate 120 units per year and produce the same state funding for four FTE. However, campus B, which enrolls the extra student at fewer units will produce about \$7,000 more in tuition revenue along with any fees for running other programs or supports. Revenue per student is higher at campus A since the state contributes more than students, but the overall revenue loss of the extra tuition and fees may be a financial disincentive for campuses to shift more students to full-course loads. Campuses have to hire more faculty if more of their students are taking more units; campus officials have indicated that they have been relying on Graduation Initiative funding in order to create more course sections to keep up with increased demand as students took more courses per term (California State University 2020).

Full Course Loads Could Help More Students Succeed

The relationship between courses taken and eventual graduation is somewhat mechanical. Students who enroll in more courses over their years in college and earn more credits earlier in their college career need fewer credits later to graduate, leading to faster graduation. However, full course loads even early in college turn out to be a strong indicator of eventual on-time graduation, as that momentum has been shown to carry forward to other terms (Adelman 2006; Attewell, Heil and Reisel 2012; Attewell and Monaghan 2016; Belfield, Jenkins, and Lahr 2016).

To illustrate the relationship between course-taking and student success at CSU, we examined student data from four partner campuses. The four universities include northern and southern California campuses, and range from fully impacted in every major to campuses with space for more students in most majors.⁵

For much of the analysis, we use the fall 2011 to fall 2013 cohorts, which provides a large enough data window to follow students through their fourth and fifth year in order to see if they graduated on time or re-enrolled after their fourth year. The campuses are fairly typical in terms of course-taking, with about 36 percent of students taking full course loads (the system average was about 35 percent over that time). The campuses vary in on-time graduation rates from 10 percent to 20 percent (the system average was about 21 percent over those cohorts; see [Technical Appendix B](#) for more on the sample).

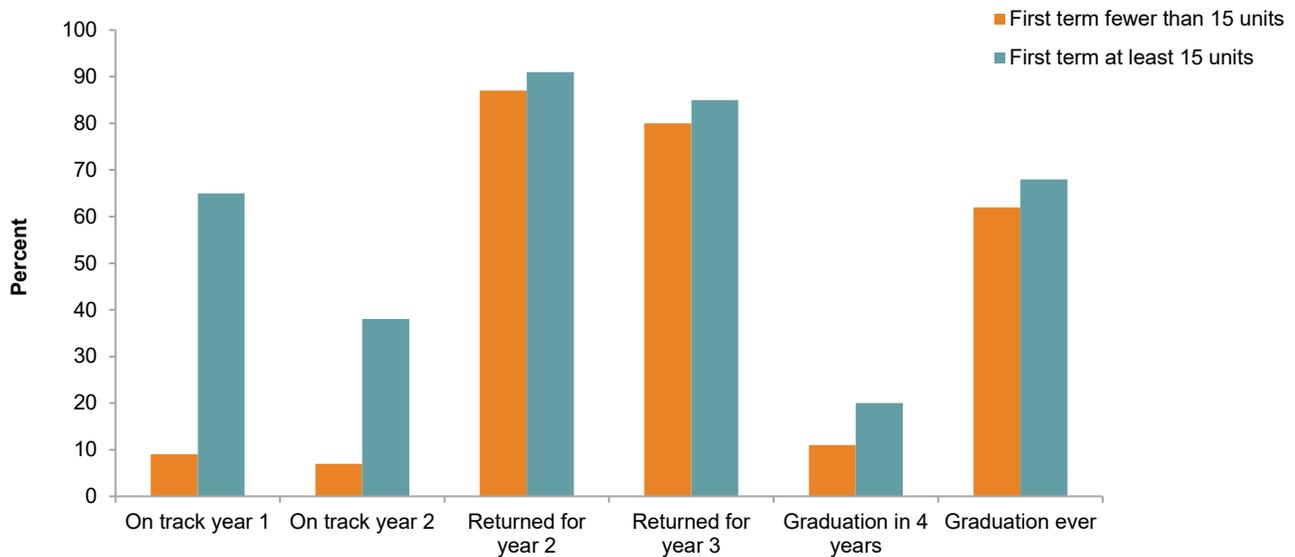
⁵ To retain the privacy of student-level data, the campuses in this report are anonymous. Impacted campuses are those that have more qualified applicants than can be accommodated. Impaction can result in higher standards of entry for some students (CSU 2019)

Early Course-taking Can Influence Later Outcomes

The amount of courses students take in their first quarter is an important predictor for whether they keep taking the right number of courses as they continue. Of students who took more than 15 units in their first quarter, 65 percent were likely to be on track to graduate by the end of their first year, while only 9 percent of students who enrolled in fewer than 15 units were on track. By the end of the second year, the split was 38 percent to 7 percent (Figure 4).

FIGURE 4

Course-taking in the first quarter affects short and long-term outcomes



SOURCE: Four CSU partner campuses.

NOTE: Fall 2011–2013 course loads. On track for year one is having attempted 30 units by spring (45 for quarter campuses), and for year two it is having attempted 60 units by spring (90 units for quarter campuses).

The units a student takes in their first term also affect longer-term outcomes. Students are very likely to persist into their second and third years no matter how many courses they take. However, students who carry a full course load in their first term are four percentage points more likely to return in their second year, and then five percentage points more likely to return in their third. They are six percentage points more likely to graduate. At 20 percent, these students are about twice as likely to graduate in four years compared to those who did not take a full course load (11%).

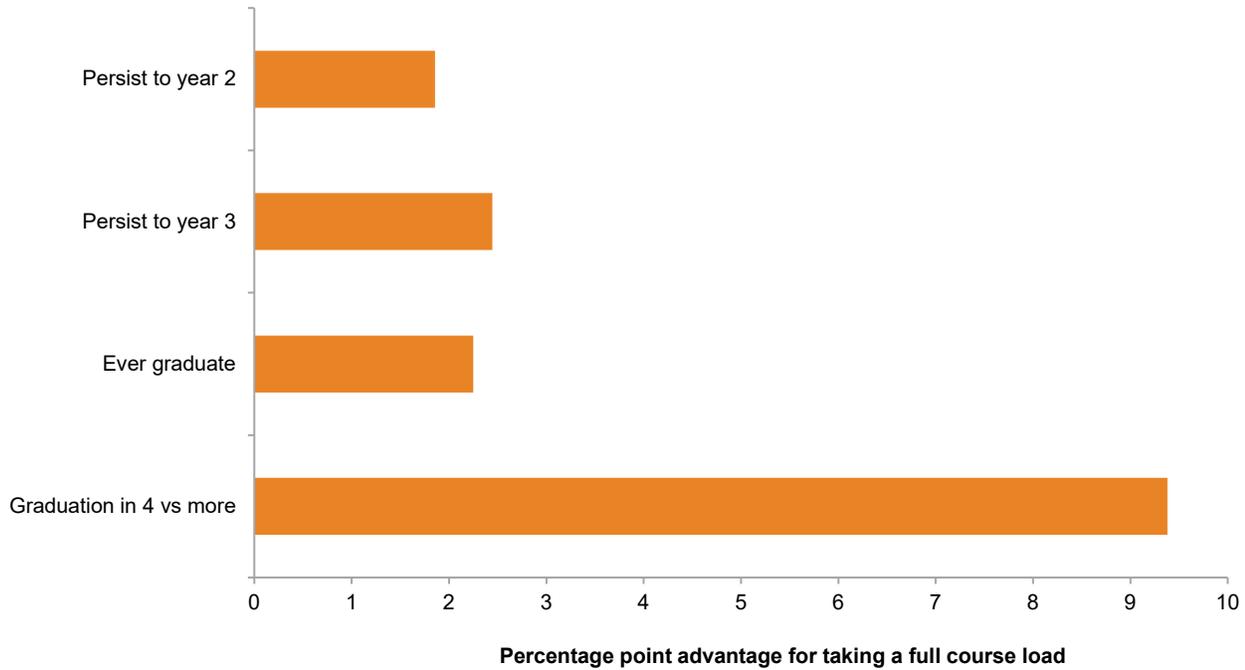
Academic preparation or student characteristics may also drive the relationship between course loads and these outcomes. For example, students with higher high school grades may take more classes and be more likely to graduate on time, both by virtue of perhaps being more motivated students. Campus differences can also be a factor, as advising policies, programs, or campus culture could influence both unit load and eventual graduation.

However, when we account for differences in preparation (high school GPA, AP test completion, college exam score) and demographics (gender, race/ethnicity, and first-generation status) and campus, we find roughly the same set of differences. For the typical student, taking a full course load is associated with moderate (1 to

3 percentage point) differences in graduation and persistence rates, and a difference of 9 percentage points in on-time graduation even when accounting for preparation and demographics (Figure 5).⁶

FIGURE 5

Students with a full course load their first term are more likely to graduate on time



SOURCE: Four CSU partner campuses.

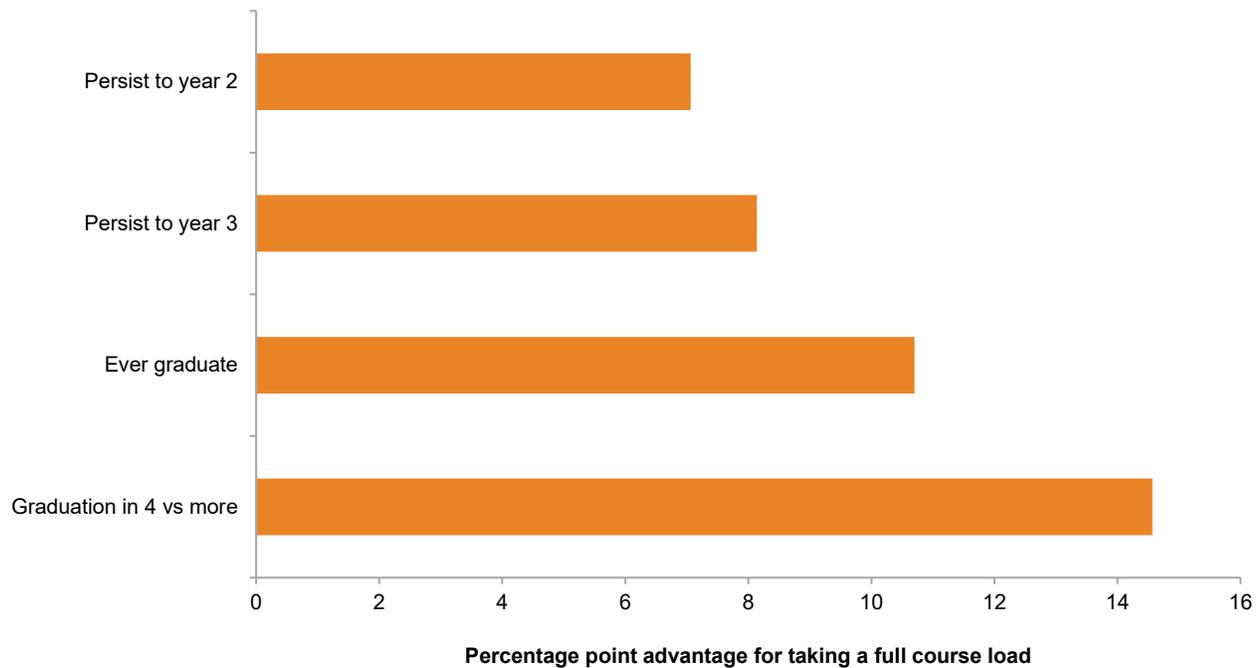
NOTE: Results are regression-adjusted for academic preparation and demographic characteristics. See [Technical Appendix A](#) for more information on the regressions.

A similar pattern holds for students who take a full load over the whole first year: those with similar preparation and demographic characteristics are between 7 and 10 percentage points more likely to graduate and persist. Otherwise similar students are more than twice as likely to graduate (25% compared to 11% for typical students) (Figure 6). Together with the 15-unit results, these findings suggest that early course-taking plays a role in persistence and graduation, and an especially important role in on-time graduation.

⁶ See [Technical Appendix B](#) for more information on the models.

FIGURE 6

Students who take a full course load their first year are more likely to persist and graduate



SOURCE: Four CSU partner campuses.

NOTE: Results are regression-adjusted for academic preparation and demographic characteristics. See [Technical Appendix A](#) for more information on the regressions.

Some Students May Benefit More than Others

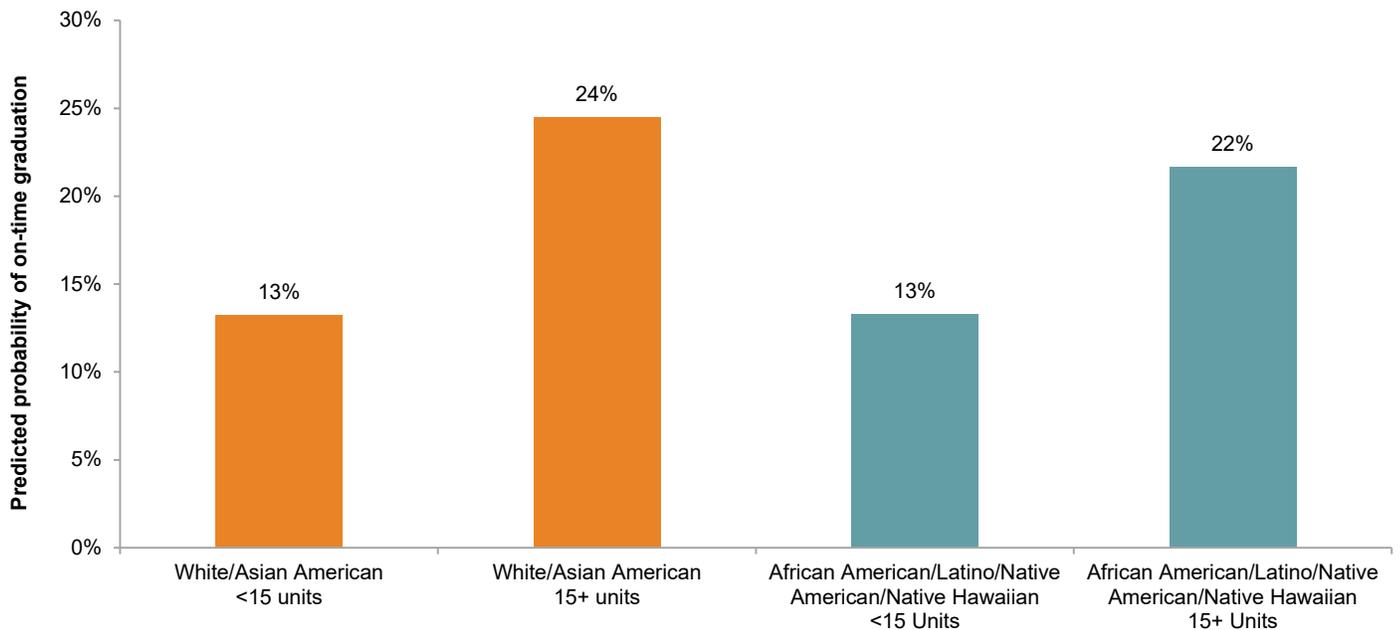
While all groups of students benefit from taking full course loads in their first term and first year, some students benefit more. For example, historically underrepresented students—African American, Latino, Native American, and Native Hawaiian students—who enroll in a full course load have about a 9 percentage point advantage in on-time graduation, compared to otherwise similar underrepresented students with a lighter course load. Meanwhile, that same gap for their white and Asian American peers is about 11 percentage points (Figure 7).

Underrepresented students still benefit, just slightly less.

The pattern also holds true for first-generation students, who receive about half the benefit in on-time graduation compared to those not the first in their family to graduate. Students with lower grade point averages in high school and higher SAT/ACT scores were also moderately less likely to benefit more from higher course loads compared to students with lower SAT scores (see [Technical Appendix A](#) for more on the models). The same pattern holds true with full course loads in the first year. However, students from all groups were still more likely to graduate on time if they took full course loads in their first term or first year.

FIGURE 7

Students from underrepresented groups may benefit slightly less from a full course load



SOURCE: Four CSU partner universities.

NOTES: Results are regression-adjusted for academic preparation and demographic characteristics. Predicted probabilities are holding all covariates at their means. See [Technical Appendix A](#) for more information on the regressions.

However, underrepresented and first-generation students with first-term full course loads appear to benefit a bit more in persistence. And they have about the same probability in terms of ever graduating as their peers (see [Technical Appendix B](#) for more details). Students with lower high school GPAs who took 15 units in their first term were more likely to eventually graduate than their peers with higher GPAs if they enrolled in 15 units.

Taken together, students with full course loads appear to benefit on a range of outcomes, regardless of their demographic and academic characteristics. Importantly, the analysis also shows that students who are less academically prepared, students who are the first in their families to attend college, and underrepresented students are, on average, more likely to persist, graduate, and do so on time if they enroll in a full course load in their first term and first year.⁷

Gaps in Course-taking and On-time Graduation

Equity gaps in long-term outcomes at CSU may widen because some groups of students tend to take more courses than others—and for all groups, a full course load is associated with completing a degree faster, with more persistence, and with graduating. Closing gaps in course-taking across campuses and student groups may help close gaps in those outcomes.

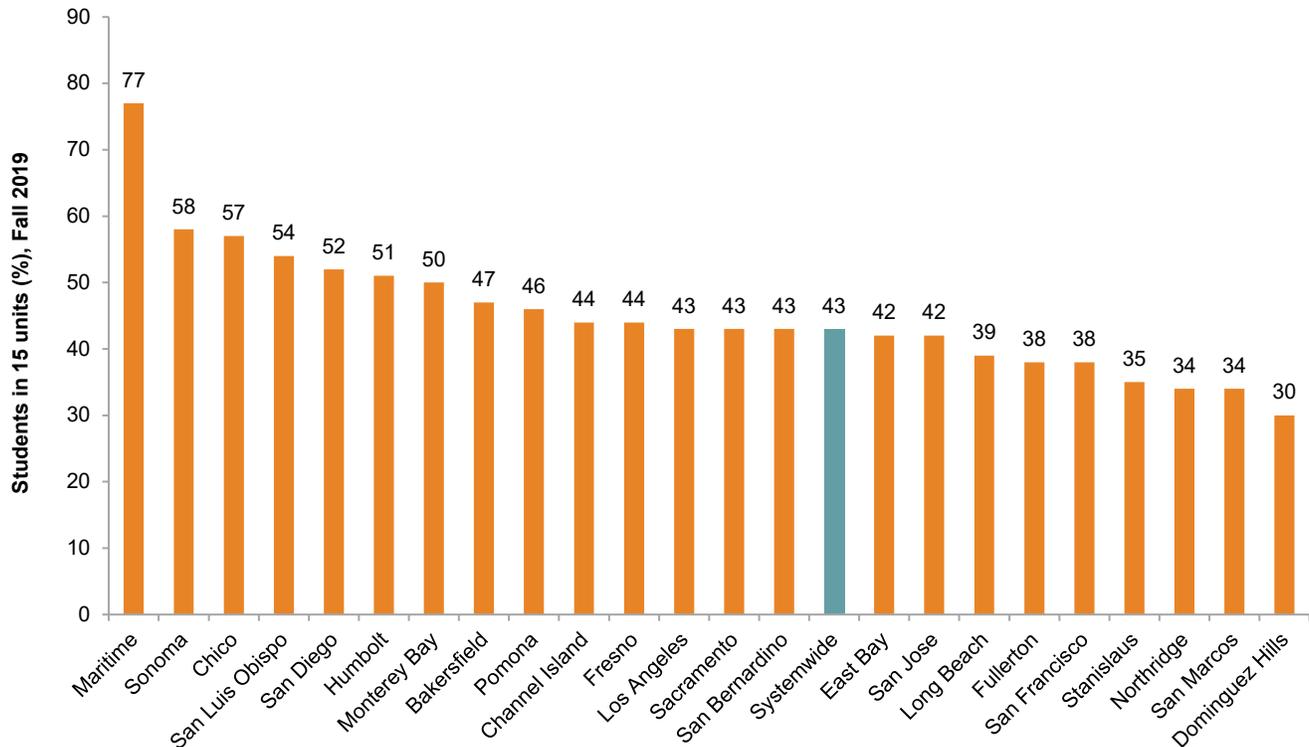
⁷ This analysis cannot speak to the types of courses students were taking, and whether they were remedial or otherwise. Remedial courses, which do not provide units that count toward a degree, cause a student to require more courses in order to graduate, and likely lengthen time to degree. Prior to 2018, about one in three students required remediation in some subject. It is not yet clear what removing remedial courses will do to the relationship between course loads and graduation.

Students Enroll in Full Course Loads at Different Rates

At different campuses and for different groups, average course load varies. On average, 43 percent of students across CSU enrolled in a full course load in 2019; however, that percentage varies considerably by campus (Figure 8). At CSU Dominguez Hills, CSU San Marcos, and CSU Northridge, for example, about a third of students enroll in 15 units in fall, while at CSU Maritime Academy, three-quarters of students enroll in a full course load.

FIGURE 8

Full course load participation varies by campus



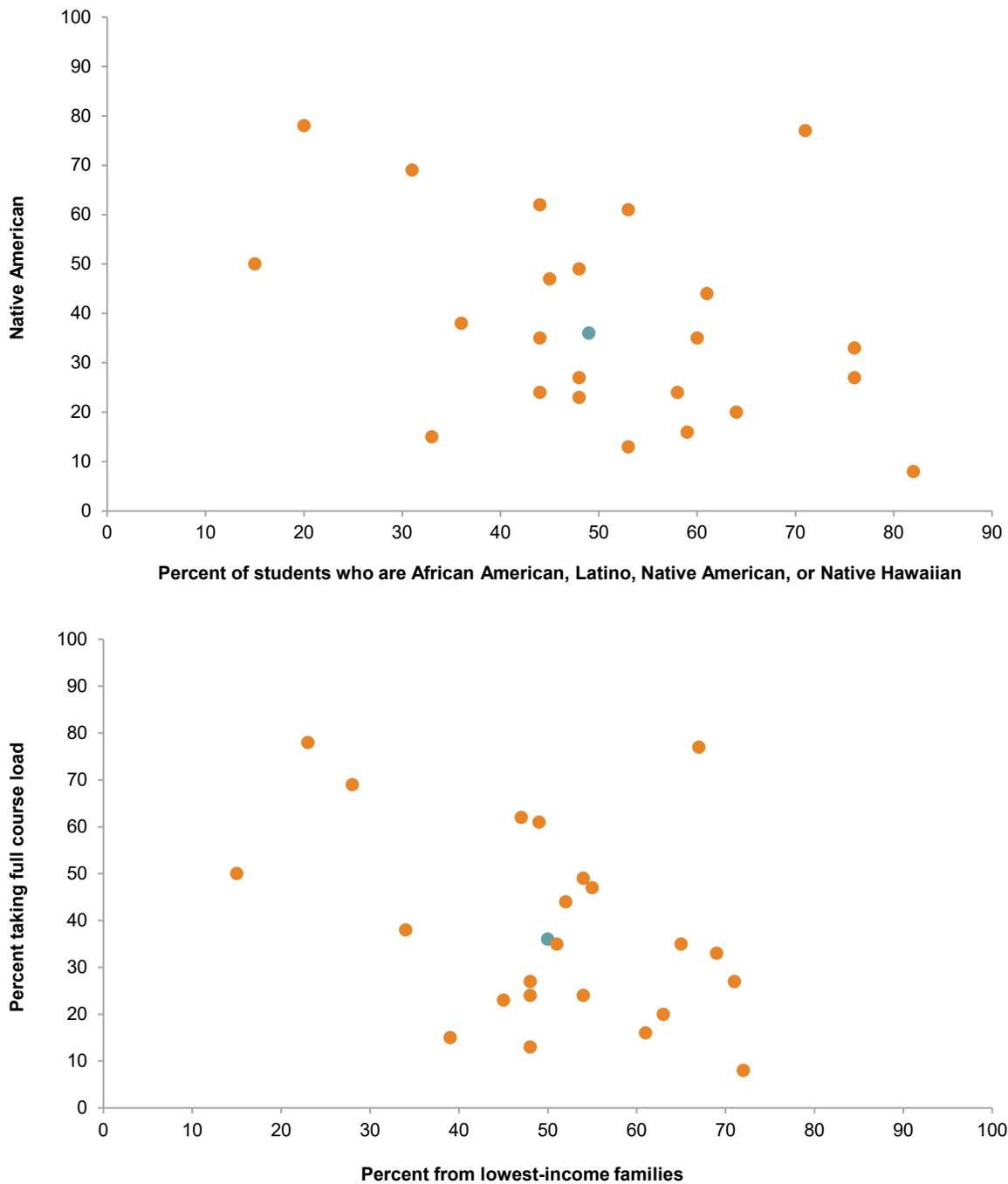
SOURCE: CSU Institutional Research and Analysis.

NOTE: Fall term 2019 unit loads for all undergraduates.

The 23 CSU campuses generally serve their local populations, and therefore vary in demographics, levels of student academic preparation, and more. Similarly, the campuses operate independent programs and apply their own policies that guide everything from advising to major requirements. Many factors likely combine to affect both course loads and graduation—however, some patterns exist that help illuminate campus differences. At colleges that serve more low-income students as well as larger proportions of African American, Latino, Native American, and Pacific Islander students, on average the students generally take lower course loads (Figure 9).

FIGURE 9

Students at campuses with more underrepresented and lower-income students are less likely to take full course loads



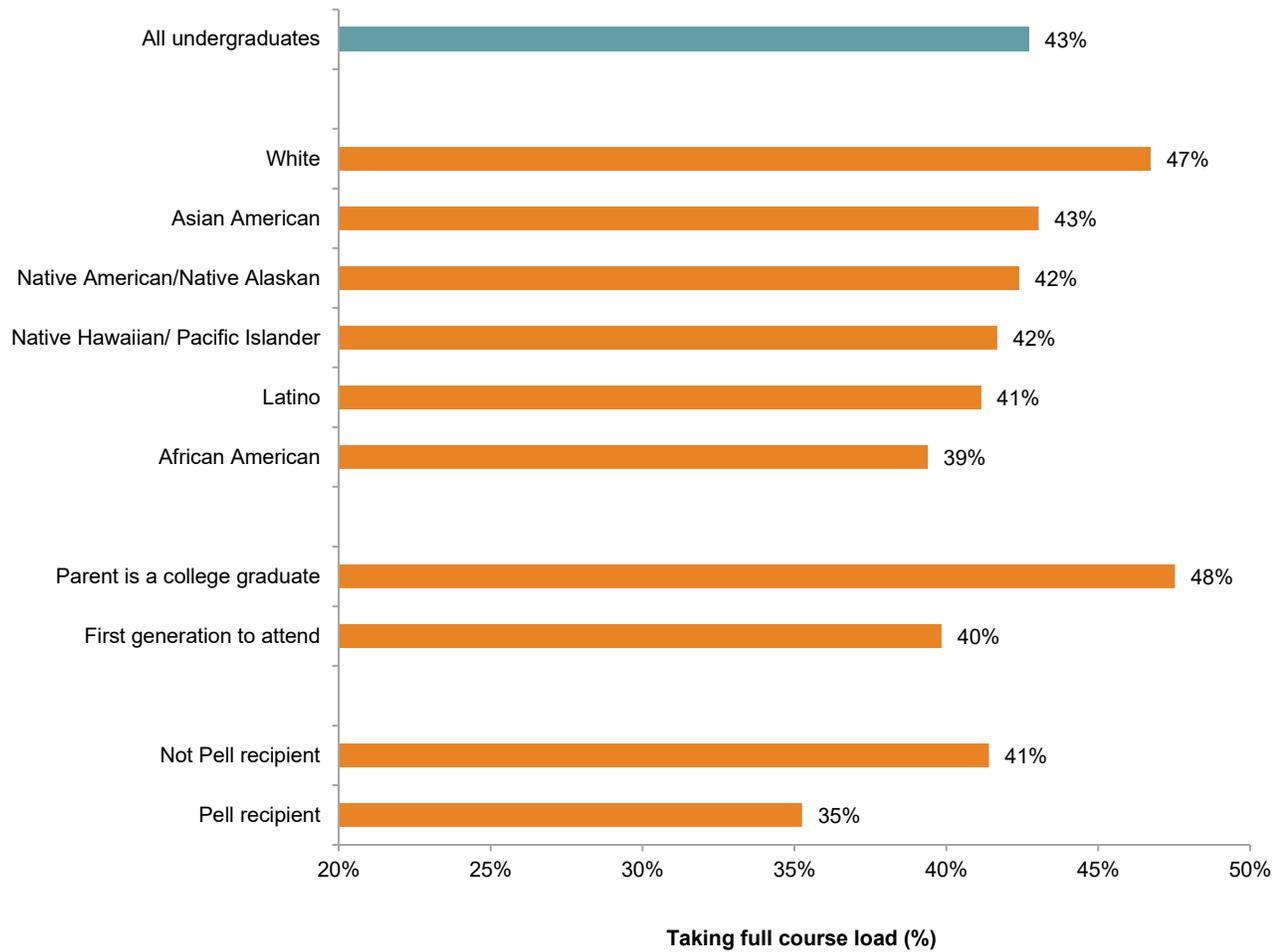
SOURCE: CSU Institutional Research and Analysis.

NOTES: Fall term unit loads for 2019. System average in blue.

Across all CSU campuses, gaps occur by race, as white students are more likely than average to take a full course load, while African American students are less likely than average (Figure 10). If full course loads are related to success, differences in course-taking norms between campuses could contribute to the large gap in graduation and the growing gap in on-time graduation between racial groups at CSU.

FIGURE 10

Large differences in course-taking behavior appear



SOURCE: CSU Institutional Research and Analysis.

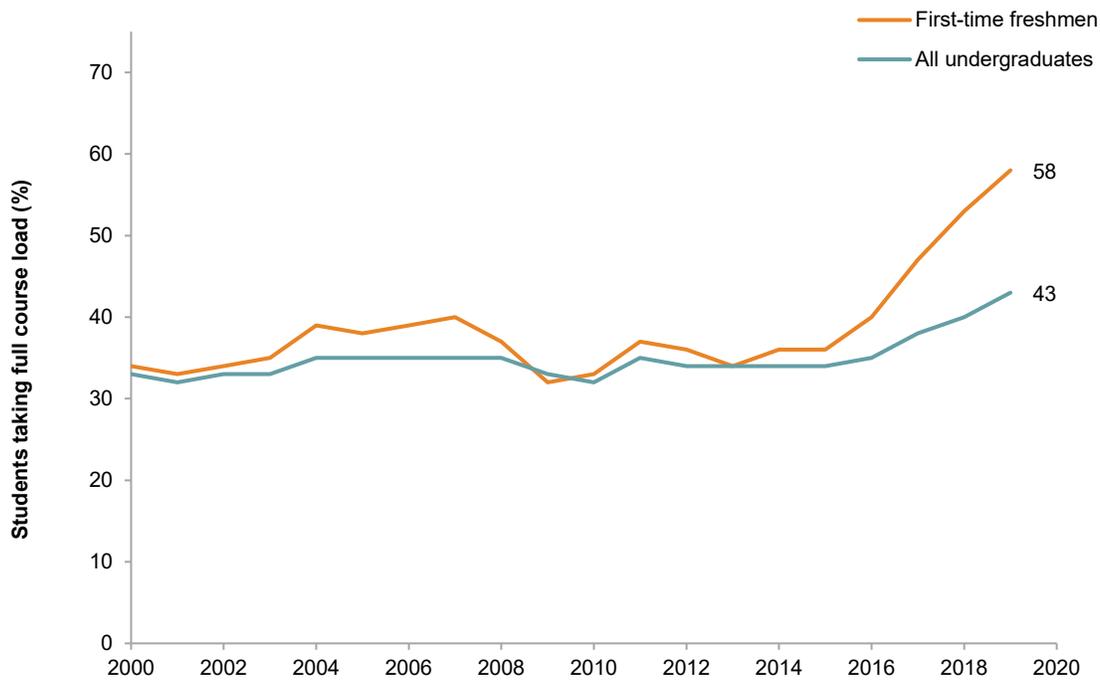
NOTES: Fall term 2019 unit loads for all undergraduates. Pell and Non-Pell are from 2017, the most recent year where data were available. In 2017, 38 percent of undergraduates took 15+ units in fall.

Increases in Course Loads Hold Promise at CSU

If course loads are related to the likelihood of graduation, CSU may soon see higher graduation and on-time rates. In fall 2019, 43 percent of students were enrolled in full course loads, which is a substantial increase over 2016, where just 36 percent did so. Those increases were driven at least in part by freshmen course-taking behavior. Since the Graduation Initiative 2025 began, the percent of freshmen taking a full course load in the first quarter rose from 40 percent to 58 percent (Figure 11). At four universities in 2019, more than 70 percent of first-time freshmen enrolled in a full course load their first quarter.

FIGURE 11

The share of students taking a full course load is increasing among first-time freshmen



SOURCE: CSU Institutional Research and Analysis.

NOTES: Fall term unit loads. First-time freshmen make up about 20 percent of all undergraduates per fall term.

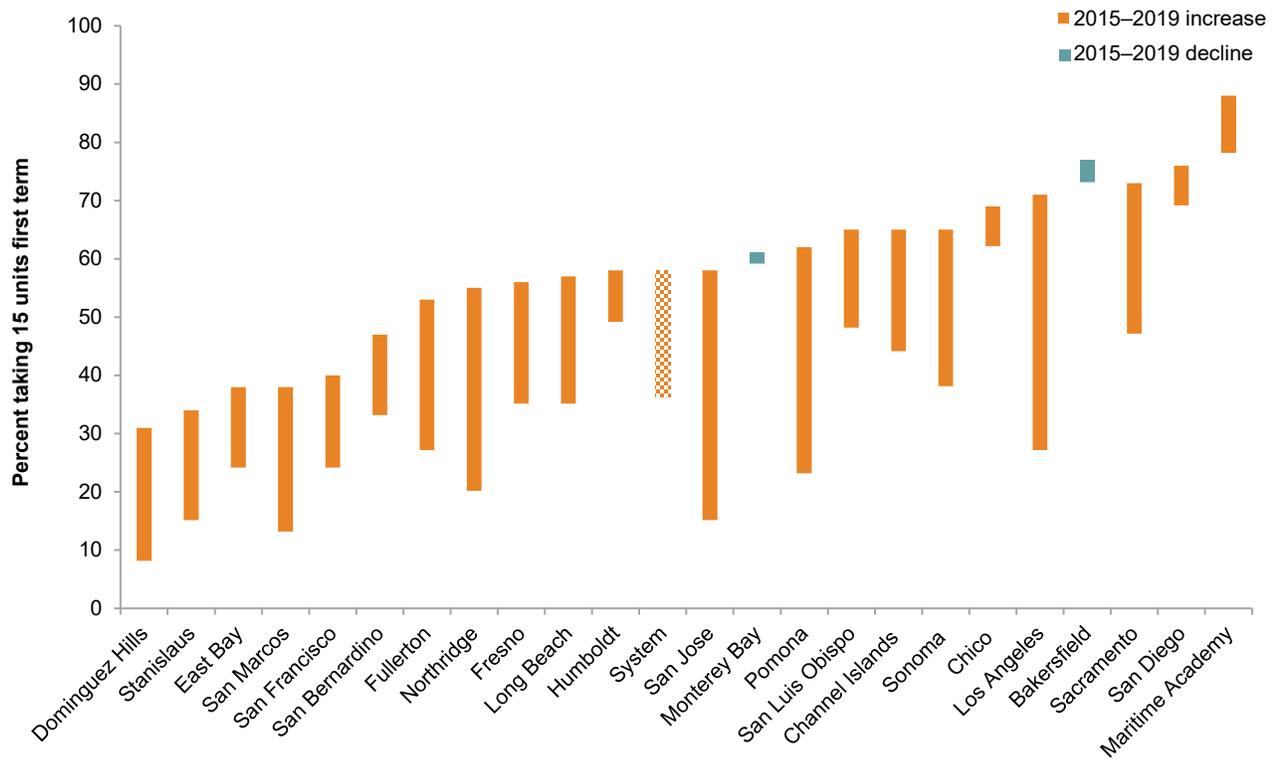
Students who started after 2016 have experienced many changes based on the plans campuses put in place for the Graduation Initiative 2025. These campus plans often incorporate programs and policies that encourage students to graduate, and do so on time. Some of those programs and policies include:

- Proactive advising for students who do not yet have majors to get them on track taking useful courses
- Student pledges and accompanying incentives for students to stay on track with the right number of units to graduate on time
- Grants to help students pay for summer courses to stay on track to graduate on time
- Scheduling incoming freshmen for a full load of 15 units, and letting them opt out rather than opt in

Between Early Start, the removal of remediation, and campus programs associated with the graduation initiative, students face fewer hurdles to on-time graduation than ever before. As a result, at most campuses course-taking has risen across the last four years. CSU moved from about 36 percent to over half (58%) of students taking a full course load. However, some campuses had huge increases—like CSU Los Angeles, which increased from 27 percent to 71 percent of first-time freshmen taking 15 units in fall of their first quarter. At six campuses, over two-thirds of students are on track in the first term (Figure 12).

FIGURE 12

Most colleges increased course-taking among freshmen considerably from 2015 to 2019



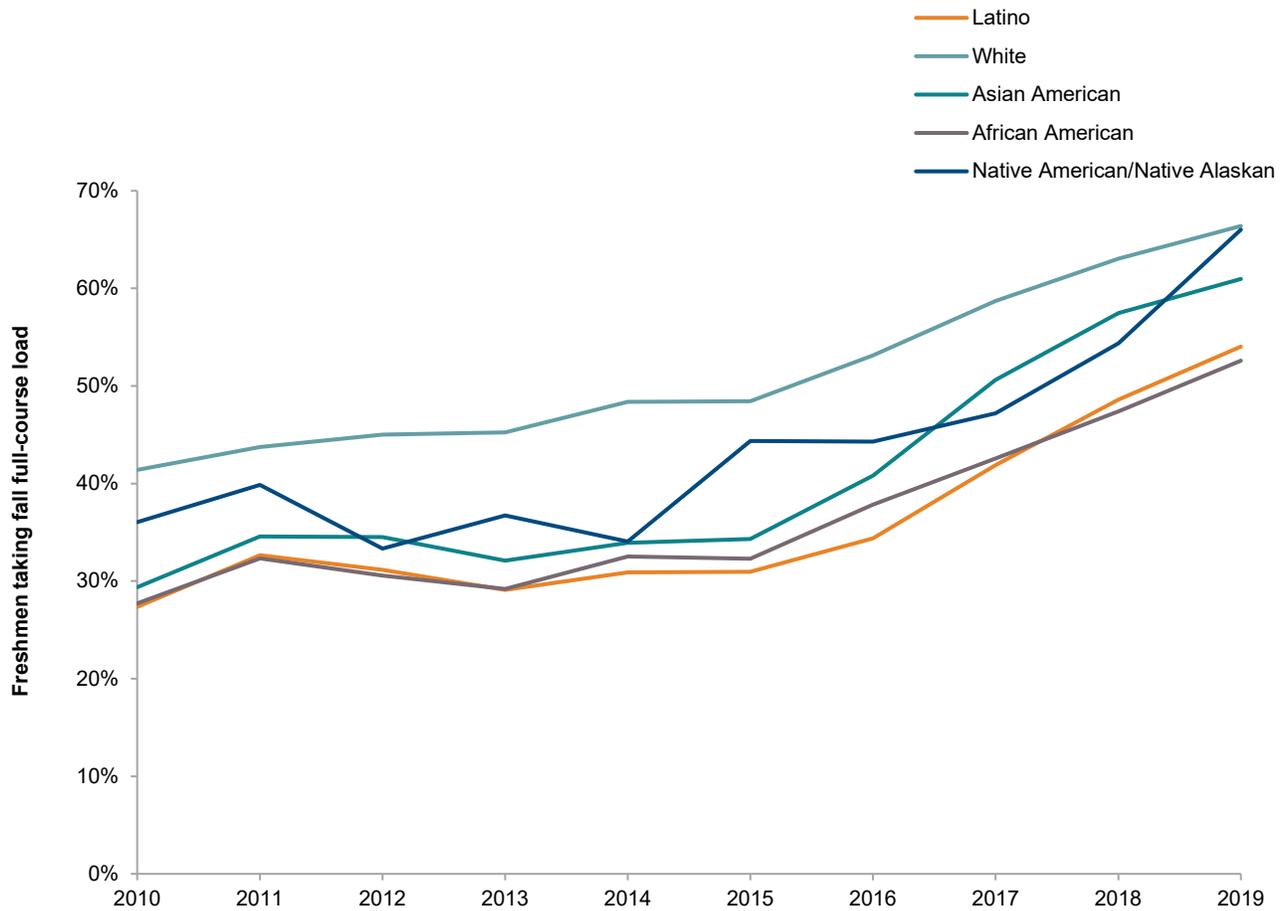
SOURCE: CSU Institutional Research and Analysis.

NOTES: Fall term unit loads. First-time freshmen make up about 20 percent of all undergraduates per fall term. Green bars represent increases and orange bars represent declines from 2015 to 2019. System average is striped.

The increases happened across all student groups, holding promise that graduation and on-time graduation will also increase for all students (Figure 13). However, even with the recent rise, important gaps remain with course-taking between groups. White students are still more likely (66%) than African American students (53%) and Latino students (54%) to take a full course load, although the gap between Asian American and white students has shrunk considerably.

FIGURE 13

Although course-taking increased for all students, many gaps remained between groups



SOURCE: CSU Institutional Research and Analysis.

NOTE: Fall term unit loads.

These long-standing differences in course-taking, along with the evidence that course-taking is about as effective for students from all racial groups, suggest that closing these opportunity gaps could close graduation gaps. There may be other reasons gaps in course-taking occur—for example, some students need to work while they are in school or take care of family members, and these needs may vary among students from different racial groups. For CSU to close these opportunity gaps, schools may need to explore targeted interventions that can assist students who are managing responsibilities beyond college.

Looking Forward

The number of units students take in their first term and first year strongly relates to later outcomes—especially on-time graduation—for all groups, even when accounting for demographic and academic characteristics. While the evidence is not causal, the evidence suggests that policies to support and encourage full course loads could increase the odds that students persist, graduate, and do so on time.

While the recent rise in course-taking indicates that more students than ever may be on track to on-time graduation, COVID-19 may complicate course delivery and availability. It is vital for colleges to continue efforts at promoting full course loads, despite the pandemic. We offer the following recommendations.

Incentivize Full Course Loads

Campuses are employing many strategies to motivate students to take full course loads, with tactics ranging from pledges to take 15 units per term to proactively pre-enrolling incoming freshmen in 15 units and letting them opt out if they like. Several campuses enjoyed dramatic gains with these approaches, a signal to other CSU campuses that more students can be enrolled in more courses.

Also, instead of relying solely on full course loads, summer terms can help students remain on-track to graduate in four years, even if they enroll in fewer units. Summer courses are generally less subsidized than courses during the school year, but recently Pell Grants have returned for summer enrollment and some campuses are providing summer grants to keep students on track.

Close Gaps in Course-taking

Gaps in who graduates within four years have grown between historically underrepresented students and their peers, even as more students in all groups are graduating on time. Some of the four-year gap may be explained by persistent gaps in course-taking by race and ethnicity, Pell status, and parent education.

The good news is that all students seem to benefit from full course loads, so closing course-taking gaps may effectively help close on-time graduation and graduation gaps. Plans like the California Promise Program that reward students for taking full-course loads by offering them priority registration times, however, could exacerbate gaps if they don't provide proper support for historically underrepresented students, who are less likely to initially enroll in full course loads. Campuses should determine what other interventions work well with heavier course loads to help support underrepresented students, first-generation students, and their peers.

Align Funding to On-time Completion

Students who opt for 15 units instead of 12 units do not pay higher fees. For colleges, however, costs are more complicated: they receive no more tuition revenue from a full course load, but must provide more courses. Many CSU campuses have used Graduation Initiative 2025 funding to hire new faculty and create new courses to meet student demand, increases that may not have been possible without additional funding from the state.

Supporting institutions as students enroll in more courses can make our institutions more efficient, reduce student costs in pursuing a degree, lower student debt, and increase the output of universities. The state could consider extra funding for campuses that enroll more students in 15 units, which could offset the revenue disadvantage for colleges. Students who work may also need extra financial help in order to take more courses during the school year or participate in summer courses if they are to complete their degrees on time.

Ensure COVID-19 Does Not Slow Student Progress

The switch to distance learning in spring 2020 was abrupt, forcing campuses to plan quickly to move instruction online. As institutions plan for this school year, they may encounter challenges offering all types of courses online, such as labs or courses with other experiential components. Colleges should ensure that students can register for enough classes that they need for their degrees, or the pandemic may end up slowing students and stunting the progress CSU has made in both course-taking and on-time graduation (Education Trust-West 2020).

In interviews, some campus leaders expressed optimism that the forced online courses have induced students and faculty to think differently about the possibility of online courses once we return to in-person courses. One area

that could be reconsidered is for colleges to continue to use asynchronous online courses to deliver the courses students need without the constraints of time or space (Cook and Malhotra 2020). This strategy may allow students with more difficult schedules to supplement their regular in-person coursework to make sure they take a full course load each term.

For California State University, encouraging more students to take on full course loads is one of many strategies aimed at improving student outcomes by 2025. In concert with efforts to increase course-taking, many schools are implementing campus-specific policies to help close graduation gaps and increase completion. Large system-wide changes, like the removal of remediation, are also making an early impact. It will be important to continue to monitor and research the progress made at CSU, as the results of approaches at different campuses can provide evidence toward strategies that help diverse student groups reach graduation on time.

REFERENCES

- Adelman, C. 2006. “The Toolbox Revisited: Paths to Degree Completion From High School Through College.” US Department of Education.
- Attewell, P.A. Heil, S., and Reisel, L. 2012. “What is Academic Momentum? And Does It Matter?” *Educational Evaluation and Policy Analysis*, 34 (1): 27–44.
- Attewell, P.A. and Monaghan, D. R. J. 2016. “How Many Credits Should an Undergraduate Take?” *Research in Higher Education*. 57: 682–713.
- Belfield, C., Jenkins, D. and Lahr, H. 2016. “Momentum: The Academic and Economic Value of a 15-Credit First-Semester Course Load for College Students in Tennessee.” Community College Research Center Working Paper No. 88.
- California State University. 2016. [CSU Undergraduate Outcomes Report](#).
- California State University. 2020. [Graduation Initiative 2025 Progress: Student Success Activities and Opportunities](#).
- California State University Office of the Chancellor. 2019. [What Is Impaction?](#)
- California Student Aid Commission. 2019. [Cal Grant Modernization: A Vision for the Future](#).
- California Student Aid Commission. 2020. [COVID-19 Student Survey](#).
- Cook, K. and Malhotra, R. 2020. [Expanding Enrollment Capacity at California State University](#). Public Policy Institute of California.
- Cuellar Mejia, M. and Johnson, H. 2019. [Higher Education in California: California’s Higher Education System](#). Public Policy Institute of California.
- Education Trust-West. 2020. [Coronavirus and Educational Equity: Supporting California’s College Students through the Pandemic](#).
- Jackson, J., Cook, K., and Johnson, J. 2019. [Higher Education in California: Improving College Completion](#). Public Policy Institute of California.
- Johnson, H. and Cuellar Mejia, M. 2020. [Higher Education and Economic Opportunity in California](#). Public Policy Institute of California.
- Legislative Analyst’s Office. 2017. [Assessing UC and CSU Enrollment and Capacity](#).
- Legislative Analyst’s Office. 2019. [Analyzing UC and CSU Cost Pressures](#).
- Moore, C., Shulock, N., and Offenstein J. 2009. [Steps to Success: Analyzing Milestone Achievement to Improve Community College Student Outcomes](#). Institute for Higher Education Leadership & Policy.
- National Center for Education Statistics. 2019. [Digest of Education Statistics](#).
- Rodriguez, O., Cuellar Mejia, M., and Johnson, H. 2019. [Higher Education in California: Increasing Equity and Diversity](#). Public Policy Institute of California
- Stolzenberg, E.B., Aragon, M. C., Romo, E., Crouch, V., McLennan, D., Eagan, K.M., and Kang, N. 2019. [The American Freshman: National Norms Fall 2019](#). Higher Education Research Institute, UCLA.
- The Institute for College Access & Success. 2020. [What College Costs for Low-Income Californians: 2020](#).

ABOUT THE AUTHOR

Jacob Jackson is a research fellow at the PPIC Higher Education Center. His research includes work on college costs, college readiness, community college participation, access to higher education, and college completion. Before joining PPIC, he was a postdoctoral scholar at the University of California, Davis, and a middle school and high school teacher in Sacramento, California, and Columbia, Missouri. He holds a PhD in education from the University of California, Davis, and a master's degree in education from the University of Missouri.

ACKNOWLEDGMENTS

The author would like to thank several people who assisted with this research. Stephanie Barton, Sarah Bohn, Kevin Cook, Su Jin Jez, Hans Johnson, Joel Schwartz, and Mary Severance provided helpful reviews and guidance. We also thank the Bill and Melinda Gates Foundation and the Sutton Family Fund for funding the work. We would like to acknowledge the work of the leadership and staff of our four partner campuses, which made this paper possible as well. All errors are the author's own.

Board of Directors

Steven A. Merksamer, Chair

Senior Partner
Nielsen Merksamer Parrinello
Gross & Leoni LLP

Mark Baldassare

President and CEO
Public Policy Institute of California

María Blanco

Executive Director
University of California
Immigrant Legal Services Center

Louise Henry Bryson

Chair Emerita, Board of Trustees
J. Paul Getty Trust

A. Marisa Chun

Partner
Crowell & Moring LLP

Chet Hewitt

President and CEO
Sierra Health Foundation

Phil Isenberg

Former Chair
Delta Stewardship Council

Mas Masumoto

Author and Farmer

Leon E. Panetta

Chairman
The Panetta Institute for Public Policy

Gerald L. Parsky

Chairman
Aurora Capital Group

Kim Polese

Chairman
ClearStreet, Inc.

Karen Skelton

Founder and President
Skelton Strategies

Helen Iris Torres

CEO
Hispanas Organized for Political Equality

Gaddi H. Vasquez

*Retired Senior Vice President,
Government Affairs*
Edison International
Southern California Edison



PPIC

PUBLIC POLICY
INSTITUTE OF CALIFORNIA

The Public Policy Institute of California is dedicated to informing and improving public policy in California through independent, objective, nonpartisan research.

Public Policy Institute of California
500 Washington Street, Suite 600
San Francisco, CA 94111
T: 415.291.4400
F: 415.291.4401
PPIC.ORG

PPIC Sacramento Center
Senator Office Building
1121 L Street, Suite 801
Sacramento, CA 95814
T: 916.440.1120
F: 916.440.1121