University of California Accountability Framework

As a public entity, the University is accountable to the people of California and must remain accountable to them for its actions, past and present, and for its future development. Accountability will be demonstrated:

- by the transparency of the decision-making processes that govern the University and its campuses, medical centers, and laboratories;
- by the manner in which key performance indicators are disclosed to and discussed with the broader public.



The Annual Accountability Report is produced by the Institutional Research and Academic Planning Unit at the University of California Office of the President. We gratefully acknowledge the assistance provided by numerous departments and individuals both at the Office of the President and at UC campuses.

universityofcalifornia.edu/accountability

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UC ACCOUNTABILITY REPORT

University of California For all of California

O UC Riverside

Teaching Research Public service

JMMAR

ECUTI

UC Davis

UC Merced

UC San Francisco OC Berkeley

UC Santa Cruz

The University of California began with the audacious idea that California should have a great public research university.

Today, UC has more than 2 million living alumni, having educated generations of Californians and being recognized as the State's upward mobility machine.

Through its research mission, UC has been a wellspring for many of the bold ideas that have helped make the Golden State what it is today.

UC is poised to help tackle the State's future challenges and keep California's economy and population strong.

UC Santa Barbara

UCLA

UC Irvine

UC San Diego

UC Accountability Report 2021 Executive Summary

As part of its transparency efforts, the University of California produces the UC Accountability Report to provide greater awareness of University operations. This report, along with the online UC Information Center (<u>ucal.us/infocenter</u>), allows the public to learn more about the University, and UC leadership to identify areas of strength and opportunities for improvement for the system and UC campuses.

The 2021 UC Accountability Report Executive Summary highlights accountability indicators relevant to goals associated with the University of California's multi-year plan: UC 2030. The UC 2030 plan is a collective effort of UC leadership — the President, Chancellors, and Board of Regents, in consultation with the Academic Senate — to help California cope with a serious shortfall in the number of college-educated people in the workforce and other struggles facing the state.

UC for California

For more than 150 years, UC has served California and its people. The University has educated generations of Californians who have gone on to support the state as civic leaders, educators, scientists, doctors, business owners, taxpayers, and engaged citizens. UC has also been a wellspring for many of the bold ideas that have helped make the Golden State what it is today. Propelled by advances in technology and education, the California economy flourished, and its population and urban centers boomed.

As California's premier research university, UC is poised to tackle the state's problems. UC research showed farmers how to remove salts from the alkali soils in the Central Valley, transforming barren land into one of the world's most productive farming regions. UC research uncovered how chemical pollutants called chlorofluorocarbons were depleting Earth's ozone layer, providing critical evidence that led to a ban on its use in aerosol spray cans. UC physicians and scientists helped transform a human immunodeficiency virus (HIV) diagnosis from the equivalent of a death sentence to a chronic but survivable condition and are now closing in on a cure.

Just last year, when a new virus began infecting people halfway around the globe, UC leaders marshalled expertise and resources from across the University to help both UC and public health authorities respond. In short order, UC helped identify some of the first COVID-19 cases in the U.S. from community spread, prepared UC's statewide network of hospitals to meet the expected surge in patients, and helped meet an urgent demand for diagnosis and testing. UC faculty, graduate and undergraduate students repurposed maker spaces to produce desperately needed hand sanitizer and volunteered to provide COVID-19 support for local communities.

At the same time, UC faculty converted classes for remote delivery, allowing students to continue their education through the pandemic. Advising and student support services transitioned from in-person to online. And UC, as the third-largest employer in the state, transitioned all but essential workers to work from home. The University stayed open for business, demonstrating the resilience of our institution and dedication of our employees.

As California emerges from the pandemic, the state will continue to face serious challenges resulting from or exacerbated by COVID-19. UC can help.

The University plays a critical role in bolstering California's economy, contributing significantly to the state's vibrancy and economic strength. A recent economic impact report — *The University of California: Systemwide economic, fiscal, and social impact analysis* — shows that investing in the University provides a strong return on that investment. Every \$1 of State funding helps generate or support over \$21 in economic impact, of which more than \$14 is value added. The map below shows that benefit is spread across California.



UC's systemwide impact on gross state product (value added) per capita

These funds are used to purchase local goods and services, contribute to state and local tax revenues, and support jobs. In fact, UC-related spending supports over half a million jobs in California — or one in every 45 jobs — with less than half of those being UC employees.

Solving California's Problems

The vast majority of support for UC research comes from the federal government. In 2019–20, UC's direct research expenditures were about \$5.1 billion. Of this, 47 percent came directly from federal agencies. A further seven percent represents federal flow-through funds that came to UC from the state, corporations, nonprofits, or other universities. So more than half of UC research expenditures are dollars coming from outside the state into California.

Federal funds support most of the research conducted at UC.





Source: UC Corporate Financial System. Direct amounts have been adjusted for inflation and do not include accrual funds for postemployment retirement benefits or indirect cost recovery funds.

UC research spans virtually every discipline, including hydrology, agriculture, and food security; climate change and energy sustainability; health care; manufacturing and industrial technology; transportation and urban infrastructure; and artificial intelligence. UC research has spurred forward every industry in which California is a world leader — including agriculture, biotechnology, computers, digital media, entertainment, environmental technologies, semiconductors, and telecommunications.

The pandemic has had a significant effect on UC research operations, with a significant proportion of faculty and other researchers unable to continue their work when campuses shifted to primarily remote operations. Two decades ago, UC accounted for 8.7 percent of research expenditures for all US universities. The share peaked at 9.7 percent around 2010, but now has declined back to 8.6 percent.

UC accounts for over eight percent of all research expenditures at all US universities.

9.1.4 Research expenditures US 4-year universities 2018–19

	Research expenditures	Percent of US total
UC Universitywide	\$5.4 B	8.6%
Other public universities	\$34.7 B	55.4%
Private universities	\$22.6 B	36.0%

Source: IPEDS. Excludes for-profit institutions, which conduct a negligible share of research. This figure is slightly different from UC's own figures due to differences in how IPEDS treats non-functional expenses.

Getting UC research activities back to full capacity is critical to maintaining the University's and California's competitive position and its ability to continue to attract dollars and talent into the state.

Not only is the University able to help the state address California's problems by providing the latest research-based findings, but UC researchers disseminate much of the knowledge they create through free, open-access publications. The University feels so strongly about open access (OA) that it ended a partnership with publishing giant Elsevier until there could be an agreement about providing open access to UC research. UC continues to push out research findings through its own OA publishing platform and repository managed by the California Digital Library. Since 2002, UC-sponsored research in eScholarship has been viewed and/or downloaded almost 90 million times by readers around the world. The repository contains over 300,000 individual items, including many articles, research reports, working papers, and the 80-plus OA journals that are published on the platform. As seen on the following map, these materials are being accessed worldwide.

UC's Open Access policies continue to add to a growing body of freely available research publications in eScholarship, UC's open-access repository and publishing platform, expanding the global reach of UC's research findings.

9.2.1 eScholarship views and downloads of UC scholarly materials Universitywide Through April 2021



Source: California Digital Library

Uplifting California's Population

California's greatest strength has been — and continues to be — its human capital, including the new generation of public K–12 students, a majority of whom come to UC from low-income, underrepresented backgrounds and are among the first in their families to attend college. The pandemic has likely exacerbated the historic inequities facing many of these students.

As California has grown, so has the University — expanding enrollment and opening campuses with locations across the state, most recently in the Central Valley.



Undergraduate and graduate enrollment, with campus opening dates

The public value of a UC degree can be seen through the University's role in meeting critical workforce needs, educating engaged citizens, and advancing economic mobility. Compared to other public and private research universities, a significant portion of UC undergraduates are low-income students who qualify for federal Pell Grants, and are the first in their family to go to college. Within five years of graduation, the majority of UC Pell Grant recipients earn more than their families did, and the same is true for first generation college students seven years after they graduate. These findings demonstrate that a UC degree can help the state address issues of income inequality.

The University is focused on advancing equity, and ensuring that UC's undergraduate, graduate, and faculty populations better reflect California's diversity. UC's 2030 multi-year framework looks to expand the pathway to the professoriate, starting with improving undergraduate outcomes for Pell Grant recipients and first-generation and underrepresented students, as well as increasing diversity for UC's faculty and its graduate academic and professional student populations. The UC 2030 goals seek to revitalize UC as a leading source of social mobility, research, and innovation.



UC 2030 goals seek to diversify the pathway from UC undergraduate students to the professoriate with a goal of better reflecting California

7.3.1 Racial/ethnic distribution of students and faculty, domestic population only, Universitywide Selected years, fall 2007 to 2019



Source: UC Information Center Data Warehouse; Corporate Personnel System

UC 2030: Advancing the California Dream

In 2019, The University of California established its multi-year framework — UC 2030 — with a threepoint plan on how the University would strengthen California over the coming decade by:

- producing over 200,000 additional degrees, on top of the one million undergraduate and graduate degrees currently projected;
- achieving a 90 percent graduation rate and eliminating gaps for timely graduation and graduate degree attainment for Pell, first-generation, and underrepresented groups;

• investing in the next generation of faculty and research by adding 1,100 ladder-rank faculty over the next four years.

At the end of this Executive Summary is a dashboard displaying UC 2030 systemwide goals; listed below are relevant UC Accountability Report indicators, which set the baseline and highlight existing challenges and opportunities to achieve these goals.

Goal 1: Producing 200,000 more undergraduate and graduate degrees by 2030

The Public Policy Institute of California (PPIC) estimates that California will face a shortfall of 1.1 million workers with at least a bachelor's degree between 2014 and 2030, in large part due to Baby Boomers leaving the workforce. The University of California has set a goal to add 200,000 degrees over the one million currently projected — or 1.2 million undergraduate and graduate degrees. To date, UC has produced over 376,000 undergraduate and graduate degrees, or just over 31 percent of the 1.2 million total.



	Undergra 280,4	iduate 23	Grad 95,635	376,058	as of 2019-	20		Degrees re	emaining: 82	23,942	Goal: 1.2 mil	lion 🗸
0.0M	0.1M	0.2M	0.3M	0.4M	0.5M	0.6M	0.7M	0.8M	0.9M	1.0M	1.1M	1.2M

At the undergraduate level, much of this improvement will be made by increasing timely graduation, with all campuses proposing improvements that will yield a systemwide goal of increasing four-year freshman graduation rates by eight points, from 68 percent to 76 percent, and two-year transfer graduation rates by 13 points, from 57 percent to 70 percent.

UC four-year freshman and two-year transfer graduation rates gained over 1.5 points.



3.1.1 Freshman graduation rates UC and comparison institutions

Cohorts entering fall 2014, 2015, and 2016; fall 2013 cohort for AAU comparison

Source: IPEDS and UC Information Center Data Warehouse



3.1.3 Transfer graduation rates Universitywide and UC campuses Cohorts entering fall 2016, 2017, and 2018

Source: UC Information Center Data Warehouse

When campuses shifted to remote instruction, undergraduates took higher course loads in both spring and fall 2020. There was also a significant increase in students enrolling in the summer. As a result, there was an increase in graduation rates, particularly four-year freshman and two-transfer graduation rates, systemwide and on most campuses. Course loads are now starting to return to pre-remote instruction levels, so it is unclear if this will be a one-year uptick or if graduation rates will continue to increase. *If trends continue, UC is cautiously optimistic that it is on track to meet undergraduate degree attainment goals.*

Of the additional 200,000 degrees UC will produce, over 40,000 will be graduate degrees, and this growth will primarily be achieved through increased graduate enrollment across the system. **UC has not** *received State funding to increase graduate enrollment in many years and is at risk of not meeting graduate degree attainment goals absent a restoration of State support for graduate enrollment growth.*

Graduate enrollment growth would increase mentorship and teaching assistant support for undergraduates, and expand research capacity across UC campuses. For academic doctoral students, more than half remain in California after receiving their doctorates. The majority work in higher education — 25 percent of UC faculty and 20 percent of California State University faculty have a UC Ph.D. — and these graduate students become part of the future professoriate.

UC's professional degrees include professional master's and professional practice degrees in fields such as law, medicine, nursing, public health, business, education, architecture, public policy, and the arts.

Half of UC academic doctoral and master's graduates who stay in California work in higher education.





Source: California Employment Development Department and UC Corporate Student System

UC's graduate academic and professional degree recipients both contribute significantly to the state's high-skilled and high-tech industries, as seen in the Google and Kaiser Permanente examples presented below. LinkedIn data show that UC Ph.D. students are serving in research and analysis, along with engineering and technical positions. It also shows UC MBA, MD, and JD degree recipients serving in vital positions at these companies, including President or Vice President, medical doctor, and attorney positions.



UC graduate degree recipients employed by Google and Kaiser Permanente



Source: LinkedIn and UC Information Center Data Warehouse

Goal 2: Ensuring the California Dream is for everyone

The emphasis of this goal is two-fold: ensuring that nine out of ten freshman and transfer entrants leave UC with a degree, and eliminating timely graduation gaps for Pell grant recipients and first-generation and underrepresented students.





Over the last 15 years, UC graduation rates have improved, particularly four-year freshman and twoyear transfer rates. However, UC has been unable to close gaps in timely graduation for Pell, firstgeneration, and underrepresented groups, particularly for freshman entrants. UC is seeking to eliminate double-digit gaps in timely graduation rates for Pell, first-generation, and underrepresented students.

UC's gap in timely graduation for Pell and non-Pell recipients remained flat for freshmen and decreased two and half points for transfers.

4 year

📕 3 year

2 year

Pell

Non-Pell

2018

3.1.6 Freshman graduation rates by Pell Grant recipient status, Universitywide Cohorts entering fall 2014, 2015, and 2016

100%

80%

60%

40%

20%

0%

Pell

Non-Pell

2016





Source: UC Information Center Data Warehouse

UC's gap in four-year graduation rates decreased by over one point for underrepresented students compared to Asian and White peers, though the gap is still around 15 points.



3.1.4 Freshman graduation rate by race/ethnicity Cohorts entering fall 2014, 2015, and 2016

Pell

Non-Pell

2017

Source: UC Information Center Data Warehouse

UC campuses have identified ways to achieve these ambitious goals, including increasing summer orientation programs (e.g., summer bridge/transfer edge), expanding living-learning communities, combining curricular and co-curricular advising, and redesigning gateway courses to eliminate equity gaps. *While timely graduation rates are improving, UC is at risk of not being able to eliminate equity gaps by 2030.*

Goal 3: Investing in the next generation of faculty and research

While much of the funding that supports UC research activity comes from the federal government, a primary way California supports UC research activity is through State support for worldleading faculty. Campuses estimated the growth in faculty appointments that would be necessary to achieve the goals of the multi-year framework. Based on that input, the University set a goal in 2018 to add 1,100 net new faculty by 2022. Between fall 2018 and fall 2020, UC added around 375 faculty (a 3.6 percent increase).

To reach the faculty hiring goal by fall 2022, UC would need to add an additional 722 faculty between 2020 and 2022, which is nearly double the amount of growth over the prior two years. UC campuses have drastically scaled back their faculty recruiting due Goal #3:

Add 1,100 ladder-rank non-recall faculty over 4 years: Universitywide headcount







to the economic uncertainty caused by the COVID-19 pandemic. UC may also see an increase in retirements. *For these reasons, UC is not on pace to meet this faculty hiring goal.*

Faculty growth is critical for UC campuses to achieve UC 2030 goals, including increasing faculty diversity. UC's recent hires are more diverse than existing faculty. In many cases, they meet or exceed national availability pools (5.3.1). UC is looking at further opportunities to diversify the professoriate, including opportunities to grow and expand the diversity of UC Ph.D. students through ongoing partnerships with UC undergraduate programs, along with CSU, other Hispanic Serving Institutions, Historically Black Colleges and Universities, and Tribal Colleges and Universities. Increasing the number and graduating more UC Ph.D. students would create a larger, more diverse availability pool that UC, CSU, and California Community Colleges could tap. With current demographic trends, UC has a generational opportunity to diversify the professoriate if it can do more than just replace the faculty, but grow it. Growing it, inclusively, will also help graduation rate and equity goals.

UC's hiring of African American, Hispanic/Latinx and women faculty generally meets or exceeds the national availability of doctorates, with variation among discipline groups.



5.3.1 African American new assistant professors compared with national availability by discipline group

5.3.2 Hispanic/Latinx new assistant professors compared with national availability by discipline group







Source: Survey of Earned Doctorates and UC Academic Personnel and Programs

Achieving UC 2030 Goals Will Require Sustained State Investment

The University of California requested permanent funding of \$60 million for each of the first four years of this initiative, starting in 2019, resulting in a \$240 million investment. This funding proposal represented what campuses needed to meet UC's 2030 goals. It was similar to, but lower-cost than, the request CSU made and has received from the State for its Graduation Initiative 2025.

State funding is a critical component to success. UC requested an additional \$60 million in permanent annual funding starting in 2019 to support this multi-year plan. As of June 2021, no funding has been received.

UC's funding request from the state:



In his January 2019 budget introduction, California Gov. Gavin Newsom proposed \$49.9 million to improve degree attainment and student success, suggesting a significant down payment on UC's multi-year plan. However, the State Legislature shifted the UC funds to one-time undergraduate enrollment growth.

While this additional funding has helped increase degree attainment, it hasn't provided permanent and necessary support for the programs and strategies that would eliminate equity gaps. Without targeted investment, it is likely that UC will improve graduation rates but will be unable to close achievement gaps that disproportionately affect low income, first-generation students. State support for UC 2030 goals would institutionalize these critical efforts to help these students graduate in a timely manner, reducing their cost of education and increasing the likelihood that they would go on to graduate school. These same students were also more likely to face academic challenges related to remote instruction, making this investment in UC's new and future freshman and transfer entrants more critical than ever.

In addition, the investment in graduate enrollment growth will expand opportunities for students to go onto graduate programs, including doctoral programs. Without this investment, not only will UC be less likely to meet UC 2030 graduate degree attainment goals, California will miss a generational opportunity to diversify professions that require a graduate degree, including the future professoriate for UC, CSU, and CCC.

Finally, UC needs to ramp up research operations to remain competitive with other research universities that remained open during COVID-19. The recent economic impact report demonstrates that funding faculty positions and new graduate enrollment will result in UC being able to attract more dollars and talent into the state. At the same time, this funding will help UC further diversify its faculty population, recognizing that UC hires are more diverse than existing faculty.

To date, UC has not received any State support to advance UC 2030 goals and without it, the University is unlikely to achieve the UC 2030 goals.

UC 2030 dashboard

This dashboard highlights key goals of the UC 2030 framework.

UC has goals to (1) produce 200,000 more undergraduate and graduate degrees on top of the 1 million already projected for a total of 1.2 million degrees; (2) achieve a 90 percent overall graduation rate and close graduation gaps for Pell, first-generation and underrepresented groups; and (3) invest in faculty and research by adding 1,100 ladder rank faculty over the next four years.

Select campus Universitywide

Goal #1: Award 1.2 million degrees between 2015-16 and 2029-30

	Undergradu 280,423	uate 3	Grad 95,635	376,058 as of 2019-20			Degrees remaining: 823,942		Goal: 1.2 million			
0.0M	0.1M	0.2M	0.3M	0.4M	0.5M	0.6M	0.7M	0.8M	0.9M	1.0M	1.1M	1.2M

Goal #2:

Increase freshman and transfer graduation rates Clo



Close graduation rate gaps by 2030



Goal #3:

Add 1,100 ladder-rank non-recall faculty over 4 years: Universitywide headcount



Diversify faculty, implement best hiring and retention practices

Ladder-rank non-recall diversity (Universitywide)

		2020	
Hispanic	Dom	5.4%	
	Int	2.5%	
Afr Am	Dom	3.0%	
	Int	0.5%	
Am Ind	Dom	0.5%	
	Int	0.0%	
Nat Haw/Pac	Dom	0.1%	
Isl	Int		
Asian	Dom	9.6%	
	Int	9.3%	
White	Dom		49.8%
	Int	13.5%	
Two or more	Dom	1.0%	
	Int	0.2%	
Unknown	Dom	2.6%	
	Int	2.1%	

State funding is a critical component to success. UC requested an additional \$60 million in permanent annual funding starting in 2019 to support this multiyear plan. As of April 2021, no funding has been received.

	\$60M	\$120M	\$180M	\$240M	\$240M	\$240M
2018	2019	2020	2021	2022	2023	2024

Dashboard Notes and Data Sources

Degrees Awarded include the leading summer and the full academic year. <u>universityofcalifornia.edu/infocenter/degrees-awarded-data</u>

Graduation rates are based on entering cohorts but labeled by the exit academic year, which is a leading year. For example, the six-year graduation rate for 2019 in the graph reflects students who entered in fall 2014 and graduated in the 2019–20 year (including the trailing summer). universityofcalifornia.edu/infocenter/ug-outcomes

Ladder-rank non-recall faculty are October payroll snapshot headcounts. universityofcalifornia.edu/infocenter/uc-employee-headcount

The Accountability Report website: accountability.universityofcalifornia.edu

The UC Information Center: universityofcalifornia.edu/infocenter

UNDERGRADUATE STUDENTS ADMISSIONS AND ENROLLMENT



CHAPTER ONE

UNDERGRADUATE STUDENTS — ADMISSIONS AND ENROLLMENT

Goals

One of the University of California's highest priorities is to ensure that a UC education remains accessible to all Californians who meet its admissions standards. This goal is articulated in California's Master Plan for Higher Education, which calls for UC to admit all eligible freshmen and transfers, with freshman eligibility designed to capture the top 12.5 percent of California public high school graduates. It also calls for UC to admit all eligible transfer students from California Community Colleges (CCCs) who apply.

Of the over 215,000 applications for admission in fall 2020, about 172,000 students applied as freshmen and 43,000 as transfers. Campus admission decisions are based on a comprehensive review of qualifications and establish the incoming California resident class size based on State funding. Over the last five years, UC's total undergraduate enrollment of California residents increased by more than 18,000: 1,500 in fall 2020, 2,500 in fall 2019, 3,000 in fall 2018, 4,000 in fall 2017, and 7,000 in fall 2016.

For 2020–21, UC is also estimated to have achieved its enrollment capacity goal of enrolling a 2:1 systemwide ratio of freshman to transfer California resident undergraduates, excluding Merced, for the fourth year in a row. The UC Transfer Pathways program supports this goal by helping community college students prepare for transfer admission to the most popular majors at UC campuses. Under a new agreement with the California Community Colleges, UC has created a Transfer Guarantee program, Pathways+, for community college students who meet certain criteria. This campus and major guarantee accompanies and is complimentary to UC's systemwide transfer guarantee program. The first cohort for the Pathways+ program is expected to enroll in fall 2021.

Admissions — freshmen

UC utilizes a comprehensive review process to make admission decisions, considering not only completion of rigorous college preparatory courses and high school GPA, but also talents, special projects, accomplishments in light of life experiences and circumstances, extracurricular activities, and community service.

The rapid growth in freshman applications to UC over the past two decades demonstrates the increased demand for a college education, the growth of California's population, and UC's continued popularity. UC continues to reach its Master Plan goals by guaranteeing admission to California resident applicants who are either in the top nine percent of high school graduates statewide or the top nine percent of graduates from their own high schools. Qualified freshman applicants are offered an opportunity to be admitted to another UC campus if they do not receive an offer of admission from the UC campuses where they applied.

Admissions — transfers

Almost all transfer students enter UC as upper-division juniors. Campus enrollment targets are based on State funding as well as capacity in major programs at the upper-division level.

UC's Transfer Pathways identify a common set of lower-division courses for each of 20 of the most popular majors among transfer applicants. The Transfer Pathways present a clear roadmap for prospective transfers to prepare for their majors and be well positioned to graduate in a timely fashion from any UC campus. In fall 2020, the third year of the Transfer Pathways, those indicating Pathway-based preparation represented 50 percent of all CCC admits and 51 percent of all CCC enrollees. Many of these students also participated in other preparatory programs such as Transfer Admissions Guaranteed (TAG) and Intersegmental General Education Transfer Curriculum (IGETC).

Fransfer Pathways Majors							
Anthropology	Computer Science	Molecular Biology					
Biochemistry	Economics	Philosophy					
Biology	Electrical Engineering	Physics					
Business Administration	English	Political Science					
Cell Biology	History	Psychology					
Chemistry	Mathematics	Sociology					
Communication	Mechanical Engineering						

In April 2018, UC signed an agreement with the California Community Colleges (CCCs) to guarantee a place within the UC system to students who complete one of the Transfer Pathways and achieve the requisite grade point average (GPA). The new Pathways+ program launched in August 2019.

Enrollments

The University enrolled over 226,000 undergraduates in fall 2020. The University enrolls freshman and transfer students from almost every county of California. UC's Eligibility in the Local Context (ELC) policy is designed to increase the overall geographic diversity of freshman entrants.

Undergraduate Enrollment, Fall 2020	
New Freshmen	46,716
New Transfers/Other ¹	21,960
Continuing Students	157,773
TOTAL	226,449

Source: UC Data Warehouse

As academic qualifications have improved over the last decade, UC has maintained access for populations historically underserved by higher education. In fall 2020, 34 percent of new undergraduates received Pell Grants, a marker for low-income status. About 41 percent of UC's entering students are first-generation, meaning neither parent graduated from a four-year college. These students are more likely to be from an underrepresented group (URG, African American, Hispanic/Latinx and Native American/Alaska Native students), to have a first language other than English, to enter as a transfer student, to be female, and/or to have a lower income than students with at least one parent who graduated from a four-year college (1.2.1).

The share of all undergraduates who are nonresident domestic and international students has increased in recent years, though their proportion is still much lower than at comparable public research universities. In 2019–20, the share of new undergraduates paying nonresident tuition went down slightly while the share of all undergraduates paying nonresident tuition went down slightly while the share of all undergraduates paying nonresident tuition went down slightly while the share of all undergraduates paying nonresident tuition went up slightly (1.4.4). In May 2017, UC adopted a policy² affirming that nonresident undergraduates "will continue to be enrolled in addition to, rather than in place of, funded California undergraduates at each campus." The policy also capped nonresident enrollment at 18 percent for five UC campuses (Davis, Merced, Riverside, Santa Barbara, and Santa Cruz) and, for the remaining four campuses (Berkeley, Irvine, Los Angeles, and San Diego), at the proportion each campus enrolled in 2017–18. The policy went into effect for the 2018–19 academic year.

Having California students learn and live alongside students from backgrounds and cultures different from their own is part of a world-class educational experience. California students also benefit from the extra tuition paid by nonresident undergraduates, which is about \$30,000 more per year than the amount paid by residents. That

¹ Other types of new students include those enrolling for a second baccalaureate or with limited status (not seeking a bachelor's degree).

² Regents Policy 2109: Policy on Nonresident Student Enrollment: regents.universityofcalifornia.edu/governance/policies/2109.html.

tuition helps to fund faculty hires, instructional technology, student advising, and other services that directly benefit California students.

Admissions and enrollment trends

Freshman applicants have gone up from 68,000 to 172,000 over the past two decades, averaging four percent growth per year. In fall 2020, the number of applicants decreased two percent compared to the previous year, while the number of students admitted went up ten percent and the number of enrollees went up two percent (1.1.1). While the fall 2020 incoming cohort applied to UC before the COVID-19 pandemic, they made choices about whether and where to attend college during the start of the pandemic, and entered UC during a time of distance learning. Application numbers are about the same as the year before but admitted students were deciding to come to UC at a lower rate, leading campuses to admit a higher proportion of applicants in order to meet enrollment goals.

Fall transfer applicants nearly doubled over the last 20 years, with average annual growth of four percent. In fall 2020, transfer applicants and admits both increased by five percent compared to the previous year, while enrollees went up eight percent (1.1.2).

The Master Plan specifies that the University maintain a 60:40 ratio of upper-division to lower-division students, which corresponds to a 2:1 ratio of new California resident freshmen to new California resident transfers. UC has moved from 2.3:1 in 2016–17, to an estimated 1.9:1 in 2020–21 (Universitywide). The Universitywide ratio excluding Merced is also estimated to be 1.9:1 for 2020–21, achieving the systemwide goal for this metric for a fourth year. The University continues to work toward achieving this ratio for each campus (except Merced) (1.1.3). Overall undergraduate enrollment (new and continuing students) continued to grow in fall 2020. Total enrollment was over 226,000 in fall 2020, up less than half a percent from the year before. This includes an increase in California residents of over 1,500, following increases of over 7,000 in fall 2016, over 4,000 in fall 2017, over 3,000 in fall 2018, and over 2,500 in fall 2019 (1.1.4).

Academic preparation

Freshmen entering UC are increasingly well prepared, as shown by changes in the number of college preparatory courses and high school GPA over time (1.3.1). Transfer students are also increasingly well prepared, as measured by college GPA over time (1.3.2).

Geographic origins and nonresidents

UC has a lower proportion of out-of-state undergraduates than other public AAU universities. In fall 2020, only 17.2 percent of UC's enrollees were out-of-state or international, compared with 30.5 percent for other AAU public institutions (1.4.1).

About 36 percent of freshmen and 49 percent of transfer students entering UC campuses come from within 50 miles of campus. These numbers are relatively stable and have risen only slightly over the past few years (1.4.2, 1.4.3).

The percentage of all undergraduates paying nonresident tuition and the percentage of new undergraduate students paying nonresident tuition went up slightly in 2019–20 (1.4.4).

Looking ahead

The University of California Board of Regents at its May 2020 meeting unanimously approved the suspension of the standardized test requirement for all California freshman applicants until fall 2024, providing time for the University to create a new test that better aligns with A–G curricular standards. However, if a new test does not

meet specified criteria in time for fall 2025 admission, UC will eliminate the standardized testing requirement for California students.

Enrollment of new freshman and transfer students has been fairly steady for the last few years, but will need to grow for UC to meet its goal of awarding an additional 200,000 degrees (for a total of 1.2 million) by 2030. State funding is crucial for reaching this goal. UC also continues to work to close equity gaps. In 2020, 61 percent of California public high school graduates were from underrepresented groups (URGs) while 38 percent of new freshman enrollees at UC were from these groups, for a 23-percentage point gap.

For more information

Information on admissions: admission.universityofcalifornia.edu

Data on UC admissions:

universityofcalifornia.edu/infocenter/admissions-residency-and-ethnicity universityofcalifornia.edu/infocenter/freshman-admissions-summary universityofcalifornia.edu/infocenter/transfer-admissions-summary universityofcalifornia.edu/infocenter/admissions-source-school universityofcalifornia.edu/infocenter/transfers-major

Data on UC fall enrollment: universityofcalifornia.edu/infocenter/fall-enrollment-headcounts

Demand for UC admission from freshman applicants remains high.

1.1.1 Freshman applicants, admits, and enrollees Universitywide and UC campuses Fall 1994 to 2020





Source: UC Data Warehouse¹

Although unduplicated freshman applicants went down by two percent in 2020 compared to 2019, they remained above the levels for all years prior to 2018. From 2011 to 2018, applicants increased 71 percent (or about eight percent per year), from about 106,000 to about 182,000, compared to a 42 percent increase in the seven-year period between 2004 and 2011 (or about five percent per year), from about 75,000 to 106,000. The 71 percent growth represents about 76,000 applicants, including about 35,000 California residents. Most campuses admit less than half of freshman applicants. Many applicants apply to more than one UC campus; in fall 2020, UC applicants applied to an average of 3.9 campuses. Freshman applications increased at Berkeley, Irvine, Merced, and San Diego, and decreased for all other campuses in fall 2020. For data tables on UC freshman applicants, admits, and enrollees by campus over time, see: universityofcalifornia.edu/infocenter/admissionsresidency-and-ethnicity.

¹ Admits and enrollees here include applicants guaranteed admission who are not offered admission at a campus to which they applied but who are referred to and admitted by another campus. Some campuses admit fall applicants for a subsequent term (winter or spring). These "rollover" admits and enrollees are excluded in this indicator. Students who apply to multiple UC campuses are counted only once in the Universitywide indicator. A change in accounting for referral students is responsible for the apparent drop in 2011 admits. Beginning that year, UC Merced admitted only students who indicated interest in a referral offer, rather than every student who qualified for an offer.

Transfer applicants, admits, and enrollees are higher than ever.

1.1.2 Transfer applicants, admits, and enrollees Universitywide and UC campuses Fall 1994 to 2020





Source: UC Data Warehouse¹

Transfer applications and admits increased by five percent, and enrollees increased by eight percent in fall 2020. Over 43,000 transfer students applied, over 30,000 were admitted, and almost 22,000 enrolled in fall 2020. Consistent with UC's commitment to transfer students from California Community Colleges (CCCs), fall enrollment of new CCC California resident transfers has more than doubled since 1994, from 8,400 to 18,100. The average transfer applicant applies to 3.7 UC campuses, compared to 3.9 for the average freshman applicant.

For data tables on UC transfer applicants, admits, and enrollees by campus see: universityofcalifornia.edu/infocenter/admissionsresidency-and-ethnicity.

¹ Admits and enrollees here include the referral pool. Some campuses admit fall applicants for a subsequent term (winter or spring). These "rollover" admits and enrollees are excluded in the graphs here, which only show fall data.

UC has met the systemwide goal of a 2:1 ratio of California resident freshmen to transfer students and is on track to meet the goal at all campuses.





* The actual figures for 2020–21 are not yet available and may differ from the estimated figures shown here. Source: UC Data Warehouse and UC campuses¹

The California Master Plan calls for UC to accommodate all qualified resident California Community College (CCC) transfer students. It specifies that the University maintain at least a 60:40 ratio of upper-division (junior and senior) to lowerdivision (freshman and sophomore) students to ensure adequate upper-division spaces for CCC transfers. To do so, UC aims to enroll one new California resident transfer student for every two new California resident freshmen, or 67 percent new resident freshmen to 33 percent new resident transfer students.² UC has moved from 2.3:1 in 2016–17 to an estimated 1.9 in 2020–21 (Universitywide). Excluding Merced, the ratio for 2020–21 is also estimated to be 1.9:1, meeting the systemwide goal four years in a row.³ San Diego met it in 2019–20 and Riverside was estimated to meet it in 2020–21. Santa Cruz met the goal in 2018–19 and 2019–20, but in 2020–21 did not meet the goal primarily due to an unusually large freshman class.

2020–21*	% New CA resident freshmen	% New CA resident transfers	Ratio of new CA freshmen to new CA transfers
Berkeley	66%	34%	1.9
Davis	63%	37%	1.7
Irvine	67%	33%	2.0
Los Angeles	60%	40%	1.5
Merced	89%	11%	8.1
Riverside	66%	34%	2.0
San Diego	65%	35%	1.8
Santa Barbara	64%	36%	1.8
Santa Cruz	70%	30%	2.3
Universitywide, all campuses	66%	34%	1.9
Universitywide, excl. Merced	65%	35%	1.9

¹ Full year headcount enrollment.

² Nearly all (96 percent) of California resident transfer students in 2019–20 came from CCCs.

³ Merced is excluded from the 2:1 ratio goal that was part of the Budget Framework agreement with the State of California.

UC's fall undergraduate headcount grew slightly between fall 2019 and fall 2020, including over 1,500 additional California residents.



1.1.4 Undergraduate headcount enrollment Universitywide and UC campuses Fall 2008 to 2020

Source: UC Data Warehouse

The University and the state share the goal of expanding access to a UC education. The University enrolled over 1,500 additional California residents in fall 2020 compared to fall 2019, following increases of 2,500, 3,000, 4,000 and 7,000 in the four prior years, for a total of over 18,500 over five years.

1.2 DEMOGRAPHIC OUTCOMES

UC's entering first-generation students are more likely to be from an underrepresented group (URG), to enter as transfer students, and/or to be Pell Grant recipients.

1.2.1 Entering students by first generation status, race/ethnicity, first language spoken at home, entry level, Pell Grant status, and gender Universitywide

Fall 2020



A little over half (50 percent) of entering firstgeneration students in fall 2020 are from URGs, compared to 16 percent of not-first-generation students. Almost two-fifths (39 percent) of firstgeneration students' first language was not English, versus 30 percent for others. Over one-third (37 percent) of first-generation students entered as transfers, versus 27 percent for others. Three-fifths (60 percent) of first-generation students are lowerincome Pell Grant recipients, versus 16 percent for others. And nearly three-fifths (58 percent) of firstgeneration students are female, compared to just over half (52 percent) of others.

¹ First-generation students are those whose parent(s) did not complete a four-year college degree. Total of first-generation students is 27,846 (40.5 percent); not-first-generation students total 38,865 (56.6 percent); and missing/unknown are 1,965 (2.9 percent). Those with unknown first-generation status are excluded from this indicator. Pell Grant receipt is used as a proxy for low-income status. Less than .02 percent of entering students have an unknown first language. Gender is unknown for one percent of students and non-binary students make up less than 0.1 percent of the total.

1.3 PREPARATION OUTCOMES

Freshmen entering UC are increasingly well prepared.

1.3.1 A–G (college preparatory)¹ courses and weighted, capped high school grade point average (GPA)² of entering freshmen, as share of class
Universitywide
Fall 2008 to Fall 2020

Yearlong A-G courses



High school weighted, capped GPA



Source: UC Application Processing data (A-G courses) and UC Data Warehouse (GPA)

The academic indicators of UC's entering freshmen have improved over time, as reflected by an increase in the share of students completing 25 or more college-preparatory courses and having a 3.8 or higher high school GPA. Despite slight downturns in 2020, from 2008 to 2020, the first indicator went up from 33 percent to 48 percent, while the second went up from 54 percent to 76 percent.

¹ A-G courses refer to those high school courses that UC has reviewed and approved as college preparatory. The minimum number of required A-G courses is 15.

² Weighted, capped GPA means that students may receive a maximum of eight semesters of honors credit. More information is available at admission.universityofcalifornia.edu/freshman/california-residents/admissions-index/index.html.

1.3 PREPARATION OUTCOMES

UC transfer students in fall 2020 were better prepared academically than their counterparts a decade ago, as measured by their grades.



1.3.2 College grade point average (GPA)¹ of entering transfer students, as share of class Fall 2008 to Fall 2020 Universitywide

Source: UC Data Warehouse and UC Corporate Student System

The academic qualifications of transfer students entering UC have improved over time, as reflected by an increase in the share of students having a 3.6 or higher college GPA, from 37 percent in fall 2008 to 49 percent in fall 2020.

¹ The transfer GPA is based on grades for college-level academic courses from the college(s) where students were previously enrolled.

UC has a substantially lower proportion of out-of-state undergraduates than other AAU universities. In fall 2020, only 17.2 percent of UC's enrollees were out-of-state or international, compared with 30.5 percent for other AAU Public institutions.



1.4.1 Residency of undergraduate students Universitywide and comparison institutions Fall 2020

Source: UC Data Warehouse (UC numbers) and Common Data Set (comparator numbers) * UC's four comparison public institutions. **AAU public average excludes UC; also excludes University of Missouri Columbia, University of Florida, and Rutgers New Brunswick because data not available.

UC's priority is to enroll California residents. Campuses enroll nonresident students based on available physical and instructional capacity and the campus' ability to attract qualified nonresident students.

Nonresidents provide geographic and cultural diversity to the student body. They also pay the full cost of their education. In 2019–20, systemwide tuition and fees for a nonresident undergraduate were \$42,324, compared to \$12,570 for California resident students.

Nonresident applicants must meet higher criteria to be considered for admission. The minimum high school GPA for nonresident freshmen is 3.4, compared to 3.0 for California freshmen. The minimum college GPA for nonresident transfer students is 2.8, compared to 2.4 for California residents.
1.4 GEOGRAPHIC ORIGINS AND NONRESIDENTS

UC campuses attract freshmen from nearby regions and the major urban areas of California, with a systemwide local attendance rate of 36 percent.

1.4.2 Percentage of new CA resident freshman enrollees whose home is within a 50-mile radius of their campus UC campuses¹ Fall 2020

Berkeley Davis Irvine Fall 2020: Fall 2020: Fall 2020: **38%** Fall 2019: 38% Fall 2018: 39% 19% 65% Fall 2019: 19% Fall 2019: 65% Fall 2018: 20% Fall 2018: 59% Fall 2017: 36% Fall 2016: 36% Fall 2017: 58% Fall 2016: 60% Fall 2017: 20% Fall 2016: 20% Los Angeles Merced Riverside Fall 2020: Fall 2020: Fall 2020: 13% Fall 2019: 13% 47% Fall 2019: 47% 60% Fall 2019: 60% Fall 2013: 47% Fall 2018: 47% Fall 2017: 50% Fall 2016: 48% Fall 2018: 12% Fall 2017: 14% Fall 2018: 59% Fall 2017: 60% Fall 2016: 13% Fall 2016: 59% San Diego Santa Barbara Santa Cruz Fall 2020: Fall 2020: Fall 2020: Fall 2019: 32% Fall 2019: 32% Fall 2018: 34% 3% Fall 2019: 3% 18% Fall 2019: 18% Fall 2018: 3% Fall 2018: 22% Fall 2017: 22% Fall 2017: 20% Fall 2017: 3% Fall 2016: 20% Fall 2016: 4% Fall 2016: 22%

Source: UC Data Warehouse and UC Corporate Student System

¹ California residents are defined here as those with permanent addresses in California.

1.4 GEOGRAPHIC ORIGINS AND NONRESIDENTS

Local enrollment rates for transfers are higher than for freshmen, with 49 percent enrolling at a UC campus within 50 miles of their homes.

1.4.3 Percentage of new CA resident transfer enrollees whose home is within a 50-mile radius of their campus UC campuses¹ Fall 2020



Source: UC Data Warehouse and UC Corporate Student System

¹ California residents are defined here as those with permanent addresses in California.

1.4 GEOGRAPHIC ORIGINS AND NONRESIDENTS

The proportion of undergraduate students paying nonresident tuition declined slightly in 2020–21.





Systemwide, the share of all undergraduates paying nonresident tuition rose from five percent to 17.6 percent between 2009–10 and 2019–20. From 2009–10 to 2015–16, the proportion of undergraduates paying nonresident tuition went up from five percent to 15.3 percent, this increase in this period coincides with a period of reductions in State funding for UC due to the Great Recession. Starting in 2016–17 as enrollment of new California residents increased, the proportion of undergraduates paying nonresident tuition leveled off to 17.5 percent between 2017–18 to 2019–20 During the COVID-19 pandemic, the estimated percentage dropped to 16.8 in 2020-21. The proportion of nonresident students at individual campuses varies depending on a campus' capacity, and its ability to attract nonresident students, as well as its nonresident cap under a policy approved in May 2017, which applies to total undergraduate numbers. Under the policy, effective in 2018–19, nonresident enrollment is limited to 18 percent at five UC campuses. At the other four campuses where the proportion of nonresidents already exceeded 18 percent — UC Berkeley, UC Irvine, UCLA, and UC San Diego — nonresident enrollment is capped at the proportion that each campus enrolled in 2017–18

¹ This chart uses year average headcount enrollment, the average headcount across all terms in the academic year (three quarters or two semesters).

² Not all nonresident students pay nonresident tuition. Some have statutory exemptions, such as AB 540 students, children of UC employees, and others designated by the State. AB 540 students are considered California residents for tuition purposes as established by Assembly Bill 540, passed in 2001.

UNDERGRADUATE STUDENTS AFFORDABILITY



UNDERGRADUATE STUDENTS — AFFORDABILITY

Goals

The goal of the University's undergraduate financial aid program is to ensure that the University remains accessible to all academically eligible California students, regardless of their financial resources.

Affordability is among UC's highest priorities. The University has maintained a strong record of enabling families from all income levels to finance a high-quality education, and it closely monitors the impact of its pricing decisions and financial aid programs.

Maintaining inclusive access

The total cost of attendance and the composition of undergraduates in terms of financial resources set the framework for what is required to provide adequate financial support.

For in-state students who live on campus, the total annual cost of attendance, which comprises tuition and fees and other expenses (e.g., living and personal expenses, books and supplies, transportation, and health care), has remained relatively flat over the last several years at about \$35,000. This figure compares to about \$27,000 on average at other Association of American Universities (AAU) public institutions and around \$71,000 for the AAU private institutions (2.1.1).

The income profile indicators demonstrate that the University remains accessible to low-income students. Between 2008–09 and 2019–20, the proportion of UC in-state undergraduates in the lowest income category increased from 14 percent to 21 percent, with offsetting declines among upper- and upper-middle-income families (2.2.2). These trends reflect both the manageability of UC's net cost for low- and middle-income families, and the decline in the incomes of UC families since the 2009 economic recession.

In fall 2020, 35 percent of all UC undergraduates received a Pell Grant, which is a federal grant for low-income students with family incomes typically under \$50,000. Pell Grant recipients comprise a higher share of UC's student body than they do at both AAU public (22 percent) and AAU private (16 percent) institutions (2.2.1).

Financing a UC education

UC is able to provide access to students across the economic spectrum thanks to a progressive financial aid program that considers how much parents can afford; federal, state, and University gift aid or grants; and a manageable student "self-help" contribution from work or borrowing.

Gift aid dramatically reduces the net cost of attendance (total cost of attendance less gift aid) for students and enables those from low- and middle-income backgrounds to enroll in sizable numbers and proportions. The resulting inflation-adjusted net cost of attendance for in-state students from families in the lowest income bracket (less than \$60,000) has declined or remained stable since 2004–05.

Federal and state governments provide critical support through the Pell Grant and Cal Grant programs. In addition, UC's commitment to affordability is evident in the University's strong systemwide financial aid program. As a result of this robust institutional financial aid program, which combines support from different sources, 56 percent of California resident undergraduates paid no tuition in 2019–20. Furthermore, over two-thirds of UC's own grant program helps students cover non-fee costs such as room, board, and book expenses.

Both UC and the State of California have made it a priority to provide financial support to undocumented students. Approximately 4,500 undocumented students received Cal Grants or need-based UC grants in 2019–20, totaling

\$99.9 million. The California Dream Loan Program continues to provide student loans to undocumented Assembly Bill (AB) 540 students at CSU and UC.

The Legislature has provided \$2.5M in UC's annual budget for the program, which has been matched by UC's own funding of \$2.5M each year. Undocumented students who qualify for a waiver of nonresident supplemental tuition under AB 540 have been eligible for Cal Grants and UC grants since 2013 under the California Dream Act.

An undergraduate's self-help requirement can be met through a combination of work and loans. UC relies on student surveys — including the UC Undergraduate Experience Survey (UCUES) and Cost of Attendance Survey — to measure how much students work. UCUES data show that over 50 percent of undergraduates do not work. Studies indicate that 20 hours of work per week is the threshold at which undergraduate academic performance may be adversely affected, and UC's financial aid programs are structured to expect no more than 20 hours. Nevertheless, in the most recent UCUES survey (2020), ten percent of students reported working more than 20 hours per week, the same share as two years earlier.

For the academic year 2019–20, about 36 percent of California undergraduates relied on federal student loans to help finance their education, with loan amounts averaging \$5,900. Parental borrowing under the federal PLUS program remained at about six percent, with the average PLUS loan amount at about \$16,000 per year.

Since 2014–15, California's Middle Class Scholarship program has provided a new source of gift assistance for students at UC and the California State University with household incomes of up to \$171,000 who receive limited or no need-based financial aid. In 2019–20, UC students received \$34 million in Middle Class Scholarship awards.

Addressing basic needs

Universities across the nation are attempting to address student basic needs. UC provides unprecedented access to low-income students and has prioritized efforts to address food and housing insecurity. Spring 2020 UCUES survey results show 39 percent experience low to very low food security (20 percent report very low food security) and four percent report being homeless. The UC Office of the President (UCOP) has partnered with UC Systemwide Basic Needs Committee members to share data collection efforts and findings with intersegmental groups, including our California State University and California Community College colleagues, and has presented survey results to the UC Board of Regents Special Committee on Basic Needs.

The Regents Special Committee on Basic Needs issued a series of recommendations related to assessing and supporting student basic needs. Among the recommendations was to expand UC student access to the state CalFresh program. To facilitate this, the Committee recommended conducting research on the barriers to CalFresh eligibility and trends in CalFresh enrollment systemwide by the end of 2021. UCOP will partner with the California Policy Lab to conduct this study.

Limiting cumulative debt

The proportion of undergraduates leaving with debt is lower than a decade ago. About 44 percent of the class of 2019–20 graduated with debt, with an average amount of \$19,200. This translates into a monthly repayment amount of about \$204 for ten years at a five percent annual interest rate. This level of debt is manageable, considering that a typical graduate who takes out loans earns about \$3,500 a month within two years after graduation (2.3.5). Comparison data show the 2018–19 cumulative debt for UC undergraduates was \$19,200, compared to \$27,500 for public four-year institutions and \$33,400 for private nonprofit four-year institutions (2.3.6). UC President Michael Drake has also proposed creating a debt-free path to UC that would eliminate the need to borrow for qualifying students.

Pandemic impact

The 2020 COVID pandemic disrupted the University's education delivery, moving nearly all courses online. The pandemic also had several impacts on students, parents, and how they paid for college costs. Both graduate and undergraduate students were impacted and both received emergency grant support from the federal government, the State of California, and UC.

Students who were living in on-campus housing were largely forced to move home with their families or into offcampus housing. Those who would have faced hardship moving off-campus were provided with accommodation. Because living off-campus and, particularly, with their families, is less expensive, the aggregate financial need for students was reduced. This reduction in aggregate need extended into 2020–21.

The federal Coronavirus Aid, Relief, and Economic Security (CARES) Act provided \$12.6 billion directly to colleges and universities. Across UC campuses, \$130 million was made available through CARES for student support, providing an average of \$834 to 134,381 recipients. UC and State funds supplemented CARES emergency grants with \$5 million to provide equivalent support for undocumented students, which provided an average award of \$1,139 to 4,457 students.

Looking forward

Both the Governor and State Legislature have proposed ideas for reforming and expanding the Cal Grant Program. In 2019–20, Governor Newsom's proposal for Cal Grant awards to parenting students was implemented. The State Legislature requested the California Student Aid Commission (CSAC) propose changes to the Cal Grant Programs. Although the economy puts broad reform on hold, the CSAC recommendations would have benefited UC students by eliminating requirements that disenfranchise nontraditional students. The University is also engaged in federal advocacy efforts to double the Pell, along with examining other opportunities to increase affordability for UC students.

Under the UC 2030 multi-year plan, UC's goal is to increase timely graduation, which would reduce student debt and the cost of education.

For more information

UC costs and financial aid, including financial aid estimators: admission.universityofcalifornia.edu/paying-for-uc

Trends in UC financial aid: ucop.edu/enrollment-services//data-and-reporting

Data tables with downloadable figures on financial aid awarded by year, campus, and award type: universityofcalifornia.edu/infocenter/financial-support

Data tables with downloadable figures on total and net cost of attendance by campus and residency: universityofcalifornia.edu/infocenter/net-cost

Dashboard with typical student debt, earnings, percentages of graduates with debt, and debt payoff calculators: universityofcalifornia.edu/infocenter/uc-alumni-work

2.1 COST OF ATTENDANCE

UC resident tuition and fees and total costs have remained relatively flat over the last several years, and while they still exceed the national average for other AAU public institutions, they remain below the average for AAU private institutions.



 2.1.1 Total cost of attendance for undergraduate, in-state residents Universitywide and comparison institutions, 2019 inflation-adjusted dollars 2005–06 to 2019–20

Source: IPEDS¹

The total cost of attending college includes tuition and fees as well as living expenses, books and supplies, transportation, health insurance, and personal expenses. The total cost of attendance is higher at UC than at AAU public comparison institutions primarily because of higher costs beyond tuition and fees, especially the high cost of living in California. UC tuition and fees and the total cost of attendance have remained relatively flat over the past several years.

¹ Charges are for in-state students living on campus. Averages are simple averages. Weighted averages for UC can be found at ucop.edu/student-affairs/data-and-reporting/student-budget-tables/index.html. A list of the 28 non-UC AAU public and 26 AAU private institutions in the comparison groups can be found in the data glossary.

2.1 COST OF ATTENDANCE

Regardless of income, the net cost of attendance after financial aid for CA resident students has remained stable or declined since 2010–11. The net cost of attendance for nonresident students is higher and has grown.



 2.1.2 Net cost of attendance by family income and California residency Universitywide, 2019 inflation-adjusted dollars 2005–06 to 2019–20

A general measure of the University's affordability is its average net cost of attendance. This represents the total cost of attendance at the University for undergraduates after taking into account scholarships and grants. Scholarships and grants reduce the net cost of attending UC for students at all income levels but have the greatest impact on students from low- and middle-income families.

The availability of scholarships and grants has mitigated the impact of cost increases on students from families earning less than \$100,000. Source: UC Corporate Student System¹

Between 2005–06 and 2019–20, net cost has declined by about \$2,600 in inflation-adjusted dollars for in-state students in the lowest income category due to this scholarship and grant support.

Nonresident students face a much higher net cost of attendance because they face annual supplemental tuition charges in excess of \$29,000, and since 2016–17, have not been eligible to receive institutional need-based grant aid.

¹ Income ranges are approximate. Independent students are excluded. Net cost is the full cost of attendance less any grants, scholarships, and fee exemptions. Income is based on amounts reported in either the Free Application for Federal Student Aid (FAFSA) or the UC Application for Undergraduate Admission, or, if missing, is imputed based on demographic profiles.

UC enrolls a higher percentage of Pell Grant recipients than public or private peers.





Source: IPEDS¹

The percentage of undergraduate students with Pell Grants, a federal aid program for low-income students, provides a useful means to compare different institutions in terms of their accessibility for low-income students. It is also a useful indicator for comparing the socio-economic diversity of an institution's undergraduate student population. The data shown above represent the most recent year for which data on comparison institutions are available. The proportion of UC undergraduates receiving Pell Grants went up from 31 percent in 2008–09 to 37 percent in 2018–19. This is primarily a result of increased federal spending, which made more students eligible for Pell Grants, as well as the economic downturn from the 2009 recession, which caused broad declines in family income. By fall 2020, 35 percent of UC undergraduates and 41 percent of CA Residents received Pell Grants. Nationally, the percentage of Pell Grant recipients has declined steadily since 2010–11, partially due to a growing economy prior to the 2020 pandemic.

¹ Percentage reported is that of students who received Pell Grants at any time during the 2018–19 year as a percentage of all undergraduates. Note that Pell Grant eligibility criteria change annually because of the federal appropriations process and other formula changes. Thus, trend analysis of Pell recipients would not be a valid measure of changes in low-income students but rather would reflect the changes in eligibility criteria. A list of the institutions in the AAU comparison groups can be found in the data glossary.

2.2 INCOME PROFILE

A large proportion of UC students come from low-income families, particularly among instate students.





Source: UC Corporate Student System¹

In-state students are more likely to be from lowincome families, with 21 percent in the lowest income category in 2019–20. Since 2008–09, the proportion of low-income CA resident students increased noticeably, with an offsetting decline among upper- and upper-middle-income families. During the last two years, however, the income distributions of CA resident families have stabilized. This suggests that the University's financial aid programs keep the net cost of attendance within reach of CA resident and low- and middle-income families.

Conversely, more than 45 percent of nonresident students came from families in the highest income category in 2019–20. This proportion has increased steadily over the years while those in the lower- and middle-income categories have decreased.

Nonresidents are not eligible for UC financial aid.

¹ Note that prior to 2007–08, an increasing number of students at one campus with parent incomes above \$100,000 were incorrectly categorized as having an income of \$100,000. This problem was fixed in 2007–08, resulting in an apparent (but not actual) decline in the percentage of students shown in the \$120K to 150K category and a corresponding increase in the percentage shown in higher income categories.

The share of UC students who felt that the cost of attendance was manageable has been relatively stable over the past several years.



2.3.1 Student response to "With grants and scholarships, if any, the total cost of attending the school is manageable"

Universitywide and comparison institutions

2011-12 to 2019-20

* Results not shown since only two non-UC AAU universities participated in SERU survey in 2020. Source: UCUES and SERU⁵

Sixty percent of UC undergraduates in spring 2020 felt that the cost of attendance was manageable. This figure has risen gradually from 55 percent since the spring 2012 UCUES survey. In the most recent year available, fifty-eight percent of survey respondents at other participating American Association of University (AAU) institutions in agreed that the cost of their education was manageable.

The list of non-UC AAU participants in this comparison was not the same for all four years shown. The non-UC schools included University of Minnesota, Rutgers University, University of Pittsburgh, USC, Texas A&M University, University of Virginia, University of Michigan, Indiana University, Purdue University, University of Iowa, University of Washington, University of Oregon, University of Texas at Austin, University of Florida, University of North Carolina, University of Kansas, and Michigan State University.

2.3 COST OF ATTENDANCE AND STUDENT DEBT

Universitywide, 44 percent of undergraduate students reported being food insecure and five percent reported experiencing homelessness.



 2.3.2 Percent of students who are food insecure or are experiencing homelessness Universitywide and by campus 2019–20

Source: UCUES 2020

A growing body of research has revealed that basic needs insecurity, the lack of the minimum necessary supports for well-being, jeopardizes student success. Recognizing basic needs support as a key facilitator of student degree attainment, UCOP collaborated with the UC Systemwide Basic Needs Committee, which comprises campus representatives, to institutionalize data collection concerning student basic needs.

2.3 COST OF ATTENDANCE AND STUDENT DEBT

Forty-seven percent of undergraduates experienced food security in 2018. UC's goal is to reduce that by half, to 24 percent, by 2025.





Source: UCUES and GUEA

UC has also set a goal to reduce undergraduates experiencing housing insecurity from 7 percent, in 2020, to 3.5 percent, by 2025.

Percent of students who experienced housing insecurity in 2020, with the 2025 Goal



Since 2016, UCOP has included items related to basic needs in UCUES, using the USDA standard for food insecurity measures, while developing the indicator for homelessness to track a broader measure of housing insecurity. The food insecurity survey replaced the 2016 two-item module with a six-item module developed by the U.S. Department of Agriculture. The six-item module distinguishes between low and very low food security (combined to identify students experiencing food insecurity), while the two-item module can only be used to identify students experiencing food insecurity.

Source: UCUES and GUEA

The inclusion of food and housing insecurity items in UCUES will allow the University to measure the impact of basic needs campus services and track the University's progress in improving student basic needs. Also, it should be noted that students who responded to the 2020 UCUES were taking online classes, so they may have been staying with parents or family members, which may have affected the results. To guide the University in its journey to reduce basic needs insecurity, the Regents' Special Committee on Basic Needs issued a 2020 report, which established long-term aspirational goals to reduce food and housing insecurity at the University by 50 percent by 2025.

2.3.4

The average inflation-adjusted debt at graduation of student borrowers has gradually declined to \$19,000 over the past 19 years, while the percent graduating with no debt has increased.



2.3.5 Student loan debt burden of graduating seniors, inflation-adjusted Universitywide 2000–01 to 2019–20 (average debt of those with debt shown above each year)

Fifty-two percent of UC undergraduates graduate with no debt at all. For those who do borrow, the average student loan debt at graduation in 2019–20 was about \$19,200. The monthly repayment for this amount is about \$204 for ten years at the five percent average interest rate that typically applies to student loans. Lower payments are available with longer repayment periods. For more information about estimated loan repayment amounts using this rate, visit the "Loans and Earnings" tab of the UC Alumni-at-work dashboard at:

universityofcalifornia.edu/infocenter/uc-alumni-work.

Source: UC Corporate Student System

These figures reflect the borrowing of all graduating UC students. California resident students, however, are more likely than out-of-state students to graduate with debt. In 2019–20, about 52 percent of UC graduates who originally entered as California resident freshmen had student loan debt upon graduation, compared to only 12 percent of out-ofstate students. In-state graduates' average debt, however, was significantly lower than that of the out-of-state students who borrowed (\$18,800 vs. \$27,800).

2.3 COST OF ATTENDANCE AND STUDENT DEBT

Despite recent increases, the proportion of students graduating with loan debt across all incomes in 2019–20 was lower or comparable to what it was 19 years ago.





Parent income

Source: UC Corporate Student System

The proportion of students who borrow decreased steadily from 2000–01 through 2009–10 for students in nearly every income category. From 2010–11 through 2012–13, student borrowing increased, both in percentage and in cumulative amount. This uptick in borrowing may reflect a combination of higher costs and a reduction in other borrowing alternatives (e.g., home equity loans). In the last year, however, student borrowing remained the same or decreased slightly for the lowest two income categories and for the highest income category. UC student debt remains below the national average for both public and private non-profit four-year institutions.



E010 19 Bradates	
Merced	\$17,872
Davis	\$18,985
Santa Barbara	\$18,995
UC Average	\$19,225
Irvine	\$19,597
Berkeley	\$19,773
San Diego	\$20,536
Riverside	\$20,779
Santa Cruz	\$21,375
Los Angeles	\$21,441
Public four-year	\$27,539
Private nonprofit four-year	\$33,389
National Average	\$28,950

Source: Common Data Set and TICAS. National average excludes private for-profit institutions.

By five years after graduation, students from almost all of the UC's baccalaureate programs have debt-to-earnings ratios of less than ten percent.

2.3.8	Debt-to-earnings ratios for UC undergraduate alumni at two and five years after graduation
	Universitywide and by Campus
	Undergraduate graduating cohorts 2000–2017, with student loan debt who are working in California

	Debt-to-earnings	2 years	after grac	luation	Debt-to-earnings 5 years after graduation						
	% of programs				% of programs						
	with <10% debt-	10th	Median	90th	<10% debt-to-	10th	Median	90th			
Campus	to-income ratios				income ratios						
Berkeley	95.3%	3.1%	5.5%	8.2%	100.0%	2.3%	3.9%	5.7%			
Davis	97.7%	3.4%	5.6%	8.5%	100.0%	2.6%	3.8%	5.7%			
Irvine	87.4%	4.4%	7.2%	11.0%	98.9%	3.0%	4.8%	6.6%			
Los Angeles	94.5%	3.8%	6.7%	9.3%	99.1%	2.9%	4.4%	6.3%			
Merced	83.3%	5.4%	8.5%	12.2%	100.0%	3.4%	5.1%	6.8%			
Riverside	65.9%	5.6%	8.9%	12.8%	98.8%	3.8%	5.6%	7.8%			
San Diego	94.4%	4.5%	6.8%	9.3%	100.0%	3.3%	4.6%	6.6%			
Santa Barbara	92.6%	4.3%	7.3%	9.5%	100.0%	3.5%	4.9%	6.6%			
Santa Cruz	88.7%	3.1%	5.5%	8.2%	100.0%	2.3%	3.9%	5.7%			
UC	90.5%	4.3%	7.2%	10.1%	99.6%	3.0%	4.8%	6.9%			

Source: UC Corporate Student System and EDD Quarterly Earnings

Students who graduate from UC's baccalaureate programs go on to achieve positive earnings trajectories and have manageable student loan repayment obligations. The benchmark used to evaluate manageability is the percentage of average earnings required to repay a student's debt at graduation based upon a standard ten-year repayment plan at five percent interest. UC considers debt that requires between five percent and nine percent of a student's postgraduate earnings to be manageable. Students may choose alternative repayment plans (e.g., income-based plans) based on their individual circumstances. These can increase debt manageability for students with high levels of debt and/or low income, but can result in higher interest costs over time.

About 91 percent of UC baccalaureate program graduates systemwide have a debt-to-earnings ratio of ten percent or less at two years after graduation and nearly all of the programs do at five years after graduation.

Some arts, humanities, and social science programs have debt ratios that exceed ten percent two years after graduation. This stems from a variety of factors, including the lower average earnings associated with industries in which these graduates tend to work. (See 3.3.3 for earnings by major and industry in Chapter 3.)

UNDERGRADUATE STUDENT SUCCESS

44%

bachelor's degrees in 2020

0₀

were in STEM disciplines

29% were in Social Sciences 11% were in Arts & Humanities

Nine broad disciplines of UC undergraduates

- Arts
- Humanities
- Professional fields
- Life sciences
- Social sciences | Psychology
- Physical sciences | Math
- Health professional | Clinical sciences
- Engineering | Computer sciences
- Multi/Inter-disciplinary | Miscellaneous
- undergraduate campus

UNDERGRADUATE STUDENT SUCCESS

Filling California's gap in degree recipients

The Public Policy Institute of California projects the state will face a shortfall of 1.1 million workers in 2030 who have at least a bachelor's degree. UC has committed to adding more than 160,000 bachelor's degree recipients by 2029-30, by increasing graduation rates and improving timely graduation. By 2030, UC's goal is to have nine of ten undergraduates leave with a degree, and to improve four-year freshmen graduation rates to 76 percent, and two-year transfer graduation rates to 70 percent. In addition, UC's goal is to eliminate gaps in timely graduation for California's Pell Grant recipients, first-generation students, and underrepresented groups (URG). UC seeks to partner with the State by receiving financial support to scale up promising programs and strategies that will help campuses achieve these goals. To date, UC has not received this financial support. Below is a progress report on these critical goals and other undergraduate alumni outcomes.

UC's four-year graduation rates for freshmen have risen significantly over the past 18 years — from 46 percent for the 1997 entering cohort to 71 percent for the 2016 cohort. The most recent six-year graduation rate, for the 2014 entering cohort, is 86 percent (3.1.1), which has increased by seven percentage points since 1996. The six-year graduation rate is 88 percent when this measure includes students who transfer to non-UC institutions (3.1.2) and still graduate within six years. In addition, time to degree has steadily improved. The most recent freshman entrants are taking an average of 4.15 years (3.1.8) to graduate, an improvement on the 2000 cohort, which took 4.33 years.

Transfer entrants have made similar gains, with two-year graduation rates increasing from 37 percent for the 1997 entering cohort to 61 percent for the 2018 cohort (3.1.3). The most recent four-year graduation rate for transfers (2016 entering cohort) is 89 percent, an increase of about ten percentage points since 1997. The average time to degree is 2.4 years for the 2013 cohort, an improvement from 2.6 years for the 1996 cohort (3.1.8).

Although the overall freshman and transfer graduation rates have increased and are showing good progress toward UC 2030 goals, there are still gaps in rates between subgroups (3.1.4, 3.1.5, 3.1.6, and 3.1.7). Low-income students, first-generation students, and URG students have lower average graduation rates, especially four-year graduation rates for freshmen, and two-year graduation rates for transfers.

Improving graduation rates and eliminating gaps

The UC Office of the President and campuses have employed predictive analytics to obtain a better understanding of factors that influence graduation rates. Findings indicate that pre-college factors such as academic preparedness measured by high school GPA, the rigor of students' high school or transfer courses, standardized test scores, and demographics are related to, but only explain a small portion of, variance in time to degree and graduation rates. Campus climate, access to courses, student sense of belonging, student engagement in academic and civic activities, and success in the first year at college, among many other factors, are important to college completion and timely graduation.

To address challenges facing students and campuses, and reach UC's goal of improving graduation rates, UC campuses have identified, and where possible are expanding, a wide range of programs to promote the academic success of undergraduates and eliminate gaps in graduation rates, particularly for new generation students. These include expanding orientation, advising, and counseling services; increasing on-campus work opportunities; redesigning and removing achievement gaps in entry courses with large enrollments; streamlining course prerequisites, course sequences, and degree requirements; summer research and summer bridge programs; increasing access to summer session courses; developing pedagogical strategies for the diversification of classrooms and instruction; and conducting learning analytics to assist students who might need additional support. Increased State support would help campuses scale up these programs, particularly those that seek to eliminate equity gaps.

Students who take longer to graduate leave with more debt, have lower lifetime earnings, and are less likely to go on to graduate school. Recognizing the importance of early student success for on-time graduation, UC campuses are specifically making efforts to improve first-year student success. Many campuses offer summer bridge, transfer edge, extended orientation, and/or first-year seminars to assist students with the transition to UC. Campuses are also making advising mandatory for first-year students. Many UC campuses offer first-year students the opportunity to work on a research project with a faculty member. UC recently launched the systemwide First-Generation Faculty Initiative, which connects first-generation students to both faculty and staff mentors.

Undergraduate outcomes

The number of undergraduate degrees awarded by UC grew from about 32,900 degrees in 2000–01 to about 49,400 degrees in 2014–15, and 57,000 degrees in 2019–20 (3.3.1). Increases in the size of the entering freshman class and improving graduation rates contributed to this growth. As mentioned earlier, UC has proposed to improve degree attainment and produce 200,000 more degrees in addition to the projected baseline of one million degrees over the next 15 years, between 2015–16 and 2029–30. About 80 percent of these additional degrees (160,000) would be at the undergraduate level. UC is making progress to achieve that goal.

UC undergraduate alumni enroll at graduate schools or work in various industries. Four years after graduation, more than one-quarter of bachelor's degree recipients have enrolled in graduate or professional programs. More than half are working in key industries such as health care, K–12 education, finance & insurance, public administration, social assistance, higher education, engineering, and internet and computer systems. Many alumni work in industries that closely align with the majors they chose. By ten years after graduation, 56 percent of engineering & computer science majors work in engineering, manufacturing, or internet and computer systems; 30 percent of life science majors work in health care; and 34 percent of arts & humanities majors are working in K–12, higher education, or performing arts and entertainment.

UC alumni working in California surpass the typical earnings of other California bachelor's degree recipients (aged 25 and over) by six years after graduation. The earnings trajectory of UC alumni increases rapidly; ten years after graduation they double what they were earning two years after graduation, on average (3.3.2). Economic success is prevalent for all socioeconomic groups, including students whose families qualified for federal Pell Grants. Within five years of graduation, the majority of Pell Grant recipients earn an average income higher than their parents' combined incomes during the time those students attended UC (approximately \$50,000).

Looking forward

UC campuses have identified promising strategies that, if increased in scale, could help achieve ambitious UC 2030 goals. The University has not yet received State funding to expand these programs and strategies. While the current data available have not shown a significant immediate effect from the shift to remote instruction on student success and retention, the long-term impact of the COVID-19 pandemic on student success and retention is unclear. UC will continue to track these measures, including for UC's future freshman and transfer entrants coming from California high schools and community colleges, who may have widely varying experiences during this period of remote instruction.

For more information

UC 2030 systemwide and campus dashboards: universityofcalifornia.edu/infocenter/uc-2030-dashboard

Graduation rates and goals by campus, gender, Pell, residency status, race/ethnicity, and other factors: universityofcalifornia.edu/infocenter/ug-outcomes

Eliminating gaps in timely graduation: regents.universityofcalifornia.edu/regmeet/sept19/b2.pdf

UC's report on Advising Strategies to Support Timely Graduation: ucop.edu/institutional-research-academic-planning/_files/Advising_strategies.pdf

UC's undergraduate alumni outcomes, including employment industries and earnings: universityofcalifornia.edu/infocenter/uc-undergraduate-alumni-outcomes

Beyond economic impact, understanding societal impacts and public value of a UC degree: regents.universityofcalifornia.edu/regmeet/mar21/b2.pdf

Total degrees awarded by degree type, campus, gender, and race/ethnicity: universityofcalifornia.edu/infocenter/degrees-awarded-data

UC's role in enabling low-income students to achieve intergenerational economic mobility universityofcalifornia.edu/infocenter/climb-mobility-analysis

UC First-Generation Faculty Initiative

universityofcalifornia.edu/news/uc-first-generation-faculty-students-you-ve-got-and-we-re-help

Over 85 percent of UC freshmen graduate within six years, a higher rate than comparable AAU public universities.



3.1.1 Freshman graduation rates

UC and comparison institutions

Cohorts entering fall 2014, 2015, and 2016; fall 2013 cohort for AAU comparison

UC's six-year graduation rate is higher than that of comparable AAU public institutions. UC's four-year graduation rates for freshmen have risen significantly since 1997, from 46 percent for the 1997 entering cohort to 71 percent for the 2016 cohort. Since 2010, UC has improved four-year graduation rates by about nine percentage points; UC Riverside and UC San Diego have improved fouryear graduation rates by about 15 and 12 percentage points, respectively. These improvements are due to factors including campus programs supporting four-year completion, improvements in academic preparation of incoming students, and the current cost of a UC education, all of which motivate students to complete their degrees in timely fashion. UC's latest freshman six-year graduation rate is 86 percent, which is a five-percentage point increase over the past twenty years.

By 2030, UC is striving to raise four-year completion to 76 percent and six-year completion to 90 percent. UC is seeking financial support from the State to achieve these goals.

More information on trends in UC freshman graduation rates can be found at: universityofcalifornia.edu/infocenter/ug-outcomes and progress in achieving UC 2030 goals can be found at: universityofcalifornia.edu/infocenter/uc-2030-dashboard

Source: UC Data Warehouse and IPEDS1

¹ Comparison IPEDS data are available for more limited years. The AAU comparison institutions are in the data glossary. AAU comparison is for the 2013 cohort, the most recent data available. Graduation rates are weighted by total cohort size. Institutions with missing data are excluded for that year. Freshmen are those students who entered a university directly from high school and who have not matriculated at another postsecondary institution prior to enrollment. UC statistics give credit to the originating campus for inter-UC campus transfers.

The six-year graduation rate of UC freshmen is close to 90 percent when students who finished their degrees at a non-UC institution are included.



3.1.2 Freshman graduation rates, including those who graduated from a non-UC institution Universitywide and UC campuses Cohort entering fall 2014

Source: UC Data Warehouse and the National Student Clearinghouse¹

The extended graduation rate of students who begin their studies as freshmen at UC includes those who transfer to a non-UC institution and complete their bachelor's degree within four, five, or six years.

By this measure, UC's overall six-year graduation rate is about 88 percent. The effect of the extended

graduation rate varies by UC campus, with Berkeley having fewer students who earn a degree outside of the UC system, while the six-year rates at Merced, Riverside, Santa Barbara, and Santa Cruz improve by as much as three percentage points when students who complete their degree at a non-UC school are included.

¹ Intercampus transfers within UC are counted as graduates of their originating UC campus. In this graph, non-UC rates only include those who transferred to non-UC institutions and graduated with a bachelor's degree.

More than 60 percent of transfer students graduate within two years and close to 90 percent in four years.



3.1.3 Transfer graduation rates Universitywide and UC campuses Cohorts entering fall 2016, 2017, and 2018

Source: UC Data Warehouse¹

The two-year graduation rate for transfers is currently at 61 percent, the highest since 1995. The four-year rate is 88 percent. More information on trends in UC transfer graduation rates can be found at: universityofcalifornia.edu/infocenter/ug-outcomes. UC is striving to improve two-year graduation rates to 70 percent by 2030. UC is seeking financial support from the State to expand programs and services to achieve these ambitious goals. Progress in achieving UC 2030 goals can be found at: universityofcalifornia.edu/infocenter/uc-2030-dashboard

¹ Comparison data on graduation rates for transfer students are not available. UC statistics give credit to the originating campus for inter-UC campus transfers.

Underrepresented group (URG) students at UC graduate at higher rates when compared to URG students at other AAU public institutions, but gaps exist with other UC peers.





Source: UC Data Warehouse and IPEDS.

By 2030, UC is looking to eliminate graduation gaps for underrepresented groups. All racial/ethnical groups have improved their four-year graduation rates from that of the previous cohort. Compared to the overall four-year rate of 70 percent, however, African American students have a 59 percent rate, Hispanic/Latinx a 61 percent rate, and American Indian a 65 percent rate. More information on trends in UC freshman graduation rates by campuses and demographic detail can be found at: universityofcalifornia.edu/infocenter/ug-outcomes.



UC and comparison institutions, cohort entering fall 2013

Source: UC Data Warehouse and IPEDS.

Regardless of race/ethnicity, transfer students graduate at a high rate, and the rate for twoyear graduates of most racial/ethnic groups is rising.



3.1.5 Transfer graduation rates by race/ethnicity Universitywide Cohorts entering fall 2016, 2017, and 2018

Source: UC Data Warehouse

The rate for two-year graduates of all racial/ethnic groups except American Indian students is rising. While graduation gaps are smaller for transfer students than for students who enter as freshmen, gaps still remain. By 2030, UC is looking to eliminate graduation gaps for underrepresented groups and raise the overall on-time graduate rate. More information on trends in UC transfer graduation rates by campus and demographic detail can be found at:

universityofcalifornia.edu/infocenter/ug-outcomes.

Over 83 percent of freshman Pell Grant students graduate within six years, and 87 percent of transfer Pell Grant students graduate within four years.

3.1.6 Freshman graduation rates by Pell Grant recipient status Universitywide Cohorts entering fall 2014, 2015, and 2016



3.1.7 Transfer graduation rates by Pell Grant recipient status Universitywide Cohorts entering fall 2016, 2017, and 2018



Source: UC Data Warehouse. Pell Grant recipients are those who received a Pell Grant at any point during their time at UC.

Freshman Pell Grant recipients graduate at rates comparable to non-Pell recipients: 83 percent and 88 percent, respectively. Although there is an 11percentage point gap at the four-year mark between freshman Pell recipients (63 percent) and non-Pell recipients (74 percent), this gap is reduced to five percentage points at the six-year mark.

For the transfer 2016 cohort, Pell and non-Pell Grant recipients graduated at comparable rates of 87 percent and 90 percent, respectively, within four years. However, the two-year graduation rate gap between Pell and non-Pell Grant recipient transfer students is nine percentage points, down by five percentage points from the 2016 cohort.

UC has adopted goals to eliminate graduation gaps by 2030 and is seeking funds from the State to support investment in programs and services needed to help achieve these ambitious goals.

More information on trends in graduation rates can be found at universityofcalifornia.edu/infocenter/ugoutcomes.

Undergraduate students at UC are graduating more quickly.



3.1.8 Average time to degree

Universitywide and UC campuses

Source: UC Corporate Student System.

Average time to graduation only includes students who graduated from UC within seven years.

The average time to earn a bachelor's degree at UC has decreased fairly steadily since 1994. Students entering as freshmen in 2013 took an average of 4.15 years, down from 4.33 years in 2000.

For students entering as transfers, the average time to degree is 2.39 years, down from 2.55 years in 2000. More information on trends in UC time to degree can be found at universityofcalifornia.edu/infocenter/ug-outcomes.

3.2 RETENTION RATES

Retention rates are high, but UC is monitoring recent declines.



3.2.2 First-year retention rates UC and comparison institutions Cohorts entering fall 2019



Source: Freshman data from IPEDS.¹ Transfer data from UC Data Warehouse. Comparison data are not available for transfers.

The current Universitywide retention rate is 93 percent. This is higher than non-UC AAU public institutions (92 percent), but lower than AAU private institutions (97 percent).

For students leaving in good academic standing (GPA ≥ 2.0), some campuses are expanding honors programs or providing opportunities for undergraduate research as early as the freshman year. For those leaving in poor academic standing (GPA < 2.0), some UC campuses are using Summer

Bridge or early orientation. Campuses are also looking into housing and residential programs and cohort programs to integrate undergraduates.

Like entering freshmen, transfer students benefit from a smooth transition to UC. Several UC campuses have summer programs to support transfer students. More information on trends in UC retention rates can be found at: universityofcalifornia.edu/infocenter/ug-outcomes.

¹ Freshmen are first-time, full-time, degree-seeking students from the fall who enroll again in the next fall term. The most recent available comparison data available from IPEDS is for 2019.

3.3 OUTCOMES

Social science, life sciences, and arts and humanities are the largest segments of bachelor's degree recipients.

3.3.1 Undergraduate degrees awarded by discipline UC and comparison institutions

2018–19

	0%	10	0% 2	0%	30%	% 40	%	50%	60)% 70)%	80%	% 90)%	100%
AAU Private (55,947)		20)%	7%		14%		229	6	14	4%	1	.0%	12%	
Non-UC AAU Public (207,069)		20	%	5%	1	6%	1	<mark>.6%</mark>	9	9%	15%		20)%	
UC (57,165)		15%	8	%	1	.9%			29%		11	%	6%	11%	6
Berkeley (8,727)		19	%	9%		19%			259	%	10%	6	<mark>4%</mark>	15%	
Davis (7,993)		13%	6%		21%	6		2	9%		11%		6%	14%	
Irvine (8,063)		20)%	5%		18%			28%		8%		12%	9%	6
Los Angeles (8,561)		10%	9%	16	5%				41%				16%	<mark>2%</mark> -	5%
Merced (1,415)		22	1%	4%		29	%			27%			4% <mark>1</mark> 2	1%	4%
Riverside (4,520)		12%	7%	16	%			30%			15%		16%	6	4%
San Diego (7,609)		18%	6	11%		2	5%			18%	5% <mark>3</mark> 9	<mark>%</mark>	21	%	
Santa Barbara (5,882)	6	% 2	11%	16%	ś			399	%		1	.4%	1 <mark>%</mark>	12%	
Santa Cruz (4,395)		19	%	6%		21%			249	%	1	5%	8	<mark>%</mark> 6	5%

Engineering & Computer Science Physical Sciences Life/Health Sciences Social Sciences Arts & Humanities Business Other

Source: IPEDS

About 42 percent of all undergraduate degrees awarded by UC in 2018–19 were in science, technology, engineering, and mathematics (STEM) fields. This is higher than the proportion at AAU public and private comparison institutions (41 and 40 percent, respectively).

Across disciplines, undergraduate degree recipients tend to double their earnings between two and ten years after graduation.

3.3.2 Inflation-adjusted average and median alumni wages by selected majors, two, five, and ten years after graduation

Universitywide

2000–01 to 2017–18 graduating cohorts, combined, sorted by popularity

	After	2 years	After	5 years	After 10 years		
	Mean	Median	Mean	Median	Mean	Median	
Arts & Humanities							
Arts	\$34,135	\$29,790	\$50,179	\$44,661	\$73,117	\$61,222	
English/Literature	\$37,950	\$34,480	\$57,042	\$51,697	\$83,325	\$70,386	
Foreign Language	\$37,760	\$33,449	\$56,374	\$50,556	\$84,578	\$70,326	
History	\$38,552	\$34,192	\$61,284	\$53,027	\$90,975	\$74,682	
Other Humanities	\$36,162	\$32,215	\$56,525	\$56,092	\$71,603	\$69,488	
Philosophy	\$38,995	\$33,731	\$58,883	\$50,369	\$100,944	\$74,810	
Professional							
Nursing	\$85,967	\$86,668	\$109,296	\$106,519	\$133,689	\$129,353	
Business	\$57,020	\$53,283	\$83,014	\$73,372	\$125,821	\$101,253	
Agriculture	\$54,580	\$52,496	\$78,079	\$71,660	\$116,573	\$100,358	
Architecture	\$50,103	\$47,747	\$66,971	\$62,038	\$87,923	\$79,817	
STEM							
Computer Science	\$89,780	\$81,343	\$122,577	\$103,449	\$159,721	\$128,912	
Engineering	\$73,928	\$70,570	\$102,051	\$92,379	\$143,197	\$121,815	
Physics	\$53 <i>,</i> 881	\$48,042	\$81,020	\$74,744	\$118,570	\$102,823	
Biology	\$39,749	\$37,414	\$65,626	\$58,213	\$114,107	\$95,373	
Chemistry	\$45,629	\$44,248	\$65,809	\$60,578	\$110,877	\$94,592	
Mathematics	\$57 <i>,</i> 003	\$51,960	\$83,298	\$72,934	\$112,254	\$94,724	
Social Sciences							
Economics	\$56,354	\$52,782	\$82,431	\$72,911	\$124,907	\$100,362	
Political Science	\$44,196	\$40,279	\$71,245	\$60,177	\$110,781	\$90,973	
Geography	\$44,219	\$40,809	\$68,993	\$60,946	\$96,383	\$80,939	
Psychology	\$38,002	\$34,264	\$59,707	\$53,400	\$88,980	\$76,056	
Anthropology	\$36,163	\$31,741	\$53,177	\$47,040	\$80,290	\$66,707	
Sociology	\$40,820	\$37,345	\$61,221	\$54,784	\$86,834	\$74,142	
All Disciplines							
All Majors	\$47,943	\$42,298	\$71,428	\$62,084	\$106,047	\$87,094	

Source: California Employment Development Department and UC Corporate Student System. Includes alumni employed in the state of California only. Amounts are inflation-adjusted to 2019 dollars.

Alumni employment data provide evidence of UC's contribution to the California economy and its role as an engine of economic mobility. UC enrolls a greater percentage of low-income students (from the bottom 20 percent of the income distribution) than other four-year institutions in California. Recent data made available through a partnership with the Equality for Opportunity Project show that more than one in three UC alumni who come from the bottom 20 percent of income rise to the top 20

percent of income as adults, based on the entering cohorts of 1999 to 2005. Moreover, comparisons using this national data show UC bachelor's degree recipients working in California tend to earn about 20 percent more than UC graduates who work outside of California. More information on the Equality of Opportunity Project can be found at: ucop.edu/institutional-research-academicplanning/_files/CLIMB-a-mobility-analysis.pdf.

3.3 OUTCOMES

Engineering and computer science majors tend to earn more than other UC undergraduate alumni, but how much UC alumni make also depends on the industry.





Industry of Employment

Note: Bubble size corresponds to percentage of alumni within majors employed in the industry. The largest bubble is 36 percent and the smallest is <1 percent.

Source: California Employment Development Department and UC Corporate Student System. Includes alumni employed in the state of California only. Amounts are inflation-adjusted to 2019 dollars.

UC graduates go on to work in a wide range of industries in California. A large share of Engineering and Computer Science majors work in the Internet & Computer Systems and Manufacturing industries, with median salaries of about \$100K and \$90K, respectively. Business majors are likely to work in the Business Services or Finance & Insurance industries where median earnings reach \$72K to \$78K. Arts & Humanities graduates are most likely to work in K–12 Education, where median salaries are much lower, at about \$54K at five years after graduation.

3.3 OUTCOMES

Thirty-eight percent of undergraduate degree recipients go on to earn a graduate degree, the majority of which are masters-level degrees.



3.3.4 UC undergraduate alumni graduate degree attainment by campus 2000 to 2012 graduating cohorts, combined, as of June, 2020

Source: UC Information Center

Earning a graduate degree is a major objective of many undergraduates who attend a research university. Nearly 40 percent of undergraduate students go on to earn a graduate degree after their undergraduate studies at UC.

The UC Information Center

(universityofcalifornia.edu/infocenter/alumni-gradoutcomes) provides more details on graduate degree attainment by race/ethnicity, gender, Pell grant eligibility, and entry status. By 2030, UC aims to increase access to graduate degrees for populations that currently are less likely to attend graduate school.

GRADUATE ACADEMIC AND GRADUATE PROFESSIONAL STUDENTS



Campus symbols are scaled to reflect total 2020 new and continuing graduate student enrollment.

CHAPTER FOUR
GRADUATE ACADEMIC AND GRADUATE PROFESSIONAL STUDENTS

Goals

California's Master Plan for Higher Education gives the University of California the responsibility of enrolling and preparing graduate academic and professional students to help meet the needs of California and the nation and to further the UC mission of teaching, research, and public service. Thus, reviving adequate support for the University of California is important, as its graduate education enterprise fuels California's role as a national and international leader.

UC's goals for graduate education are to offer outstanding degree programs, advance research, support undergraduate instruction, and prepare students to join a professional workforce or innovate on behalf of it. UC produces the leaders of the future — the teachers, artists, thinkers, innovators, scientists, inventors, doctors, lawyers, and nurses; and it creates an environment of exploration and discovery that stimulates innovation and invention. UC's internationally renowned graduate education enterprise serves to drive California's economy and its role as a global leader. UC graduate education allows California to grow, create jobs, drive industry, tackle unique challenges facing the state, and help improve the everyday lives of its inhabitants.

Types of graduate degrees

UC awards both graduate academic degrees and graduate professional degrees.

Graduate academic degrees — These include academic doctoral and academic master's degrees in education, life sciences, physical sciences, social sciences, arts, humanities, and engineering/computer science. The largest proportion of graduate academic degrees awarded at UC is in the STEM fields — science, technology, engineering, and mathematics. From the 2016–17 to 2019–20 academic years, more than 70 percent of UC graduate academic degrees were awarded in STEM fields.

Graduate professional degrees — UC's professional degrees include professional master's and professional practice degrees in fields such as law, medicine, nursing, business, education, architecture, public policy, and the arts. The graduate professional category includes professional master's degrees (e.g., M.B.A., M.Ed.) and professional practice degrees (e.g., J.D., M.D.). In the field of medicine, UC offers the nation's largest instructional program in health care and health sciences.

The University maintains multiple funding models for its graduate professional programs. Many partially Statesupported programs (e.g., M.B.A., law, medicine) assess professional degree supplemental tuition (PDST), which allows the professional schools to ensure their excellence, accessibility, and inclusiveness, and assists with affordability (by requiring return-to-aid for tuition revenue). Programs assessing PDST commit substantial resources to student financial support, including grants and scholarships. Since PDST began in 1994, both the number of professional degree programs that charge PDST and the amount charged have increased.

Other UC graduate professional programs, primarily master's programs, follow a self-supporting funding model. The largest are business and management programs. These programs receive no State support and are funded entirely by revenues generated by the program and other non-State revenues. Self-supporting programs allow the University to serve additional students beyond those supported through State resources. They also fulfill higher education and workforce needs. Some self-supporting programs serve nontraditional populations such as full-time employees, mid-career professionals, and international students with specialized goals. Many programs are offered through an alternative mode of delivery, such as online or hybrid instruction, alternative scheduling, or at off-campus locations.

Graduate enrollment share

UC's graduate education enterprise enrolls over 59,000 students, with doctoral students representing the largest number (28,600), and professional (23,800) and master's (6,800) comprising the remainder. Despite its size, UC's graduate education enterprise represents a smaller share of its total enrollment than that of its peers. Graduate students comprise 21 percent of total student enrollment at UC, which is lower than the proportion of graduate enrollment among other Association of American Universities public (27 percent) and private (56 percent) peer institutions. In addition, while the graduate share of UC's total enrollment has remained relatively constant over the last decade at 21 percent, the doctoral enrollment percentage has declined. The graduate professional percentage has risen steadily (4.2.1). Despite these enrollment trends, UC research degree production is comparable to other public university competitors. For example, in number of research degrees produced and percentage of research degrees produced in comparison to other types of degrees, UC compares favorably to its competitors. While enrollment needs will vary by program, it is important that academic doctoral student enrollment be supported at sufficient levels to drive UC's research enterprise and support faculty innovation.

UC is proposing a multi-year framework that seeks to improve degree attainment and produce 200,000 more degrees through 2030, in addition to the projected one million degrees. About 40,000 of these additional degrees would be at the graduate level.

Supporting diverse career paths and making research accessible

To promote and highlight the work of master's and doctoral students across UC campuses, UC holds an annual research communication competition called UC Grad Slam. The event challenges its ten participants — the winners of each campus's Grad Slam — to distill years of academic research into a three-minute presentation free of technical lingo. Grad Slam encourages students to communicate their research in a clear and compelling way to non-specialists — a skill that employers need and value. Campuses provide workshops and resources for students to develop this skill set. The contest also demonstrates to the public that UC research benefits their lives in both ordinary and quite extraordinary ways. While UC was unable to hold the 2020 installment of systemwide Grad Slam due to the coronavirus pandemic, Grad Slam returned in 2021 in a virtual format. UC Merced Applied Mathematics Ph.D. student, Shayna Bennett, was named systemwide champion for presenting her dissertation research, "A New Tool to Fight Invasive Species."

UC graduate students also applied their research to make important contributions to the fight against COVID-19. One of the primary symptoms of COVID-19 is difficulty breathing, and approximately one percent of people who contract the virus require ventilators to push air in and out of the patient's lungs and support their recovery. As COVID-19 became more widespread, many hospitals experienced acute shortages of ventilators to treat patients. Along with Drs. James Friend and Lonnie Petersen, UC San Diego graduate students developed simple, ready-touse ventilators through 3-D printing technology — which is only one example of many where graduate students are addressing global concerns in real time.

Career Pathways Survey and UC Graduate Student Experience Survey (UCGSES)

In 2017, UC launched the Ph.D. Career Pathways Survey, which is a partnership between the University of California and the Council of Graduate Schools. The survey's third phase was conducted in 2020, and its purpose is to better understand the career preparation and pathways of Ph.D. students and alumni. While the Council of Graduate Schools is specifically focused on humanities and STEM Ph.D.'s, the University of California is collecting data from doctoral students and alumni in all disciplines.

Results showed high levels of employment and satisfaction with UC Ph.D. programs. Ninety-two percent of respondents were working in a job for pay, 69 percent indicated they were working in a field closely related to their degree, and 54 percent were employed at a higher education institution. Eighty-eight percent of respondents stated that their Ph.D. training prepared them well for their current job, 76 percent stated that they would pursue a Ph.D. in the same field, and 80 percent indicated they would choose the same institution for their Ph.D. education if given the opportunity to choose again.

In 2021, UC launched the UC Graduate Student Experience Survey (UCGSES). This systemwide survey was developed based on the UC Graduate Well Being Survey, Ph.D. Career Pathways Survey, and UC campus graduate and professional student surveys. This survey will be administered every two years to solicit graduate and professional students' opinions on a broad range of academic and co-curricular experiences, including instruction and training, advising, basic needs, and student services.

Equity and inclusion: Expanding academic pathways

A more diverse and inclusive community of scholars at all levels has been a longstanding goal for UC, but progress at the doctoral, postdoctoral, and faculty levels has been particularly slow. UC's difficulties reflect challenges in both enrolling individuals from underrepresented groups in doctoral programs and in attracting and hiring them as postdoctoral scholars and faculty. Systemwide initiatives aimed at increasing the diversity of UC's academic community include:

UC-Hispanic Serving Institutions Doctoral Diversity Initiative (UC-HSI DDI) — Launched in fall 2019, the UC-HSI DDI aims to improve faculty diversity by enhancing pathways to the professoriate for underrepresented students from California Hispanic Serving Institutions (HSIs). The UC-HSI DDI includes two components: 1) competitive grant awards to UC faculty/faculty administrators to support short-term and long-term programs/projects to enhance and expand pathways to the professoriate for underrepresented students; and 2) funding to directly support graduate student preparation for the professoriate. Funding includes resources to support a limited number of Ph.D. students, named UC President's Pre-Professoriate Fellows (UC PPPF), who are California HSI alumni and have advanced to candidacy at UC. The UC President's Pre-Professoriate Fellowship fosters their interest in and preparation for the professoriate. Additional professional development support for underrepresented Ph.D. students is provided to encourage and help equip them to consider careers in the professoriate. Another goal of the UC-HSI DDI is to enhance the climate of academic programs through interventions, incentives and efforts that foster an academic culture of inclusion and equity — especially for faculty and students from underrepresented communities.

The inaugural cycle of the UC-HSI DDI received great interest and an impressive response for this systemwide competition. In 2019–20, the Initiative received 31 proposals, totaling a funding request of nearly \$7 million. Six of 31 grants were awarded to the Davis, Irvine, Merced, Riverside and San Diego campuses. Three grants focus on STEM fields, one on social sciences, and two are interdisciplinary; together, these projects partner with 24 HSIs, and involve over 350 students. Despite the COVID-19 pandemic, grantees continue to implement their proposed

efforts to support the UC-HSI DDI using remote strategies and developing web-based resources to support students and faculty dedicated to accessing and improving pathways to the professoriate for URM scholars. The Initiative also supported 29 UC President's Pre-Professoriate Fellows in 2020.

UC LEADS — The University of California Leadership Excellence through Advanced DegreeS (UC LEADS) program prepares promising UC undergraduate students for advanced education in science, technology, engineering, and mathematics (STEM) fields. The program prepares underrepresented UC undergraduate students for doctoral education opportunities at a UC campus. From its inception in 2000, 1,107 scholars participated in UC LEADS, celebrating 20 years of programmatic effort and yielding significant outcomes Ninety-nine percent of UC LEADS scholars graduate with their undergraduate degree, 76 percent pursue graduate school or have already earned degrees in a master's or doctoral program, and 47 percent of UC LEADS scholars attended UC for graduate school. Given the importance of gender and ethnic equity within STEM-based doctoral programs, it is notable that 46 percent are women, 54 percent are first-generation college students, and 48 percent are from underrepresented minority groups. Thirty-seven UC LEADS alumni are now working as tenure track faculty, including seven within the UC system, while another 12 are employed in non-tenure track faculty positions and 11 hold other academic career positions. Others work around the world as industry and government scientists, teachers, medical doctors, and entrepreneurs.

UC-HBCU Initiative — The University of California-Historically Black Colleges and Universities (UC-HBCU) Initiative was established to increase the number of African Americans completing Ph.D.'s at UC by investing in relationships between UC faculty and HBCUs. The program has raised UC's profile within the HBCU community and facilitated faculty research collaborations in addition to enrolling and retaining students. UC has hosted 644 UC-HBCU summer interns across nine campuses since it first hosted students in summer 2012. UC currently has 69 Ph.D. fellows enrolled at eight UC campuses (Berkeley, Davis, Irvine, UCLA, Santa Barbara, Santa Cruz, San Diego, and Riverside) as a direct result of the Initiative: 77 percent in STEM fields, and 23 percent in Social Sciences/Humanities. Ten Ph.D. and 12 master's students have graduated.

University of California President's Postdoctoral Fellowship Program (PPFP) — The PPFP was established to encourage outstanding women and minority Ph.D. recipients to pursue academic careers at UC. The program offers postdoctoral research fellowships, professional development, and faculty mentoring to outstanding scholars in all fields whose research, teaching, and service will contribute to diversity and equal opportunity at UC. More information about the PPFP is presented in Chapters 5.

Looking ahead

The University continues to develop programs to enhance the graduate student experience. UC's overall excellence rests on the strength and scope of its graduate programs. Unlike undergraduate enrollment planning, which is based on California's Master Plan, graduate enrollment planning includes the assessment of state and national needs, faculty expertise, program quality (which includes international competitiveness), and financial support. In early 2018, Provost Michael Brown convened a workgroup on graduate education, which examined the current condition and needs of UC's academic doctoral education enterprise. The workgroup, a subcommittee of the Academic Planning Council, examined key areas of importance within graduate education such as providing multi-year guaranteed funding packages upon admission, improving student stipend amounts, prioritizing mental health and well-being, improving diversity, equity and inclusion, and enhancing professional development support. The workgroup issued its final report in 2019, urgently stressing that without adequate support for doctoral

education, UC risks its excellence and continued role as a key contributor to California's economy and a global leader in research.

The report highlights long-term inadequacies of UC graduate student support, including the negative impact of Ph.D. students not being offered multi-year packages upon admission. This issue continues to be challenging. However, some progress is being made. Currently, UC Irvine, UC Santa Cruz, and UC San Diego guarantee five years of funding support for academic doctoral admits. UC Berkeley has committed to offering this support in the near future and UC Davis has expressed its commitment to work toward the goal of offering such support. The remaining campuses continue to examine this matter. These commitments let students know they will have guaranteed funding support (in various forms, including fellowship, graduate student researcher appointment, and/or teaching assistantship) for five years or for the normative time to complete their degree (if less than five years). The assurance that they will be funded each year can help reduce some of the financial stress students face. In an effort to help mitigate financial concerns and better support doctoral students, several campuses are also offering various forms of cost-of-living or housing supplements.

As part of the UC 2030 planning goals to diversify pathways to the professoriate, UC leadership has expressed interest in examining opportunities to enhance the undergraduate to graduate to professoriate pipeline. Enhanced effort in this area is expected in the future.

For more information

UCOP Graduate Studies: ucop.edu/graduate-studies

Time to doctorate at UC: universityofcalifornia.edu/infocenter/time-to-doctorate

Doctoral completion rates: universityofcalifornia.edu/infocenter/doctoral-rates

Graduate student financial support and net cost of attendance: universityofcalifornia.edu/infocenter/net-cost

Employment and doctoral experience of Ph.D. recipients: universityofcalifornia.edu/infocenter/employment-and-doctoral-experience-phd-recipients

Doctoral program data: universityofcalifornia.edu/infocenter/doctoral-program

UC Grad Slam: gradslam.universityofcalifornia.edu

UC-Hispanic Serving Institutions Doctoral Diversity Initiative (UC-HSI DDI): ucop.edu/graduate-studies/initiatives-outreach/uc-hsi-ddi.html

UC LEADS: ucleads.ucop.edu/index.html

UC-HBCU Initiative:ucop.edu/uc-hbcu-initiative/index.html

President's Postdoctoral Fellowship Program: ppfp.ucop.edu/info/index.html

UC Academic Planning Council, Graduate Education Workgroup's Report "Recommendations for Greater Support of Doctoral Education," (June 2019): ucop.edu/graduate-studies/_files/apc-grad-ed-wrkgrp-report.pdf

4.1.1

Universitywide graduate academic applications have increased substantially since 2011, while admits and new enrollments have remained relatively flat.

Graduate academic applications admits and new enrollees by degree program.

University	vide						
Fall 2011 to	o Fall 2020						
80,000							
60.000							
40,000							
40,000							
20,000							
0							
2011 2012	2013 2014 2015 2016	2017 2018 2019 202	20 2011 2012	2013 2014 2015 2016	5 2017 2018 2019 2020		
	Master's Degree	e Programs		Doctoral Degree P	rograms		
	-		A -1 1	- -	-		
	,	Applications	Admits — Nev	v Enrollees			
		Master's Deg	ree Programs	Doctoral Deg	Doctoral Degree Programs		
		2011	2020	2011	2020		
Physical sci/ Math	Applications	1,684	2,639	10,815	14,765		
	Admits	416	717	2,423	3,191		
	New Enrollees	171	210	875	973		
Engineering/Comp sci	Applications	14,175	31,493	16,182	16,856		
	Admits	3,963	9,256	2,741	2,759		
	New Enrollees	1,535	1,896	1,056	1,068		
Life science	Applications	2,072	2,521	10,517	14,396		
	Admits	698	950	1,967	2,301		
	New Enrollees	384	456	890	1,149		
Social sci/ Psych	Applications	912	899	11,331	11,250		
	Admits	381	583	1,679	1,528		
	New Enrollees	160	220	762	638		
Arts & Humanities	Applications	4,339	3,843	7,341	6,522		
	Admits	497	465	1,221	1,022		
	New Enrollees	316	264	600	510		
Interdisciplinary/Othe	er Applications	1,518	2,298	5,094	4,938		
, ,,	Admits	540	1,167	802	858		
	New Enrollees	217	485	449	450		

Source: UC Corporate Student System. A small number of professional doctoral programs are also included in these data. Universitywide applications and admits are duplicated in this report since students often apply to more than one campus.

The demand for UC academic master's and doctoral programs has increased since 2011. Applications for admission grew from 85,000 in 2011 to 112,400 in 2020. Nearly all of this increased demand has come from prospective international students, with international applications growing from 40,300 to 66,200. Engineering and computer science programs have higher demand from international students than do other disciplines. Recent survey data compiled by the Council of Graduate Schools show a similar

nationwide trend of growth, with engineering as the most popular field.¹

Since 2011, admits increased from 17,300 to 24,700 in 2020, and new enrollments increased from 7,400 to 8,300. Though applications are now predominantly (59 percent) from international students, both admits and new enrollments of domestic students exceed those of international students.

4.1 GRADUATE ACADEMIC ADMISSIONS

Since 2011, the number and share of graduate academic admissions have significantly increased for international students.





Fall 2011 and 2020



Source: UC Data Warehouse

International students represent the majority of applicants, admits, and new enrollees in engineering and computer science graduate programs. The share of international students in all other disciplines also increased between 2011 and 2020. Social science and humanities programs have the highest shares of enrollment among underrepresented minority students, and those shares increased between 2011 and 2020. Given recent events, including political decisions affecting visas to the COVID-19 pandemic, UC and the national higher education community are examining the impact on international students and UC degree programs. Graduate enrollment, as a share of UC's total undergraduate and graduate enrollment, has remained relatively steady since 2001.



4.2.1 Graduate enrollment share of total Universitywide Fall 2001 to Fall 2020

Source: UC Corporate Student System. Academic master's students include post-baccalaureate, teaching-credential students. Graduate professional includes professional master's (e.g., M.B.A., M.Ed.) and professional practice (e.g., J.D., M.D.) degrees.¹

With 21 percent graduate enrollment in 2020, including health science students, UC was lower than the average for non-UC AAU¹ public institutions, at 27 percent, and the average for AAU private institutions, at 56 percent.

In fall 2020, the proportion of academic doctoral students varied across UC's general campuses, from eight percent at Riverside, Santa Cruz, and Merced to 12 percent at Berkeley. At San Francisco, an exclusively graduate health-sciences campus, academic doctoral students made up 29 percent of fall 2020 enrollments. Since 2010, the share of academic doctoral students has declined at most campuses due to more rapid growth in the undergraduate, master's, and professional populations. UC awards 23 percent of California's graduate academic master's degrees, 62 percent of its academic doctoral degrees, and 21 percent of its graduate professional practice degrees.

Percent of students who are academic doctoral						
	Fall 2010	Fall 2020				
San Francisco	26%	29%				
Berkeley	16%	12%				
Los Angeles	12%	11%				
Davis	11%	10%				
Santa Barbara	11%	10%				
San Diego	10%	9%				
Riverside	9%	8%				
Irvine	10%	9%				
Santa Cruz	7%	8%				
Merced	5%	8%				
Universitywide	11%	10%				
	(26,250)	(28,605)				
	Source: UC	Data Warehouse				

¹ A list of the institutions in the AAU comparison groups can be found in the data glossary.

UC net stipends remain below competitive offers, although the gap decreased substantially between 2013 and 2020.

4.2.2 Average net stipend offered to graduate academic doctoral students admitted to UC compared with their first-choice non-UC schools
Universitywide
2013, 2017, and 2020

By residency



2013 2017 2020



By broad discipline

Source: UC Graduate Student Support Survey. Graduate academic professional doctoral programs include EdD, D.Env., DrPH., D.P.T.

and D.N.S.

Doctoral students are crucial to a university's research enterprise and instructional programs. To attract the most highly qualified applicants, universities offer aid packages that include the cost of tuition and stipends. Net stipend is the amount of aid that students have for living expenses after tuition and fees are paid. It does not include loans that the student may be offered. The "stipend gap" varies by discipline, as shown in the chart above. Since 2013, UC has made considerable progress in closing the net stipend gap with competing

institutions, reducing it from \$1,600 to about \$900 in 2020. However, a considerable gap remains between UC's average net stipend and growing living costs in California. This is a significant problem with negative implications for UC research and graduate education. It poses challenges in recruitment of students, and for enrolled students, inhibits their ability to adequately meet basic living needs. California's high cost of living is also detrimental to UC faculty recruitment and retention. More than half of UC doctoral students graduate without debt. Doctoral students in the physical and life sciences have seen smaller increases in debt since 2005–06 and graduate with less average loan debt than those in the social sciences and arts and humanities.

4.2.3 Academic doctoral students' graduate debt at graduation, by discipline, domestic students Universitywide



Graduating classes of 2005–06 to 2019–20 (every two years)

Depending on the field of study, between 73 percent (arts and humanities) and 93 percent (physical and life sciences) of UC doctoral students take on no additional debt during graduate school.

Several factors account for the difference in debt burden between doctoral students in the physical and life sciences and those in other disciplines. Physical and life science students are more likely to be supported by research grants, which facilitates Source: Corporate Student System¹

their ability to spend more time on research, rather than carrying consistent teaching assistant responsibilities, as is the more common funding model in arts and humanities and some social sciences. In addition, physical and life science programs take less time on average to complete than do programs in the social sciences or arts and humanities (partly due to the noted funding model differences).

¹ Debt categories are inflation-adjusted in 2019 dollars using CA CPI-W. "Other" includes interdisciplinary and professional fields. Life sciences include health sciences.

Graduates with the highest debt levels come from professional schools that charge higher supplemental tuition.

4.2.4 Graduate professional degree student debt at graduation, by discipline, domestic students Universitywide



Graduating classes of 2005–06 to 2019–20 (every two years)

Source: UC Corporate Student System¹

On average, 48 percent of the aid awarded to graduate professional degree students comes in the form of loans rather than fellowships or grants. By comparison, loans constitute three percent of the aid awarded to graduate academic students. Graduate funding models require greater reliance on loans for professional degree students, as their programs are of shorter duration, and many fields offer potentially higher incomes after graduation. Most graduate professional degree students finance part of their education by borrowing. The increases since 2005–06 in average inflation-adjusted debt levels of graduating professional degree students vary considerably. Increases in graduate debt result from a combination of factors, including steady growth in tuition, cost of living increases, and greater student reliance on federal student loan programs.

¹ Average debt is among graduates with debt. Debt categories are inflation-adjusted in 2019 dollars using CA CPI-W.

Like other major research universities, UC awards a high proportion of graduate academic degrees in science, technology, engineering, and mathematics (STEM) fields.



4.3.1 Graduate academic degrees awarded by discipline UC and AAU private and public comparison institutions Number of degrees grouped in 3-year intervals: 2007–08 to 2009–10, 2010–11 to 2012–13, 2013–14 to 2015–16, 2016–17 to 2018–19; campus-level data for 2016–17 to 2018–19.

UC graduates have had major impacts on the nation and the world — creating much of California's biotechnology and computer industries, developing research breakthroughs that have led to major medical advances, shaping ideas about our world and culture, creating the economic and social infrastructure of our communities, and assuming political leadership in California and the nation.

UC's graduate STEM programs reflect the predominant industries in California's economy. In

Source: IPEDS¹

addition to leading all California institutions in the production of engineering and computer science degrees, UC far outpaces them in the production of degrees in the biological sciences — key to driving the growth of California's biotechnology sector.

Since 2007–08, the number of graduate academic degrees awarded at UC grew by 43 percent, compared to 59 percent at the group of AAU private institutions and 38 percent for the group of non-UC AAU public institutions.

¹ "Other" includes interdisciplinary and academic degrees in otherwise professional fields, such as architecture, communications, and public administration.

4.3 GRADUATE ACADEMIC STUDENT OUTCOMES

UC's doctoral completion rate increased in nearly every field over the two most recent cohorts studied.

4.3.2 Doctoral completion rates after ten years, by broad field Universitywide Fall 2002–2004, 2005–2007, and 2008–2010 entry cohorts



Source: UCOP Corporate Student System

The Universitywide ten-year doctoral completion rate across all fields for the fall 2008–10 entering cohorts was 72 percent. This is an increase from the 67 percent completion rate reported for the 2002– 04 cohort. Among broad disciplines, life sciences and health sciences continue to have the highest completion rates. Engineering and computer sciences, social sciences, and humanities showed the lowest rates, owing to the longer normative time in those fields and different financial support models, although both experienced an increase compared to previous cohorts. The overall improvement in ten-year completion rates may be attributed to at least two factors. First, student demographics have shifted to include a larger percentage of international students, who, as a group, have a higher ten-year completion rate than the overall cohort's rate. (A variety of factors influence this difference, including different tuition rates for international students, which can drive motivation/expectation to complete programs sooner rather than later.) Second, shifts over time in enrollment toward disciplines with higher completion rates (STEM fields) affect the overall tenyear completion rate.

The Doctoral Completion Rates dashboard is available at:

universityofcalifornia.edu/infocenter/doctoral-rates

4.3 GRADUATE ACADEMIC STUDENT OUTCOMES

UC's median ten-year time to doctorate by ethnicity and gender compares well with AAU institutions.



 4.3.3 Median ten-year time-to-doctorate, by ethnicity and gender Universitywide, AAU public and AAU private comparison institutions 2015 to 2017 exit cohort

By gender



Source: Survey of Earned Doctorates, National Opinion Research Center

The median number of years required to complete a doctoral degree at UC (elapsed time-to-doctorate) is comparable to that at other major research universities. Men and women complete the doctorate in about the same amount of time at UC. Students from underrepresented groups (URG) have longer time-to-doctorate at UC and comparison institutions, whereas international students required substantially less time to complete the doctorate.

It should be noted while UC's URG completion rate is comparable to that of non-UCs, the gap between UC URGs and non-URGs is the largest among the comparison groups. At this point, it is a small difference but worth tracking to be sure it does not increase and better yet to see if it is decreased/eliminated.

The Time to Doctorate dashboard is available at: universityofcalifornia.edu/infocenter/time-to-doctorate

UC's median ten-year time-to-doctorate varies by ethnicity, gender, and discipline.

4.3.4 Median ten-year time-to-doctorate, by ethnicity and gender, by discipline Universitywide

2017 through 2019 exit cohort



By discipline and ethnicity



■ Registered – Elapsed

Source: UCOP Corporate Student System

Three out of eight UC disciplines (engineering and computer science, health sciences, and physical sciences) graduate students from underrepresented groups (URG) with longer registered time-todoctorate (RTD) than non-URG and international students. Arts and humanities fields graduate URG students have slightly shorter RTD than non-URG students. For elapsed time-to-doctorate (ETD), the health sciences, physical sciences, and social sciences graduate URG students with longer ETD than non-URG and international students. International students have shorter ETD and RTD in humanities, life science, and physical science disciplines.

Men and women generally have comparable timeto-doctorate, with exceptions in health sciences and professional fields, where women have a longer ETD and RTD; the arts, where women have a longer ETD; and the humanities, where men have longer RTD.

The Time to Doctorate dashboard is available at: universityofcalifornia.edu/infocenter/time-to-doctorate

4.3 GRADUATE ACADEMIC STUDENT OUTCOMES

More than half of UC's academic doctoral degree recipients plan to stay in California, a greater share than those who attended high school or college in California.

4.3.5 Origin and planned destination of UC academic doctoral degree recipients Universitywide 2008-09 to 2017-18



📕 Received first bachelor's in CA 📕 Plan to stay in CA after Ph.D.

The most recent data for UC's doctoral degree recipients, based on those graduating between 2008–09 and 2017–18, show that over half plan to stay in California. Sixty-two percent of domestic doctoral degree recipients intend to stay, though only 40 percent of this cohort received their bachelor's degrees in California, and only 38 percent attended high school in California. This proportion is higher in engineering, computer science, and life sciences fields, indicating that UC graduates are an important force in California's robust economy in these areas.

Source: Survey of Earned Doctorates

Though a negligible share of UC's international (not a U.S. citizen nor permanent resident) doctoral recipients attended high school or college in California, half intend to stay after graduation.

The Survey of Earned Doctorates (SED) is conducted for all individuals receiving a research doctoral degree. It is sponsored by the National Science Foundation, National Institutes of Health, U.S. Department of Education, U.S. Department of Agriculture, National Endowment for the Humanities, and NASA.

4.3 GRADUATE ACADEMIC STUDENT OUTCOMES

Half of UC academic doctoral and master's graduates who stay in California work in higher education.

4.3.6 Industry of employment of UC graduate academic students in CA, by year after graduation Universitywide





Source: California Employment Development Department and UC Corporate Student System¹

Graduates of UC academic doctoral and master's degree programs go on to work in a broad range of industries in California. UC's engineering and computer science programs supply workers to the state's high-skilled and high-tech industries. Since 2000, over 26,000 graduates of these programs have entered the California workforce, with 34 percent working in the manufacturing sector and 27 percent working in engineering services. Another 24 percent go on to work in the state's internet and computer services industry. About 18 percent of engineering and computer science graduates go on to teaching and research positions in the state's college and university systems.

More than 56,000 graduates of UC academic doctoral and master's degree programs in fields other than engineering/computer science have entered the California workforce since 2000. Over half of them (50 percent) have gone on to work in the state's higher education workforce, which includes all of the two-year and four-year colleges, both public and private. This highlights the critical role of UC's graduate academic programs in producing the cadre of faculty who teach California's future college-educated workforce and conduct research that advances the state and national economies.

The contributions of UC academic doctoral and master's graduates to the state workforce go beyond higher education. About 16 percent of the employed graduates of UC physical sciences and life sciences programs work in the state's manufacturing sector, while another 22 percent work in the engineering industry. This shows that the skills gained in UC academic doctoral and master's programs are both applicable and relevant to key high-tech industries.

The job market for doctoral and master's degree recipients is nationwide, and those who leave California are not tracked in this data source.

¹ Includes very small numbers of graduate professional students, who do not affect the overall picture.

Like other major research universities, UC awards a high proportion of professional degrees in business.



4.4.1 Graduate professional degrees awarded by discipline
UC and AAU private and public comparison institutions
Number of degrees grouped in 3-year intervals: 2006–07 to 2008-09, 2009–10 to 2011–12, 2012–13 to 2014–15, 2015–16 to 2017–18; campus-level data for 2016–17 to 2018–19.

Source: IPEDS¹

The proportion of professional degrees awarded by UC is comparable to AAU private and public institutions, with the greatest proportion of degrees awarded in business. The number and size of graduate professional degree programs vary by campus, with UCLA awarding the greatest number of professional degrees.

UC has also grown in the proportion of law degrees, in part due to the School of Law at UC Irvine, which opened in 2009. Since 2003, UC has opened new professional schools in several other areas, including the Rady School of Management at UC San Diego in 2003, the School of Medicine at UC Riverside in 2013, the Sue and Bill Gross School of Nursing at UC Irvine in 2017, and the School of Public Health at UC San Diego in 2019.

¹ UC Merced added a professional master's program in public health in 2017. "Other" includes disciplines such as public administration, architecture, communications, and library science.

4.4 GRADUATE PROFESSIONAL STUDENT OUTCOMES

UC professional programs prepare graduates for careers related to their field of study.

4.4.2 Industry of employment of UC graduate professional students in California, by year after graduation Universitywide



2000 to 2017 graduating cohorts

Source: California Employment Development Department and UC Corporate Student System¹

Graduates of UC Master of Business Administration (MBA) programs contribute significantly to the state's high-skilled and high-tech industries. The 25,000 UC MBA graduates who have entered the California workforce since 2000 have worked in a wide array of industries, including manufacturing (26 percent), finance and insurance (20 percent), retail and wholesale trade (19 percent), and internet and computer systems (22 percent).

Over 15,000 graduates of UC health science professional practice programs (e.g., M.D., D.D.S., Pharm.D.) have gone on to work in California since 2000. The majority of these graduates (72 percent) go on to work in the state's health care and social assistance sector. This highlights UC's role, per the Master Plan, as the state's sole public provider of many health science professional practice degrees and validates UC's success in fulfilling that role. UC health science graduates also play key roles in other areas of public service in the state, including 41 percent who go on to work in the state's higher education system and 18 percent who work in state government at some point after receiving their degrees.

UC law school graduates go on to work in two main areas — legal services and government. Of the 12,000 UC law school graduates who have worked in California since 2000, about 79 percent eventually find positions in the legal services industry. Another 17 percent go on to work in the public sector as government prosecutors and public defenders, and in other public agency roles. A large percentage of law school graduates start off in legal services initially after receiving their degree (73 percent), but by ten years after graduation this percentage has fallen to about 45 percent. The percent of UC law school graduates in government rises from seven percent to 16 percent over the same period.

¹ Includes very small numbers of graduate academic students (e.g., Ph.D. business), which do not affect the overall picture.

FACULTY AND OTHER ACADEMIC EMPLOYEES



FACULTY AND OTHER ACADEMIC EMPLOYEES

Overview

The University of California's distinguished faculty and other academic appointees serve as a rich source of innovation, discovery, and mentorship. They provide top-quality education to students, develop groundbreaking research, and serve California's diverse communities. Despite the operational and financial challenges created by the COVID-19 pandemic in 2020 and 2021, UC faculty and other academic appointees quickly rose to the challenge of engaging in the University's mission of teaching, research, and service in a remote environment. Recognizing the challenges faced by faculty and other academic appointees, the University of California adopted numerous programs and exceptions to policy, providing flexibility to faculty and other academic appointees to conduct their work.

Describing the academic workforce

Faculty are the most prominent face of UC's academic workforce, but there are many other academic roles, totaling over 50,000 full-time equivalents (FTE) across over more than 73,000 individuals. Over 59 percent of faculty are in general campus schools, while the other 41 percent are in the health sciences.

Ladder-rank and equivalent faculty are the core of the faculty in advancing the UC's tripartite mission of teaching, research, and public service. These faculty can advance to tenure or equivalent status.¹ In the past decade, ladder-rank and equivalent faculty FTE have increased by over 18 percent.

The In-Residence, Professor of Clinical (e.g., Medicine), Health Sciences Clinical Professor, and Adjunct Professor series faculty are found

Academic FTE and Headcount, October 2020						
	FTE	Headcount				
Faculty - Ladder-rank and Equivalent	10,810.5	11,677				
Faculty - Clinical/In-Residence/Adjunct	7,945.4	8,745				
Faculty - Lecturers	2,402.9	4,006				
Other Academic Employees	6,446.8	8,637				
Postdoctoral Scholars	5,253.8	6,157				
Student Teaching/Research Assistants	11,419.9	27,613				
Medical Interns/Residents	6,001.6	6,177				
Grand Total	50,280.9	73,012				

at all campus locations. However, their numbers are concentrated in the health sciences schools; their duties vary in their focus on research, clinical care, and teaching. Lecturers focus on instruction and are hired into part-time and full-time positions. Lecturers can achieve continuing status.

Postdoctoral scholars conduct research under the general oversight of a faculty mentor. They are typically paid through research contracts and grants, so their numbers concentrate in the medical and STEM fields and vary with available grant funding.

Other academic appointees include academic researchers, cooperative extension advisors, and specialists in cooperative extension; librarians; faculty administrators such as Deans; university extension instructors; graduate students appointed as Teaching Assistants and Research Assistants; and residents and interns in medicine and other academic health sciences programs.

¹ Security of Employment or the tenure-equivalent of associate and full agronomists and astronomers.

Diversity

The University of California is committed to diversity and excellence in its faculty and academic workforce. The proportion of women, African American, and Hispanic/Latinx faculty has grown at a modest pace. Newer faculty cohorts are more diverse than past cohorts.

Among tenured and tenure-track faculty, UC compares favorably in terms of the proportions of women, African American, and Hispanic/Latinx faculty relative to the comparison eight peer research institutions.¹ Still, UC continues to work to identify opportunities to diversify the faculty and improve recruitment processes and campus climate by tracking recruitment data, by sharing best practices in mentoring and professional development, and by enhancing work-life balance programs.

Varieties of programs have been put in place to strengthen faculty diversity:

Advancing Faculty Diversity — The State of California awarded UC a total of \$8.5 million in one-time funds for four fiscal years, from 2016–17 to 2019–20, to develop an innovative and focused program to increase faculty diversity at UC. The Advancing Faculty Diversity (AFD) program awards these funds on a competitive basis to campus units implementing new, measurable interventions in the faculty recruitment process. In addition, since 2018–19, twenty awards have been funded by the Office of the President to improve academic climate and increase faculty retention. Some of the successful interventions that correlate with hiring diverse faculty include the use of contributions to diversity statements early in the evaluation process; targeting potential faculty earlier in their careers through support for postdoctoral work; outreach by faculty to actively recruit candidates; revised evaluation practices, including the use of rubrics to guide decision-making; strong leadership and sustained and strategic involvement from unit leaders; introducing new voices, including students, in the recruitment and evaluation process; building of new faculty, equity, and inclusion data dashboards; research on and support for pathways to faculty leadership positions; and examinations of whether service loads differ by gender or race/ethnicity. Since 2019–20, UCOP committed an additional \$3 million per year in ongoing funds to support additional projects in faculty recruitment; improve climate and retention to pilot innovative recruitment practices; create academic climates to support UC's diverse student body and meaningfully engage faculty throughout their UC careers. Since its inception, a total of forty recruitment and improved climate and retention projects have been funded through the AFD program's competitive process, with all ten campuses receiving at least one award.

President's Postdoctoral Fellowship Program (PPFP) — Established in 1984, the PPFP recruits top scholars who are committed to underserved and minority communities to pursue faculty careers at UC. Between 2016–17 and 2020–21, UC hired 112 fellows as ladder-rank faculty at all ten UC campuses. In addition, more than 20 fellows have been successfully recruited for UC faculty positions that will begin in 2021–22, with 19 others still under consideration. Through Presidential support, UC has increased the number of incentives available to departments that hire fellows and expanded eligibility for hiring incentives to include the health sciences and professional schools. The program is nationally recognized and it leads a partnership of top universities that participate in recruiting top postdoc talent.

Hiring and retention

Overall hiring of UC faculty generally outpaces availabilities of U.S. doctoral degree recipients by race, ethnicity, and gender, with some notable differences by field. STEM fields have a more limited ability to diversify based on Ph.D. availabilities. UC is also looking at the diversity of its own student populations, including bachelor and graduate degree recipients, to increase the diversity of UC's future professoriate.

¹ The comparison eight institutions are University of Illinois, University of Michigan, University at Buffalo, University of Virginia, Harvard University, Massachusetts Institute of Technology, Stanford University, and Yale University.

In recent years, faculty hires have stabilized after several years of increases as UC recovered from severe budget cuts a decade ago and as enrollment growth demanded greater teaching capacity. Faculty separations have grown modestly, primarily due to increasing retirements. UC campuses have drastically scaled back their faculty recruiting due to the economic uncertainty caused by the COVID-19 pandemic, it remains to be seen how soon faculty recruiting can return to a growth trend. Average faculty salaries at UC have improved somewhat in recent years; however, they still trail those at many comparison institutions, particularly a benchmark of the average of salaries at the "Comparison 8," a group of four public and four private institutions.

UC 2030 goals

As part of the multi-year framework adopted by the UC Regents in early 2019, known as UC 2030 — Advancing the California Dream, UC is hoping to receive additional State support to hire 1,100 ladder-rank faculty between 2018– 19 and 2022–23 (5.3.5). Since setting the hiring goal, the University's faculty has grown by nearly 400, or about 3.6 percent. To reach the hiring goal by 2022–23, UC needs to add 700 faculty, or about 6.6 percent, over the next two years. The University is at risk of not achieving this goal as the requisite hiring rate is nearly double that of recent trends. Nonetheless, with growth, UC is hoping to continue to increase the diversity of its ladder-rank faculty, which also involves retaining faculty who contribute to that diversity.

Between 2014 and 2020, the share of Universitywide faculty who are African American increased from 2.7 percent to 3.5 percent, and the share who are Hispanic/Latinx increased from 6.4 percent to 7.9 percent. The number of African American faculty members went from 256 to 381, a 49 percent increase, and the number of Hispanic/Latinx faculty members increased from 614 to 855, a 39 percent increase.

For more information

UC Academic Senate: universityofcalifornia.edu/senate

UCOP Academic Personnel and Programs: ucop.edu/academic-personnel-programs

UC employee headcount data: universityofcalifornia.edu/infocenter/uc-employee-headcount

UC employee FTE data: universityofcalifornia.edu/infocenter/employee-fte

UC employee diversity data: universityofcalifornia.edu/infocenter/uc-workforce-diversity

Annual wage reporting: universityofcalifornia.edu/infocenter/annual-wage-reporting

Faculty diversity website: ucop.edu/faculty-diversity/index.html

UC 2030 goals: universityofcalifornia.edu/infocenter/uc-2030-dashboard

5.1 ACADEMIC WORKFORCE

UC faculty have increased to accommodate a growing student body, relying more on ladder rank faculty today than in years past.



5.1.1 General campus faculty FTE total by type Universitywide October 2011 to 2020

Source: UC Corporate Personnel System

Since 2011, faculty size has increased by 2,200 FTE, or 23 percent. While all faculty types have grown, the most pronounced increase has been among lecturers, who increased over 41 percent during this period. About one in every five faculty is a lecturer.

Ladder-rank faculty have grown by a more modest 19 percent, but they still make up over 76 percent of faculty FTE.

At UC, lecturers do not have research responsibilities and therefore focus on teaching. These faculty help meet the instructional needs of UC's growing enrollment.

5.1 Academic Workforce

General campus faculty are mostly concentrated in arts, humanities, and the social sciences.

5.1.2 General campus faculty headcount by discipline Universitywide October 2020



Faculty are employed in hundreds of departments across the ten campuses. Most health sciences faculty serve in the schools of medicine, with smaller numbers in other health sciences disciplines such as dentistry, nursing, pharmacy, veterinary medicine, optometry, and public health. General campus faculty are spread across a spectrum of disciplines. The disciplines with the most undergraduate majors also tend to have the most faculty. Source: UC Corporate Personnel System

Different disciplines rely on varying types of faculty to fulfill their teaching and research missions. Ladder-rank faculty are the mainstay of the University mission of teaching, research, and service, and are employed throughout all academic disciplinary areas. Lecturers are concentrated in certain disciplines, such as the arts and humanities, often to support general education requirements in those areas. Lecturer positions are also common in the professional schools.

5.1 ACADEMIC WORKFORCE

The non-faculty academic workforce has increased steadily, particularly student teaching and research assistants and medical interns. Growth in other categories aligns closely with faculty growth and the availability of research funding.



5.1.3 Non-faculty academic workforce FTE Universitywide

Source: UC Corporate Personnel System

The non-faculty academic workforce has expanded alongside student and faculty growth in the last decade, increasing by 3,661 FTE, or 14 percent, over this period.

Student teaching and research assistants as well as health sciences residents and interns have increased in number. Student teaching and research assistants hold part-time appointments in conjunction with their graduate studies. FTE of student assistants and residents/interns has increased in tandem with enrollment increases and expansion of health sciences programs over this time.

Postdoctoral scholars and other academic researchers, two groups vital to the research mission, have also grown in line with faculty FTE. Contracts and grants from external sponsors support the vast majority of researchers in the academic workforce, with the federal government providing most research funding. Chapter 9, Research, provides additional details on the composition of the research workforce.

Postdoctoral scholars are concentrated in medicine, science, and engineering, as well as at campuses with larger research programs in those fields.

5.1.4 Postdoctoral scholar headcount By campus and discipline October 2020

	San Francisco	San Diego	Berkeley	Los Angeles	Davis	Irvine	Santa Barbara	Riverside	Santa Cruz	Merced	
Medicine	972	511		353	191	47		19			2,093
Life Sciences		133	318	62	314	129	12	102	32	7	1,109
Math & Physical Sciences		248	233	125	56	81	93	50	65	27	978
Engineering & CS		165	225	117	80	75	151	41	29	22	905
Other Health Sciences	188	32	17	79	73	21					410
Interdisciplinary/ Other	٠	25	173	38	37	25	33	4	7	3	345
Social Science & Psychology		31	51	58	27	11	15	6	1	1	201
Business, Mgmt, Law, Other Prof.		3	24	7	3	2		4			43
Education		3	5	8	8	11		4			39
Arts & Humanities		3	5	6	3	2	7	3	2	3	34
	1,160	1,154	1,051	853	792	404	311	233	136	63	6,157

Postdoctoral scholars have completed their doctoral degrees and conduct research under the direction and supervision of faculty mentors in preparation for academic or research careers. Since most of their funding comes from contracts and grants, they are particularly prevalent in fields that receive large amounts of grant funding, such as medicine, life sciences, physical sciences, and engineering. Source: UC Corporate Personnel System

Campuses with large research programs in these fields consequently have larger postdoctoral populations.

5.2 ACADEMIC WORKFORCE DIVERSITY

The diversity of UC's academic workforce differs among the types of employees.

5.2.1 Academic workforce race/ethnicity by type Universitywide

October 2011 to 2020



Source: UC Corporate Personnel System

All academic positions have increased in racial/ethnic diversity in the last decade. Positions occupied by students and recent graduates (e.g., teaching assistants, research assistants, postdocs, residents/interns) tend to be more diverse, reflecting increasing diversity in graduate student populations. Ladder-rank faculty diversity has been the slowest to change, due to long tenures and limited availability of candidates in some disciplines. The significant number of international academics reflects a global academic marketplace. UCOP is exploring ways to improve data quality and reverse the recent trend of growth in the share of the population with unknown race/ethnicity. Campus, discipline, and age detail are available through the UC Information Center

(universityofcalifornia.edu/infocenter/uc-workforcediversity). Gender diversity has increased or maintained parity for every academic group but still falls short of parity in several academic appointee categories.

5.2.2 Academic workforce gender by type Universitywide October 2011 to 2020



Women make up half of Lecturers, Other Academic Appointees, and medical interns/residents. The ratio of women among Clinical/In-Residence/Adjunct Faculty and Ladder-rank Faculty has risen steadily since 2011. Gender diversity takes longer to change in populations such as ladder-rank faculty, where turnover is low and tenures are long. Gender ratios among postdoctoral scholars and student assistants Source: UC Corporate Personnel System

have remained relatively steady. Because of the California Gender Recognition Act (SB-179), UC recently revised self-reporting options for gender identity and sexual orientation. UC is working on improving the recent decline in data quality.

5.2 ACADEMIC WORKFORCE DIVERSITY

UC has greater diversity in terms of women and Hispanic/Latinx faculty than its peers.

5.2.3 Percent of tenure and tenure-track faculty who are women and/or African American or Hispanic/Latinx UC and comparison institutions Fall 2019

	Female	African American	African American Female	Hispanic/Latinx	Hispanic/Latinx Female
Berkeley	34%	4.1%	1.7%	5.4%	1.8%
Davis	38%	2.4%	1.5%	6.6%	3.1%
Irvine	38%	3.3%	1.4%	5.6%	2.5%
Los Angeles	35%	4.5%	2.1%	7.7%	2.6%
Merced	41%	1.8%	1.1%	15.0%	6.8%
Riverside	34%	2.9%	1.4%	5.3%	1.9%
San Diego	30%	2.6%	1.7%	6.8%	2.5%
San Francisco	35%	4.0%	1.5%	3.7%	1.2%
Santa Barbara	38%	2.5%	1.1%	7.6%	3.7%
Santa Cruz	41%	2.6%	1.2%	10.2%	5.0%
Buffalo	33%	2.1%	1.0%	2.4%	1.0%
Illinois	35%	4.4%	2.3%	6.4%	2.5%
Michigan	35%	4.4%	2.0%	3.9%	1.5%
Virginia	31%	4.9%	2.1%	2.8%	1.0%
Harvard	30%	4.2%	1.6%	3.4%	1.4%
MIT	24%	3.0%	0.9%	4.4%	0.8%
Stanford	28%	2.1%	0.8%	4.1%	1.5%
Yale	37%	3.4%	1.7%	4.1%	1.8%

Source: IPEDS

Relative to the "Comparison 8" universities (four public institutions: Illinois, Michigan, University at Buffalo, Virginia; four private institutions: Harvard, MIT, Stanford, Yale), most UC campuses have a greater share of faculty who are women. Most UC campuses are at or above the private institutions but below the public ones for African American faculty and African American women faculty shares. Most UC campuses exceed the comparison share of Hispanic/Latinx and Hispanic/Latinx women faculty. However, UC faculty do not reflect the diversity of California or UC's graduate and undergraduate students. One of the UC 2030 goals is to expand the pathway to the professoriate to help grow and diversify the faculty.

UC's hiring of women, African American, and Hispanic/Latinx faculty generally meets or exceeds the national availability of doctorates, with variation among disciplines.







5.3.3 Women new assistant professors compared with national availability by discipline group



Source: UC Academic Personnel and Program Administration and Survey of Earned Doctorates

UC remains committed to diversifying its faculty and taking full advantage of the available pools of qualified candidates. Between 2014 and 2018, women constituted 45.1 percent of nationwide new doctoral degree recipients and 44.7 percent of UC's new hires. Some disciplines at UC have diversified more than others, relative to the availability pools in their field.

Hiring of new faculty has ebbed and flowed over the years in response to budget cuts and enrollment growth. Separations have been more consistent, year over year.





2010–11 to 2019–20

Source: UC Academic Personnel and Program Administration, LSOE: Lecturer with Security of Employment, PSOE: Potential for Security of Employment

Over time, faculty numbers have grown, as hiring has generally outpaced separations. Separations have grown modestly, especially among tenured faculty, as the number of retirements has steadily increased. Other factors that can affect hiring and separations include shifts in the economy and fluctuations in State funding that affect the University's budgets. The Covid-19 pandemic has affected faculty recruitment efforts, which are expected to be reflected in lower faculty hiring in coming years. UC has partnered with Harvard's Collaborative on Academic Careers in Higher Education (coache.gse.harvard.edu) on a research project to survey faculty who leave UC for employment at other universities. This Retention and Exit Study is aimed at understanding and improving the experience of UC faculty members, as well as improving recruitment and retention.

UC faculty salaries have increased, but remain below the comparison institution benchmark.



 ^{5.3.5} Average ladder-rank general campus faculty salaries by rank UC and comparison institutions, 2010–11 to 2020–21

Source: UC Corporate Personnel System, AAUP faculty salary survey

UC faculty salaries have improved in recent years, yet they continue to lag behind the comparison benchmark UC uses to assess the competitiveness of its faculty salaries. UC sets the benchmark using the average salaries of the "Comparison 8" universities (four public: Illinois, Michigan, University at Buffalo, Virginia; four private: Harvard, MIT, Stanford, Yale). UC's faculty salaries fall below those of the comparison private institutions, but have recently been pulling ahead of the four public institutions as UC has increased investment in faculty salaries while salaries at the public comparison institutions have remained flat or even decreased. This comparison incorporates the inflation adjustment based on the Consumer Price Index (CPI), but it does not factor in the cost of living, which is especially high in most of California compared to the regions of the public peers assessed here.

Growth in UC ladder-rank faculty is critical to upholding quality in instruction, research, and public service.





Source: UC Corporate Personnel System

* Recall faculty are retired faculty who return part-time for temporary instruction and/or research needs. They are excluded here to focus on more permanent faculty appointments only.

Growth among UC ladder-rank and equivalent (LRE) faculty has been modest over the last couple of decades, relative to the growth in the student body. One of UC's goals in the multi-year framework adopted by the UC Regents in 2019 is investing in the next generation of the professoriate.

To fulfill this, UC seeks to grow non-recall LRE faculty by 1,100 between 2018–19 and 2022–23. UC would need to add 723 LRE faculty in the next two years to achieve this goal. Based on recent trends in faculty growth, the University is at risk of falling short of its goal: the growth required over the next two years is nearly double that of the previous two years.

After four years, UC leadership will assess progress toward advancing undergraduate and graduate degree attainment and diversifying the professoriate.

UC continues to develop various pathways to the diverse professoriate as a part of its 2030 goals.

5.3.7 UC pathways to professoriate

		Black/African American	Black/African American Hispanic/ Latinx		Women	
	UC Bachelors 2019-20	1.7%	13.6%	44.4%	24.6%	
	UC Doctorates 2019-20	2.6%	8.1%	23.6%	23.8%	
Engineering/	US Doctorates 2018-19	1.9%	2.6%	6.5%	24.1%	
Computer	Non-UC AAU Doctorates 2018-19	1.3%	2.8%	7.2%	23.5%	
Science	SED Availabilities, 2014 to 2018	2.9%	4.5%	44.9%	23.2%	
	UC New Hires, 2016-17 through 2019-20	5.2%	5.5%	38.5%	28.2%	
	UC LRE faculty, fall 2020	1.7%	5.4%	29.9%	18.2%	
	UC Bachelors 2019-20	3.3%	21.4%	39.1%	62.7%	
	UC Doctorates 2019-20	7.8%	15.5%	35.4%	53.8%	
	US Doctorates 2018-19	3.0%	6.4%	8.4%	51.6%	
Life Sciences	Non-UC AAU Doctorates 2018-19	2.8%	6.4%	8.9%	51.7%	
	SED Availabilities, 2014 to 2018	4.7%	7.4%	28.9%	52.6%	
	UC New Hires, 2016-17 through 2019-20	4.8%	10.8%	19.9%	47.6%	
	UC LRE faculty, fall 2020	1.3%	6.1%	13.9%	32.6%	
	UC Bachelors 2019-20	1.8%	16.2%	27.6%	41.3%	
	UC Doctorates 2019-20	1.8%	11.4%	23.5%	30.2%	
Dhuataal	US Doctorates 2018-19	1.6%	3.8%	5.4%	32.8%	
Sciences	Non-UC AAU Doctorates 2018-19	1.1%	3.2%	4.9%	31.8%	
Sciences	SED Availabilities, 2014 to 2018	3.0%	4.7%	35.0%	31.3%	
	UC New Hires, 2016-17 through 2019-20	2.2%	8.6%	26.3%	29.7%	
	UC LRE faculty, fall 2020	1.0%	5.1%	19.8%	20.3%	
	UC Bachelors 2019-20	5.0%	30.7%	26.5%	63.7%	
	UC Doctorates 2019-20	9.0%	16.0%	24.6%	50.6%	
Constant.	US Doctorates 2018-19	6.9%	8.8%	5.3%	61.4%	
Social	Non-UC AAU Doctorates 2018-19	4.1%	5.9%	5.4%	54.8%	
Sciences	SED Availabilities, 2014 to 2018	7.3%	8.1%	16.7%	59.0%	
	UC New Hires, 2016-17 through 2019-20	9.4%	13.8%	20.2%	54.0%	
	UC LRE faculty, fall 2020	5.1%	9.7%	13.3%	39.6%	
	UC Bachelors 2019-20	5.4%	30.5%	22.3%	61.1%	
	UC Doctorates 2019-20	5.8%	22.8%	22.3%	44.3%	
A	US Doctorates 2018-19	3.1%	6.2%	4.0%	52.5%	
Arts & Humanities	Non-UC AAU Doctorates 2018-19	2.4%	4.9%	4.3%	52.5%	
	SED Availabilities, 2014 to 2018	4.2%	8.2%	9.2%	51.7%	
	UC New Hires, 2016-17 through 2019-20	5.6%	18.4%	18.4%	59.8%	
	UC LRE faculty, fall 2020	5.8%	11.9%	14.2%	44.0%	

Source: UC Academic Personnel and Program Administration, UC Corporate Personnel System, Survey of Earned Doctorates (SED availabilities include non-US citizens who got doctorates at U.S. universities)

Investing in the next generation of the diverse professoriate is one of the three goals of the UC 2030 framework. UC continues to deploy the strategy of growing the graduate and future professoriate pathway, including additional ladderrank faculty to increase UC's capacity to grow graduate student numbers. While UC is consistently hiring new faculty from the historically underrepresented groups, it is also cultivating the internal talent pool by creating more research opportunities for undergraduate students and generating more diverse doctoral students' pool.

After four years, UC leadership will assess progress toward advancing undergraduate and graduate degree attainment and diversifying the professoriate.
STAFF



STAFF

Overview

The three-pronged mission of the University of California includes teaching, research, and public service, none of which can be accomplished without the support of staff who organize and facilitate all that is required to do the work of the University. Despite the operational and financial challenges created by the COVID-19 pandemic in 2020 and 2021, UC employees quickly rose to the challenge of engaging in the University's mission of teaching, research, and service in a remote environment. Recognizing the challenges faced by employees, the University of California adopted numerous programs and exceptions to policy providing flexibility to the staff to conduct their work.

Non-academic staff employees constitute nearly 70 percent of UC's workforce and are responsible for health services, student services, instruction and research support, compliance, and general administration (6.1.1). In October 2020, this group included 143,188 individuals. Overall, this staff workforce represented over 115,577 full-time equivalent (FTE) employees in that month.

Staff workforce

- About six out of every ten UC staff FTE are working for the University of California Health system. These frontline workers (including doctors, nurses, administrators, technicians, and allied health professionals) are playing a critical role in California's response to the COVID-19 pandemic. Over 97 percent of these employees are supported by non-core funds, typically the revenues generated by hospital services.
- Students often work part-time on campus as part of their financial aid packages or for research experience. During the pandemic, UC campuses transitioned to remote instruction. With staff, faculty, and students no longer on campus, student employee headcount at general campus halved from 36,000 in October 2019 to 18,000 in October 2020.
- General campus, non-student employees are the remainder of the University's staff, at 43,752 FTE. This includes student services employees, career advisors, IT specialists, research administration, laboratory staff, food and auxiliary service workers, accountants, maintenance and janitorial staff, safety workers, and analysts (6.1.1).

Diversity

The University of California is committed to diversity and excellence in its staff workforce. Staff at UC are majority women and increasingly ethnically diverse across all personnel groups (6.1.2). However, there are variations among the different employee groups, with less diversity and women representation among senior positions. A more diverse academic and staff population is an increasingly important attribute of a thriving public research university system.

Staff compensation

Over the past decade, UC has relied less on core funds (State funds, tuition and fees, and other general funds) to cover the staff payroll. While UC has about 19,300 more staff FTE than ten years ago — largely due to University of California Health and student staff growth — fewer FTE are paid on core funds (6.2.1). Just over 18 percent of staff are paid using core funds.

General campus career staff salaries have stayed relatively flat compared to inflation for the past decade and have increased modestly for some University of California Health professionals. Staff salaries tend to lag behind comparable market positions, and the lack of increases beyond inflation could affect staff satisfaction and turnover (6.2.2, 6.2.3). Chancellor compensation falls on the lower end when compared to the peer institutions (6.2.4).

Staff separations and satisfaction

UC's separation rate among career staff is about 7.7 percent (6.3.1), which is lower than it has been in a decade. More than 23 percent of staff separations are due to retirement and reflect the baby-boomer generation exiting the workforce. Still, a large portion of separations is due to resignation to accept another job, to move out of areas, or for other reasons (6.3.2). The 2019 Council of University of California Staff Assemblies (CUCSA)/Systemwide Human Resources Engagement Survey shows some improvement since 2017 in organizational change, communication, and sustainable engagement, but that UC is still below the national norm in eight out of nine employee satisfaction categories. While voluntary separation is often influenced by a combination of factors, employee satisfaction can give us a window into the areas that might be contributing to the loss of employees to other organizations or geographic areas.

UCPath deployment

UCPath is the University of California's new, modernized human resources, academic personnel, benefits, and payroll system for all UC employees systemwide. The systemwide deployment of UCPath was completed in June 2020.

For more information

Employee headcount data: universityofcalifornia.edu/infocenter/uc-employee-headcount

Employee FTE data: universityofcalifornia.edu/infocenter/employee-fte

Workforce diversity data: universityofcalifornia.edu/infocenter/uc-workforce-diversity

Staff workforce profile: universityofcalifornia.edu/infocenter/staff-workforce-profile

Annual wage reporting: universityofcalifornia.edu/infocenter/annual-wage-reporting

Chancellors compensation: ucop.edu/institutional-research-academic-planning/_files/executive-compensation-aau-chancellors.pdf

CUCSA/Systemwide Human Resources Engagement Survey: ucop.edu/human-resources/staff/employee-relationsstaff/engagement-survey.html University of California Health staff has grown significantly as health services have expanded, while general campus, non-student support staff growth has lagged behind overall student enrollment over the past decade.

6.1.1 Staff Full-time Equivalent (FTE) Universitywide, October 2011 to 2020

General Campus



University of California Health

Source: UC Corporate Personnel System

* In 2017 and 2018, several job titles were reclassified between MSP and PSS groups. Excludes Lawrence Berkeley National Laboratory, Hastings School of the Law, and Associated Students UCLA.

UC operates six health systems with five academic medical centers as well as schools of medicine, dentistry, nursing, and other health sciences education and research programs. Nearly 59 percent of UC non-academic staff FTE work for the University of California Health system. These frontline workers (including doctors, nurses, administrators, technicians, and allied health professionals) are playing a critical role in California's response to the COVID-19 pandemic. The growth of University of California Health FTE is also driven by service expansions, such as increases in inpatient days as well as outpatient/emergency visits. General campus, non-student staff has seen the greatest growth amongst senior professionals, due to both the introduction of Career Tracks and the professionalization of UC's workforce towards highskilled analysis and technical capabilities. Career Tracks is a function-specific, market-aligned job classification system that applies consistent interpretations of which positions are Management and Senior Professional (MSP) and which are Professional and Support Staff (PSS). Within PSS, there has been a significant shift away from clerical roles into student services positions and administrative analysis to manage growing campuses and student bodies.

6.1 STAFF WORKFORCE

The proportion of underrepresented staff has grown modestly at all levels in the last decade. Representation of women has grown at the Senior Professional levels, and has stayed high at the Manager and Support Staff levels.



6.1.2 Racial/ethnic diversity of non-student staff by personnel program Universitywide, October 2011 to 2020





Source: UC Corporate Personnel System

UC has sought to improve representation of historically underrepresented domestic racial/ethnic groups. Diversity has increased steadily at all staffing levels; however, management and more senior positions remain less diverse. More than half of the managers and professional support staff employees are women. The percentage of women employees has remained steady within the Senior Management Group (SMG), while Senior Professionals have nearly equal gender representation. As a result of the California Gender Recognition Act (SB-179), UC recently revised self-reporting options for gender identity and sexual orientation. In the last decade, the number of staff supported by core funds has fallen as State funding for the University has decreased. Non-core funds supported all of the increases in University of California Health and non-student, general campus staff FTE over the same time.





General campus employees are increasingly paid with non-core funds such as research funds, auxiliary revenues, and other sources. Though overall general campus staff increased modestly, overall corefunded staff has decreased. Overall core-funded staff has decreased by over 2,700 in the last ten years. This more than offsets the increases in staff funded by tuition and fees as well as other general funds. Source: UC Corporate Personnel System

University of California Health almost exclusively relies on non-core funds, particularly from hospital revenues, to support its staff. Despite adding about 17,800 FTE, even fewer FTE today are paid on core funds than a decade ago. Over the past decade, inflation-adjusted salaries have been relatively flat for general campus staff, with moderate increases for some University of California Health staff.



6.2.2 General campus career staff average inflation-adjusted base salaries by personnel program, FY 2011 to 2020





Source: UC Corporate Personnel System; California CPI-W used for inflation adjustment

Over the past ten years, salaries in inflation-adjusted dollars have increased modestly for general campus career Support Staff, Managers, and Senior Professional staff. At the same time, UC employees are contributing more to their health care costs and to the UC retirement system, putting downward pressure on the competitiveness of UC's total compensation compared with the regional labor markets where University centers are located. Salaries among University of California Health career staff have been increasing moderately in real dollars for Professional and Support Services (PSS) staff and for Managers. This reflects market trends in wages for hospital staff and growing demand for health care professionals.

UC chancellors are among the lowest-paid when compared to their Association of American Universities (AAU) peers.



6.2.4 Base salaries and additional pay for UC and AAU institution leaders

Source: The Chronicle of Higher Education Executive Compensation Report and institutional data sources

6.2 STAFF COMPENSATION

UC chancellors continue to be among the lowestpaid university leaders compared with their AAU peers. Nine UC chancellor salaries fall among the lowest third in this group. UC San Francisco, an exclusively graduate health science campus, is the only exception. In response to the COVID-19 pandemic and reduction in UC revenues, the UC President and UC Chancellors voluntarily agreed to reduce their salary by ten percent.

The separation rate among staff was about 7.7 percent in FY 2020, down from nine percent in the previous fiscal year. Retirement is the leading reason for separation.





6.3.2 Separation reasons for career staff, FY 2020



Source: UC Corporate Personnel System

Campuses experience a wide range of separation rates among their career staff, which may reflect different mixes of employees, work environments, and local job markets. High turnover is often expensive in terms of lost productivity, lost institutional knowledge, and replacement costs. Over 23 percent of separations were due to retirement, a result of the aging baby-boomer population. About 58 percent of separations were resignations, 27 percent of those are due to people moving away or choosing to attend school.

DIVERSITY



DIVERSITY

Goals

The University of California strives to create diverse, equitable, and inclusive communities for students, faculty, and staff. The University supports initiatives that increase the representation of historically underrepresented populations and foster inclusive living, learning, and working environments.

The University's diversity goals are established in Regents Policy 4440: University of California Diversity Statement, which states, in part:

- Because the core mission of the University of California is to serve the interests of the State of California, it must seek to achieve diversity among its student bodies and among its employees.
- The State of California has a compelling interest in making sure that people from all backgrounds perceive that access to the University is possible for talented students, staff, and faculty from all groups.
- Therefore, the University of California renews its commitment to the full realization of its historic promise to recognize and nurture merit, talent, and achievement by supporting diversity and equal opportunity in its education, services, and administration, as well as research and creative activity.

The public health, economic, and social crises of the 2020–21 year tested the University's ability to meet these goals. In addition to reviewing diversity and equity gains and gaps, this introduction includes student survey information about how the COVID-19 pandemic and the shift to remote learning impacted diverse university populations.

Findings

UC is making progress in several key areas related to diversity, equity, and inclusion. These include:

- Increases in the percentage of Underrepresented Group (URG) undergraduates admitted and/or enrolled based on K–12 pipeline.
- Increases in the percentage of First-Generation undergraduate enrollment and persistence.
- Increases in the percentage of URG graduate student enrollment and persistence.
- Increases in the percentage of URG faculty.
- Increase in the percentage of URG staff at campuses/locations and University of California Health.

At the same time, there are challenges and areas in which progress needs to be made. These include:

- Enrollment rates are low for African American and American Indian undergraduates, compared to the actual admission rate.
- Undergraduate African American students are less likely than other ethnic groups to agree that they are respected on campus.
- A graduation gap persists between URG undergraduates and White and Asian American undergraduates (presented in Chapter 3 of this report).
- The proportion of women and URG faculty is low, compared to availability pools in most disciplines (presented in Chapter 5).
- Senior Management (SMG) ranks are lacking in racial/ethnic diversity, compared to entry-level and professional staff ranks at UC.

Evaluating diversity

UC evaluates its diversity outcomes in a variety of ways: current demographic characteristics and trends of its students, faculty, and staff; analysis of the academic pipeline from entry to exit; and survey data that reveal perceptions of campus climate, experiences of campus life, and remote learning during the COVID-19 pandemic.

Chapters 1 through 6 present an overview of trends for undergraduate, graduate academic and graduate professional students, faculty, and staff. This feeds into a holistic analysis of University diversity, equity, and inclusion outcomes using the demographic characteristics of race/ethnicity, gender, first-generation college-going status, and international student status.

Pipeline

UC diversity outcomes are also assessed by examining the various steps along the academic pipeline. In the undergraduate pipeline from high school graduation to the end of the first year at UC, about six in ten California public high school twelfth-graders come from historically underrepresented groups. However, only less than four in ten of these twelfth-graders who enrolled in UC and persisted past their first year came from underrepresented ethnic groups. This is a strong indication that UC is not retaining the diversity of its students enrolled from California public high schools equitably after the first-year college experience.

The University of California's multi-year framework — UC 2030 — focuses on expanding the pipeline to and within the University. For example, one part of eliminating timely graduation gaps for underrepresented groups is that a greater proportion will go on to graduate school, and one of the goals of growing graduate enrollment is to increase spaces for these students. UC's increasing diversity of doctoral students will expand the availability pool of potential faculty hires, supporting efforts to diversify the professoriate.

Surveying students about diversity on campus

This chapter presents responses to the UC Undergraduate Experience Survey (UCUES), administered every two years to all undergraduates. The University's goal is to have all its students feel respected on campus, regardless of race/ethnicity, nationality, religious affiliation, gender identity, gender expression, sexual orientation, or political beliefs.

UCUES data show most undergraduates feel students of their race/ethnicity are respected on campus, but the proportion of African American respondents sharing this perspective is lower than other groups. Among religious identifications, Muslim and Jewish students are less likely to feel respected. LGBTQ+ students are also less likely to feel respected, as are students identifying as politically conservative.

Impacts of COVID-19 on diverse student populations

Spring 2020 UCUES results showed 64 percent of undergraduates responding had high confidence (somewhat to very high) about using tools for remote learning, with slightly less confidence for first-generation, African American, and Hispanic/Latinx students. First-generation students from underrepresented populations were more likely to lack appropriate equipment and study spaces and to have greater family responsibilities due to COVID-19. With the COVID-19 pandemic, many students returned home. First-generation, Pell Grant recipients, and underrepresented students were less likely to have both adequate access to the internet and appropriate study space, making remote instruction a greater challenge when compared to peers. Thirty-five percent of all undergraduates were very concerned about having access to an appropriate study space, but it was at least ten points higher for first-generation, Pell Grant recipients, and underrepresented students.

UC campuses attempted to assess and meet the technology needs of students by providing laptops and internet hotspots. For example, UC Berkeley conducted a student technology survey to estimate the funds needed to purchase laptops in its Student Technology Equity Program (STEP). Other UC campuses used a range of outreach efforts — communications with deans and department chairs, student service and advising units, and prompts on campus learning management systems — to identify students who needed technology support.

Looking forward — diversity initiatives

UC has made considerable investments in 2020 and 2021 to diversify the faculty, staff, and student body. It has sustained support for programs that promote the recruitment and retention of underrepresented faculty populations; expanded implicit bias training opportunities for student leaders, faculty, staff, and senior administrators; enhanced university information systems and operational processes to more fully recognize historically underserved populations; and rolled out initiatives designed to transform specific campuses and locations to be anti-racist and Black-thriving places to work and learn.

Advancing Faculty Diversity (AFD) — The State of California awarded UC a total of \$8.5 million in one-time funds for four fiscal years, from 2016–17 to 2019–20, to develop an innovative and focused program to increase faculty diversity at UC. The Advancing Faculty Diversity program awards these funds on a competitive basis to campus units implementing new measurable interventions in the faculty recruitment process. Some of the successful interventions that correlate with hiring diverse faculty include the use of contributions to diversity statements early in the evaluation process; targeting potential faculty earlier in their careers through support for postdoctoral work; outreach by faculty to actively recruit candidates; revised evaluation practices, including the use of rubrics to guide decision-making; strong leadership and sustained and strategic involvement from unit leaders; introducing new voices, including students, in the recruitment and evaluation process; building of new faculty, equity, and inclusion data dashboards; research on and support for pathways to faculty leadership positions; and examinations of whether service loads differ by gender or race/ethnicity. Since 2019–20, UCOP committed an additional \$3 million per year in ongoing funds to support additional projects in faculty recruitment; improve climate and retention to pilot innovative recruitment practices; create academic climates to support UC's diverse student body and meaningfully engage faculty throughout their UC careers. Since its inception, a total of forty recruitment and improved climate and retention projects have been funded through the AFD program's competitive process, with all ten campuses receiving at least one award.

President's Postdoctoral Fellowship Program (PPFP) — Established in 1984, the program recruits top scholars who are committed to underserved and minority communities to pursue faculty careers at UC. Between 2016–17 and 2020–21, 112 fellows were hired as UC ladder-rank faculty at all ten UC campuses. In addition, more than 20 fellows have been successfully recruited for UC faculty positions that will begin in 2021–22, with 19 others still under consideration. Through Presidential support, UC has increased the number of incentives available to departments that hire fellows and expanded eligibility for hiring incentives to include the health sciences and professional schools. The program is nationally recognized and leads a partnership of top universities that participate in recruiting top postdoc talent.

Implicit bias trainings — The 2018 California Budget Act included a one-time appropriation of \$1.2 million to contract out and implement an anti-bias training pilot program for administrators, faculty, staff, and student leaders at the campuses of the University of California and the California State University. The pilot program was branded Moving Beyond Bias, and it includes content on racial, gender, and religious bias. Regional trainings took place in Oakland, Sacramento, and Northridge. Due to the COVID-19 pandemic, further trainings and sessions were conducted virtually. The training module was customized and delivered to UC admissions officers and readers, the CSU Chancellor's Office, and the CSU Academic Senate. Two Moving Beyond Bias ecourses are currently under production, one version for a general staff audience and a second version for UC admissions officers and readers.

UC Gender Recognition and Lived Name Policy — Following the 2019 passage of the Gender Recognition Act (California Senate Bill 179), the University drafted and passed the Gender Recognition and Lived Name Policy on November 17, 2020, which states that the University "must provide the minimum three equally recognized gender options on university-issued documents and IT Resource systems — woman, man and nonbinary — and an efficient process for current students and employees and UC alumni and affiliates to retroactively amend their gender designations and lived names on university-issued documents, including eligible academic documents, and in IT resource systems." The new change enables the University to collect and report demographic data and visualizations that compare outcomes for individuals whose genders are woman, man, and nonbinary.

Tribal citizenship and affiliation — Enhancements have been made to the undergraduate application to improve recognition of the tribal citizenship, affiliation, and diversity of Native American and Alaska Native applicants. Starting with the 2022 undergraduate application cycle, questions about tribal citizenship will be added to the citizenship and residency section of Apply UC, and additional disaggregated tribal affiliation options will be added to the demographic racial and ethnic section for federal reporting. The new changes, reflecting guidance provided by the President's Native American Advisory Council, enable the University to collect, report, and compare demographic data on Native American and Alaska Native populations within and across populations with greater nuance and attention to tribal affiliation and sovereignty.

Anti-racism initiatives and resources — In the wake of the George Floyd murder, demand for anti-racism trainings, listening sessions, educational opportunities, resources, and commitments to institutional change increased dramatically across the UC system. Chief diversity officers and other diversity, equity, and inclusion professionals continue to be frontline responders, innovators, and leaders in this climate. A systemwide landing page of anti-racism trainings, webinars, healing sessions, and resources has been created (diversity.universityofcalifornia.edu), and continues to be refreshed and curated. The site also includes resources on anti-Asian racism and highlights long-term initiatives to address gaps in African American representation, outcomes and feelings of belonging and respect such as UC Irvine's Black Thriving Initiative, UC Merced's Valuing Black Lives Initiative, and UC San Diego's Black Academic Excellence Initiative.

For More Information

Undergraduate admissions data: universityofcalifornia.edu/infocenter/admissions-residency-and-ethnicity Graduate admissions data: universityofcalifornia.edu/infocenter/graduate-admissions Fall enrollment at a glance: universityofcalifornia.edu/infocenter/fall-enrollment-glance Degrees awarded data: universityofcalifornia.edu/infocenter/degrees-awarded-data UCUES COVID-19 and remote learning dashboard: universityofcalifornia.edu/infocenter/ucues-covid-19 UC Regents Accountability Sub-report on Staff Diversity: regents.universityofcalifornia.edu/regmeet/july20/a2.pdf Moving Beyond Bias: movingbeyondbias.org/ Gender Recognition and Lived Name Policy: policy.ucop.edu/doc/2700693/GRLN UC Anti-racism Resources: diversity.universityofcalifornia.edu/anti-racism-resources/

7.1 UNDERGRADUATE PIPELINE

UC freshman enrollees do not reflect the diversity of California's high school graduates.

7.1.1 Racial/ethnic distribution of the UC undergraduate pipeline
Universitywide
Fall 2019 new freshman cohort from California public high schools



About six in ten California public high school 9thgraders are from historically underrepresented ethnic groups (American Indian, African American, Hispanic/Latinx). However, less than four in ten of these 12th-graders who enrolled in UC and persisted Source: California Department of Education, UC Data Warehouse

past their first year were from underrepresented ethnic groups. At almost every point of the eligibility and enrollment process, fewer students from underrepresented ethnic groups are included.

7.2 GRADUATE STUDENT PIPELINE

UC academic doctoral programs are a strong draw for international students who did not earn their bachelor's degree in the United States.

7.2.1 Racial/ethnic distribution of US BA/BS degree recipients from US and UC institutions compared to UC doctoral applicants, admits, and enrollees Universitywide





Sources: Integrated Postsecondary Educational Data System; UC Information Center Data Warehouse

UC's graduate programs draw students from across the nation and around the world, including its own undergraduate students, who make up about onetenth of UC's graduate students. As a result, UC's efforts to diversify its undergraduate students also help to diversify its graduate academic population. Because recent Ph.D. recipients create the talent pool for new faculty, a critical means for increasing the diversity of the faculty is to increase the diversity of doctoral degree recipients.

7.2 GRADUATE STUDENT PIPELINE

In graduate academic doctoral programs, UC is approaching parity with the gender diversity of U.S. institutions, in most fields.

7.2.2 Gender distribution of US BA/BS degree recipients from US and UC institutions compared to UC doctoral applicants, admits, and enrollees Universitywide





Sources: Integrated Postsecondary Educational Data System; UC Information Center Data Warehouse

Female students make up less than half of U.S. Bachelor's degree recipients and UC doctoral students in Physical Sciences and Engineering & Computer Science. At the graduate level, female representation among UC doctoral enrollees from U.S. colleges and universities is within five percentage points of the female representation among all U.S. Bachelor's degree recipients in all fields except Engineering & Computer Science, where the representation of women is actually higher than that of U.S. Bachelor degree recipients.

7.3 DIVERSITY OF THE UNIVERSITY COMMUNITY

Undergraduates have the highest proportion of underrepresented students. Faculty are less diverse overall.



7.3.1 Racial/ethnic distribution of students and faculty, domestic population only Universitywide Selected years, fall 2011 to 2020

Source: UC Information Center Data Warehouse. Undergraduates include approximately 300 postbaccalaureate teaching credential students. Only includes U.S. citizens and permanent residents.

International students and faculty are excluded from the graph above for comparability purposes. The undergraduate population is the most likely to be Hispanic/Latinx. Its share of the population has risen for all groups. The African American share of the population has been flat for undergraduates, but has grown among graduate students and faculty. Graduate students, both academic and professional, are more likely to be White. This is also true for faculty.

Information on availabilities compared to hires by discipline group is presented in Chapter 5.

African American students are less likely than other students to feel that students of their race/ethnicity are respected on their campus.

- **7.4.1** Response to "Students of my race/ethnicity are respected on this campus" Universitywide and UC campuses
 - Spring 2020

Percent who agree or strongly agree



Source: UCUES. Caution should be exercised in interpretation of the Native American group due to small cell sizes. Pacific Islander will be separated from Asian in the reporting of the next UCUES survey.

7.4.2 Response to "I feel I belong at this university" Universitywide and UC campuses Spring 2020 Percent who agree or strongly agree



Source: UCUES. Caution should be exercised in interpretation of the Native American group due to small cell sizes. Pacific Islander will be separated from Asian in the reporting of the next UCUES survey.

The University of California Undergraduate Experience Survey (UCUES) offers insight into population-based experiences of respect and belonging. African American students report that members of their racial and ethnic group are less likely to be respected on campus compared to other racial and ethnic groups, and this outcome is consistent across all UC campuses. Overall, African American students report that they are less likely to feel as if they belong at the University.

Students vary widely in whether they feel their religious beliefs are respected.

7.4.3 Response to "Students of my religious beliefs are respected on this campus"

Universitywide Spring 2020

Percent who agree or strongly agree



Source: UCUES

UC students represent a diverse range of religions, sects, and faith traditions, including atheism. However, less than 50 percent of students who selfidentify with Muslim and Jewish traditions report that their religious beliefs are respected on campus. Less than 50 percent of Non-denominational Evangelical Christians and Mormons also reported their religious beliefs are respected on campus.

Undergraduates who identify as LGBQ are less likely to feel respected on campus than those who do not.



7.4.4 Response to "Students of my sexual orientation are respected on this campus," Universitywide, Spring 2020

7.4.5 Response to "Students of my sexual orientation are respected on this campus," by race/ethnicity Students who agree or strongly agree, Universitywide, Spring 2020



7.4.6 Response to "I feel that I belong at this university," by sexual orientation, percent who agree or strongly agree, Spring 2020



Source: UCUES. Caution should be used in interpretation of Native American, queer, questioning and "other" groups due to small cell sizes. Source: UCUES. Gender identity by race/ethnicity is not shown due to small cell sizes and lack of response.

Students questioning their sexual orientation and students who self-identify as bisexual, gay, lesbian, other, and queer are less likely to feel respected than their peers who self-identify as heterosexual and straight. When race and ethnicity are added, African American LGBQ students are less likely to feel respected. Counts and shares by sexual orientation are available on the Campus Climate tab of universityofcalifornia.edu/infocenter/ucues-data-tables-2020

Undergraduates who identify as other than male or female are less likely to feel respected on campus than those who do not.



7.4.7 Response to "Students of my gender are respected on this campus," Spring 2020

Source: UCUES

In terms of UC's diverse gender communities, transwomen, transmen, gender queer, gender nonconforming and students that identify with another gender not listed are less likely to feel respected than their peers who are women and men. For this year's report, the gender data cannot be further disaggregated by race and ethnicity due to the limited number of individuals across racial and ethnic groups indicating that they are transgender, gender queer and gender non-conforming. Counts and shares by gender are available on the Campus Climate tab of:

universityofcalifornia.edu/infocenter/ucues-data-tables-2020

Spring 2020

Very conservative undergraduates are less likely to feel that students of their political views are respected on campus than those with liberal or moderate political opinions.



7.4.8 Response to "Students of my political beliefs are respected on this campus," Universitywide

Source: UCUES

Data of counts and shares by political orientation are available on the last tab of:universityofcalifornia.edu/infocenter/ucues-datatables-2020.

TEACHING AND LEARNING



TEACHING AND LEARNING

Overview

The University of California provides its students with a rich learning environment created by faculty engaged in both teaching and academic research. Student learning at UC involves classes, seminars, and lab sections enhanced by collaboration with faculty and researchers. Through these activities, faculty and students engage in a learning process that helps develop critical thinking, communication, and problem-solving skills, as well as discipline-specific knowledge.

Educating students and the public

UC's faculty are principally responsible for maintaining UC's academic excellence and promoting student success. Student retention, graduation rates, and measures of effectiveness are presented in Chapter 3. This chapter focuses on the learning experience of UC's undergraduate and graduate students, reporting what skills they have learned, their engagement with faculty and their peers, and satisfaction with their UC experience. A majority of both undergraduate and graduate students report improvement in academic skills. This chapter also reports on the composition and workload of instructional staff across different academic disciplines and professional programs.

Expanding learning opportunities beyond students on campus demonstrates the connection between the teaching and the public service missions of the University. UC Extension offers adult professional and continuing education programs to Californians and people around the world, enrolling hundreds of thousands of Californians in its programs each year.

Promoting educational effectiveness

UC is committed to continuous improvement of instruction and employs a range of pedagogical and assessment strategies to enhance and support student learning. Campuses offer pedagogical development and training for faculty and teaching assistants to promote the use of evidence-based teaching practices and improve the quality of teaching and learning. UC's teaching and learning centers and offices of instructional development train hundreds of instructors each year, improving the quality of education for students in all disciplines across all ten campuses.

UC promotes educational effectiveness by supporting assessment of student learning. Assessment strategies include the development of program-level student learning outcomes and integration of evidence of student learning into academic program reviews. Programs across UC are undertaking curriculum redesign and improvement as a result of assessment work. Much of this aligns with the expectations of regional accrediting agencies, in particular the WASC Senior College and University Commission (WSCUC). As part of WSCUC accreditation, UC campuses assess five main core competencies of student learning: writing, oral communication, quantitative reasoning, information literacy, and critical thinking. Each UC campus posts its WSCUC accreditation reports online.

Innovative instructional offerings

UC faculty develop and teach an ever-expanding catalog of online courses and programs, expanding learning opportunities for UC and non-UC undergraduates, graduates, and professional students. Through the UC cross-campus enrollment system, UC provides undergraduates access to high-demand courses offered at other UC campuses, increasing flexibility and opportunities for degree completion.

For non-UC students considering matriculation at a four-year university or resuming their studies, UC offers forcredit online courses that may transfer to other colleges and universities. UC Online provides courses that span a wide range of disciplines. UC Extension offers online continuing education courses, professional certificates and post-baccalaureate programs for those seeking to advance their education and to enhance their professional skills.

In addition to online courses, UC leverages instructional technologies to enhance instruction and promote success. UC continues to develop and refine hybrid courses using multimedia resources, videos, podcasts, e-books, and other technology-based tools. UC follows best instructional practices to embed innovative technologies into course design and focuses on creating online and face-to-face learning experiences that encourage collaboration and maximize faculty-student and peer-to-peer interactions. Increasingly, UC courses utilize a flipped model of instruction, where lectures and other traditional classroom content are provided online, and classroom time is dedicated to group discussions, problem-solving activities, and other experiential exercises.

Ongoing assessment and data-driven approaches to teaching and learning are integral parts of UC's use of technology. Several UC campuses have adopted assessment systems that use online conceptual models and adaptive learning tools to determine students' knowledge quickly and accurately. Based on responses to questions, the software determines concepts or topics where each student needs to focus. Assessment and LEarning in Knowledge Spaces (ALEKS) uses web-based adaptive tools to provide students with individualized feedback and learning pathways in entry-level math and chemistry courses. As part of the 2015 state budget framework agreement, three UC campuses engaged in a pilot study of the impact of adaptive learning technologies on students use adaptive learning technology as intended, results are positive in relation to a student's overall performance in the course to which it is applied.

UC is enhancing student learning opportunities and success by expanding summer course offerings (in-person and online) to reduce students' time to degree and enrich their academic experience. Offering bridge experiences and orientation during summer also helps incoming students transition to campus life and prepare them for the rigorous courses at the undergraduate level.

The impact and lessons of the pandemic

As a result of the COVID-19 pandemic, UC campuses shifted almost all of Spring 2020 courses to remote instruction and most courses remained remote during the academic year 2020–21. Faculty and staff did an historic and commendable job adapting almost all courses to remote in a matter of days or weeks. Campuses ramped up efforts to provide students the necessary technology, along with academic and counseling support to help students succeed in this environment. UC has been collecting and will continue to collect data and research about learning outcomes during this period. Among the most significant impacts of remote instruction is that students, on average, increased the number of units they were taking per term and enrollment in summer session increased dramatically.

To keep the University community informed of the impact of this transition on instruction, a series of Regents items were presented with the most up-to-date information that was available at the time of presentation. In addition, remote instruction provided the opportunity for Regents' presentations that focused more generally on best practices available within the University to improve pedagogy and student success with the goal of reducing equity gaps in learning. Next year's Accountability Report will seek to include some of the data and indicators that were used in the following Regents' items:

Update of Covid-19 Impact on the University of California: Academic and Student Issues, May 20, 2020, regents.universityofcalifornia.edu/regmeet/may20/a1.pdf

Planning and Evaluation of Covid-19 Academic and Student Impacts, September 16, 2020, regents.universityofcalifornia.edu/regmeet/sept20/a1.pdf

Twenty-First Century Skill Development for University of California Students, November 18, 2020, regents.universityofcalifornia.edu/regmeet/nov20/a1.pdf

The Future of Instruction: Designing Equitable Classrooms and Technology-Enhanced Learning at the University of California, January 20, 2021, regents.universityofcalifornia.edu/regmeet/jan21/a4.pdf

Using Curricular Innovations and Enhancements to Address Equity Gaps, March 17, 2021, regents.universityofcalifornia.edu/regmeet/mar21/a1.pdf

The Institutional Research and Academic Planning department at UCOP created a specific dashboard that included the results of last year's UC Undergraduate Experience Survey (UCUES) questions that were specific to remote instruction and other accommodations due to the pandemic: universityofcalifornia.edu/infocenter/ucues-covid-19

For more information

Campus websites: universityofcalifornia.edu/uc-system/parts-of-uc

Summer enrollment: universityofcalifornia.edu/infocenter/summer-enrollment

UC Education Abroad Program: universityofcalifornia.edu/infocenter/uc-eap

Undergraduate research experiences: universityofcalifornia.edu/infocenter/uc-undergraduate-student-research

Adaptive Learning Technology Pilot Report: ucop.edu/institutional-research-academic-planning/_files/BFI-Adaptive-Learning-Technology-Report.pdf

UC undergraduates experienced significant improvement between their freshman and senior years in multiple areas, including reading and comprehension, critical thinking, research competency, and understanding of their chosen field of study.





Source: UCUES

The University of California Undergraduate Experience Survey (UCUES), which is conducted every two years, provides a valuable source of information on how UC undergraduates view their educational experience. These indicators also show students' perception of how much they have developed core competencies of student learning. In UCUES, students are asked to reflect on their skill levels between their freshman and senior years. During this period, UC students self-reported significant improvements in all areas, including reading and comprehension, critical thinking, research competency, understanding international perspectives, and understanding of their chosen field of study. Research participation is high among UC's seniors across racial/ethnic and gender groups. Seventy percent of students completed research as part of their coursework and one-third assisted faculty in research.





8.1.3 Students assisting faculty in conducting research Universitywide seniors Spring 2020



Source: UCUES

One of the benefits of attending an academic research university is the opportunity for undergraduates to conduct research, both through class research projects and by assisting faculty with their research. Overall, a high percentage of undergraduates reported that they participated in research. Women were more likely than men to indicate research coursework and participation.

Engagement varies by discipline, with Arts and Humanities showing higher levels of engagement.

8.1.4 Student responses to questions about areas of engagement Universitywide Spring 2020

During this academic year, how often have you contributed to a class discussion?



During this academic year, how often have you found a course so interesting that you did more work than was required?



During this academic year, how often have you worked with a faculty member on an activity other than coursework?



8.1 UNDERGRADUATE STUDENT LEARNING AND ENGAGEMENT

Satisfaction with the overall academic experience, particularly strong satisfaction, has been declining Universitywide.



8.1.5 Student satisfaction with overall academic experience Universitywide and UC campuses Spring 2012 to 2020

Source: UCUES.

For the UC system overall and for most campuses, the percent of students who were satisfied (somewhat through very satisfied) has remained as high as about 80 percent. However, student satisfaction has generally declined since 2012.

UC doctoral students credit their doctoral programs with having strengthened multiple skill sets.

8.2.1 Preparation by skillset Universitywide 2018 and 2019 combined



How well prepared do you feel you are in the following skillsets?

- Conducting research in an ethical manner 29
- Critically analyzing and evaluating findings and results 2
- Demonstrating a theoretical and practical understanding of your subject area
 - Applying research methodologies, tools, and techniques appropriately 33
 - Valuing others' worldviews 49
 - Working constructively with colleagues, acknowledging their contribution 45
 - Awareness of your own cultural values and biases 5
 - Using culturally appropriate interpersonal skills 6
 - Communicating ideas clearly and persuasively when speaking to others 7
 - Communicating ideas clearly and persuasively in writing, such as in journal articles
 - Influencing others, providing direction and encouraging contributions from others
 - Personal stress management 32

Grant writing skills 38

Very Poorly

Source: UC Ph.D. Career Pathways Student Survey

UC doctoral students responded overwhelmingly positively about the preparation received in their programs along the skillsets in the survey, with the exception of stress management and grant writing skills.

Additional data from the survey can be found here: universityofcalifornia.edu/infocenter/doctoral-experiencesurvey

The Ph.D. Career Pathways Student Survey, a collaboration between the University of California and the Council of Graduate Schools, was administered in the spring 2018 and 2019 terms. As more years of the survey are administered, this report can track trends over time.
Over time, the student-faculty ratio has deteriorated, especially for ladder-rank and equivalent faculty, as faculty hiring has not kept pace with increasing student enrollment.





Source: UC Information Center Data Warehouse

One measure of academic quality is the studentfaculty ratio. The student-faculty ratio reflects resources available for instruction and the average availability of faculty members to every student. Thus, lower ratios are preferable for students in terms of focused resources for instruction.

Because the student-faculty ratio varies considerably by degree, major, and instructional level (lowerdivision, upper-division, and graduate), student experiences will vary as well. Indicators 8.3.2 and 8.3.3 on student credit hours (SCH) provide additional insight into the student experience. The student-faculty ratio has increased at various times in the University's history and particularly in the last decade. During the most recent recession, campuses responded to uncertainty in State funding by delaying faculty hiring, or deciding not to fill vacant faculty positions on a permanent basis. While the student-faculty ratio improved slightly in 2019-20, another 1,265 additional faculty would need to be added to restore the 2005-06 ratio.

As part of its multi-year plan, UC is on track to hire 1,100 ladder-rank faculty between 2018–19 and 2022–23. More information on the plan can be found here: universityofcalifornia.edu/infocenter/uc-2030-dashboard

The expanding gap between the student-faculty ratio for all general campuses and the ratio for only ladder-rank and equivalent faculty illustrates the trend of hiring lecturers. Additional data can be found here:

universityofcalifornia.edu/infocenter/student-faculty-ratio

At the undergraduate level, full-time permanent faculty and lecturers are teaching increasing numbers of student credit hours.





Student credit hours (SCH) represent the number of student enrollments in a course multiplied by the number of credits earned from that course. For example, a four-credit class with 50 students generates 200 SCH; a two-credit class of 15 students generates 30 SCH. This measure gives an indication of the relative teaching load across different types of instructors at different levels of instruction. Source: UC Faculty Instructional Activities dataset¹

Lower-division courses such as writing, language, and other required courses are most often taught by lecturers; introductory courses to the major are most often taught by full-time permanent faculty. Upper-division courses, which are core to the student's major, are more likely taught by full-time permanent faculty, as are graduate courses.

¹ Data are for general campus courses only. These data are submitted annually by UC campuses and contain information on all general campus courses taught in that year.

As students enroll in upper-division and graduate classes, they have greater contact with fulltime permanent faculty and smaller classes.

 8.3.3 Student credit hours, by instructional staff and class type and class size Universitywide 2008–09 to 2019–20



In the lower division, full-time permanent faculty generally teach large lecture classes; lecturers generally teach both large sections and smaller classes. In the upper-division, student contact with full-time permanent faculty is fairly evenly distributed across classes of all sizes. Graduate academic students are almost uniformly taught by full-time permanent faculty in classes with fewer than 50 students. The large enrollment increases in 2016–17 and 2017–18 resulted in a substantial uptick in SCH being offered in large lower-division lecture classes.

RESEARCH



RESEARCH

The broad scope of UC research

The California Master Plan for Higher Education designates the University of California as the primary Statesupported academic agency for research. UC research contributes to the state and to the nation through discoveries that improve health, technology, welfare, and the quality of life. Research represents the creation of new knowledge, which can be communicated, curated, and cultivated to benefit society.

UC has more than 800 research centers, institutes, laboratories, and programs that span ten campuses, five medical centers, three Department of Energy National Laboratories, and numerous other research facilities.

Breadth of vision has been a virtue of UC's research since the University's founding more than a century and a half ago. All forms of intellectual inquiry are represented in the research enterprise: the architecture of atoms and the structure of the universe; the study of human cognition and the development of machine learning; the study of human pathogens and the creation of disease-resistant crops; the understanding of ancient and modern histories, cultures, and languages; and mitigation strategies for climate change. The diversity of this vision contributes to society in ways often hard to predict at the outset.

As one example of this vision, UC's Research Grants Program Office (RGPO) oversees a broad grant-making portfolio of approximately \$110 million annually from a variety of sources, with over 500 active research awards that provide first-mover advantage to UC and California investigators. RGPO grants catalyze advances in new areas yet to be supported on a large scale by federal and other sources; they also aim to enhance research capacity and excellence across California, making it easier to attract and retain outstanding faculty, to further the careers of undergraduate, graduate, and postdoctoral researchers, and to promote research collaborations.

Evaluating the research enterprise

This chapter presents a largely quantitative description of UC's research. The sources of research funding influence the nature of the research. As California's land-grant university, UC's research enterprise has always received federal support for research, which today accounts for nearly half of all research funding at UC (9.1.1). Most research funds pay the salaries and benefits of the UC research community, of which faculty are only a small proportion (9.1.2). While UC research spans many disciplines, medical research is the largest expenditure component, and its share has grown over the last two decades (9.1.3). UC performs nearly one-tenth of the nation's academic research (9.1.4). Compared to other research universities, UC has a higher rate of research expenditures per ladder-rank faculty (9.1.5), especially at UC campuses with medical schools (9.2.4). Three Department of Energy national laboratories are affiliated with the University of California: Lawrence Berkeley National Lab, Lawrence Livermore National Lab, and Los Alamos National Lab. The national labs conduct research that is vital to the nation's security, energy future, sustainability, and human health.

This chapter also presents the impact of this research on society. One of the goals of research is the dissemination of important outcomes; the global distribution of downloads from the UC eScholarship repository (9.2.1) indicates how eagerly this knowledge is sought. The frequency with which UC research is cited is another indicator of its quality and importance (9.2.2). UC research advances the economy and global technical leadership through licenses resulting from UC-generated patents (9.2.3).

These measures, however, do not capture the wide range of curiosity-driven research at UC. Quantitative measures emphasize fields that receive sizable funding and produce large numbers of publications, such as medicine, physical and material sciences, and engineering. These measures underrepresent research achievements

in the arts, humanities, social sciences, and theoretical sciences, where work leaves less of a financial footprint, and where results are disseminated in books or performances rather than journal articles.

Quantitative measures cannot capture how UC research contributes indirectly and over time to the state and to the nation through discoveries that improve health, technology, and the quality of life; how involvement in research and hearing about discoveries from the world's foremost researchers enhances the learning experiences of UC graduate and undergraduate students; or how thoughtful work in the arts and humanities furthers the understanding of ourselves as one species among many on this planet.

UC's research expenditures

While research expenditures track only some of this activity, they can indicate how research changes in scope and focus over time. They also can provide some relative sense of how research institutions compare to one another.

During 2019–20, direct expenditures for research at UC totaled over \$5.1 billion, with nearly half sourced from federal funds. Private sources account for about 22 percent — 14 percent from nonprofit organizations and eight percent from corporate sponsors. University funds derived from gifts, endowments, general funds, and other sources provided 18 percent. Over 60 percent of direct research expenditures in 2019–20 went to salaries and benefits. Of this, about one-quarter went to faculty; the majority supported staff researchers; and about one-quarter went to students and postdoctoral scholars. Faculty annual contracts are for only nine months, and their salaries and benefits are supported for the three remaining months on these grants.

Budgets for externally funded research include both a direct cost component — the actual amount spent on salaries, benefits, equipment, and materials directly linked to the project — plus a percentage to cover the facilities and administration required to support the research project, including debt service, maintenance, and libraries. These facilities and administration costs are called "indirect costs."

In 2019–20, UC's indirect cost recovery for research was over \$1.2 billion. The true indirect costs of research, however, are typically higher than the rate research sponsors are willing to pay. Rates negotiated with federal agencies are below true indirect costs. Non-federal research sponsors, including corporations, nonprofits, and the State of California, have policies that limit indirect cost rates to well below federal rates. The true costs of UC research exceed recovered amounts by hundreds of millions of dollars annually.

The research community

Research funds principally pay for people's time. Of the roughly 166,000 full-time equivalent (FTE) employees at the University, about 23,500, or 14 percent, were paid with research funds.

UC's research-funded FTE, 2019–20

Faculty	Postdoctoral scholars	Student employees	Other academic employees	Other staff employees	Research Total
2,185	3,925	3,978	3,446	9,961	23,494
9%	17%	17%	15%	42%	100%

While faculty serve as principal investigators for research projects, submitting proposals and managing the research, they make up only nine percent of the research community measured in terms of compensated time.

However, this figure, principally representing projects with research grants, underrepresents the time faculty spend on research. Virtually every faculty member at UC engages in research, often involving no expenditures other than the faculty member's time. As in all research universities, career advancement at UC (including tenure), requires a significant body of scholarly or creative work. The research community includes 4,454 postdoctoral researchers (roughly equivalent to 3,925 FTE). As shown in Indicator 5.1.4 of this report, postdoctoral scholars are most prominent in medical research and life science fields.

Research results — enhancing instruction

UC research enhances student preparation and experience. Faculty incorporate their research into their courses, providing students with access to insights and discoveries, sometimes before they are published. Postdoctoral scholars, representing one-sixth of the research workforce, contribute to instruction by working with graduate students. Students make up another one-sixth of the research workforce. In October 2020, about 9,500 students were employed as paid research assistants. Though most are graduate students, UC undergraduate students also participate in research; the 2020 UC Undergraduate Experience Survey found that about 36 percent of UC students had been involved in faculty-directed activity other than coursework.

Research results — spurring the economy

Many businesses in California are based on technology developed at UC or rely on the skills of UC graduates. Over the past quarter century, UC has secured more licensable patents than any other U.S. research university.¹ Since 1980, over 1,400 startup companies have been founded around UC inventions, with about 85 percent based in California. UC researchers submit nearly five new inventions per day in such diverse areas as agriculture, technology, biotech, and clean energy. The discoveries made through research become public knowledge through publications and the patent process. These innovations enhance industries, stimulate economies, and improve health and well-being.

Research results — communicating and curating knowledge

Publications are another way to demonstrate the results of research. This chapter compares the impact of UC research publications to global averages and to peer AAU institutions.

The books, periodicals, and journals in which research findings are published are costly and beyond the reach of many researchers, students, and journalists. To ensure that research findings become public, UC has adopted Open Access (OA) policies that are the most comprehensive of any academic institution in the United States. All UC employees must now deposit their research papers, upon publication, in the eScholarship repository operated by UC's California Digital Library (CDL) and grant a non-exclusive license to UC to make those materials openly available. CDL is negotiating agreements that reduce or eliminate the costs of publishing OA with publishers, developing models to transition subscription journals to open access, and supporting tools and services to disseminate research.

UC also disseminates its research directly. In 1893, the University's governing board funded a non-profit publishing program, establishing the UC Press. Today, the UC Press is among the six largest university publishers in the United States, and publishes nearly 200 books and over four dozen multi-issue journals annually. Of the nation's top

¹ https://developer.uspto.gov/visualization/university-patent-count-expenditures

university presses, UC Press is the only one associated with a public university.

Research results — improving health

Clinical research projects are another example of cultivating new knowledge to benefit society. During 2019–20, UC received grants funding 1,191 new clinical trial research projects in addition to 4,241 projects already underway. These projects represent a crucial stage in the journey from a scientific discovery to an effective treatment. The percentage of research awards devoted to clinical trials has grown over the past ten years, from about four percent in 2010–11 to 15 percent in 2019–20.

UC National Laboratories —science in the national interest

The three University of California-affiliated Department of Energy (DOE) National Laboratories — Lawrence Berkeley (LBNL), Lawrence Livermore (LLNL), and Los Alamos (LANL) — are among the nation's premiere multidisciplinary research and development (R&D) laboratories for energy and national security. The University has played a public service role as a manager of these three Department of Energy (DOE) National Laboratories. The Laboratories also support UC's educational mission.

Looking forward — uncertainties in federal research funding

With federal funding supporting about half of UC research, the vitality of the UC research enterprise is dependent on agencies whose funding is reviewed annually. Hence, long-term prospects for federal research sponsorship are always uncertain. However, UC is proactive in developing strong relationships with these agencies to advise them on funding priorities. The near-term future is promising for funding to support climate and environmental science, artificial intelligence, civil and cyber infrastructure, and medicine.

Whatever changes in priorities are embodied in the federal budget, one certainty is that federal funding is becoming increasingly competitive. At the National Institutes of Health, only one proposal is funded for every five received, compared to about 32 percent fifteen years ago, even though total appropriations for research have increased. UC is competitive in garnering these awards, but this effort comes at a cost. The administrative effort of drafting, reviewing, submitting, and tracking proposals is one of the less-visible costs of conducting research — costs that are not fully recovered from federal sponsors.

For more information

UCOP Research & Innovation: ucop.edu/research-innovation

A map of the economic impact of UC research activity in California: ucop.edu/institutional-research-academic-planning/_files/UC-research-impacts-in-california.pdf

Federal funds support most of the research conducted at UC. Salaries and benefits represent more than half of all research expenditures.





Source: UC Corporate Financial System. Direct amounts have been adjusted for inflation and do not include accrual funds for postemployment retirement benefits or indirect cost recovery funds.

9.1.2 Direct research expenditures by cost type, Universitywide, 2019–20



Source: UC Corporate Financial System and Corporate Personnel System.

Direct amounts do not include accrual funds for postemployment retirement benefits or indirect cost recovery funds.

UC direct research expenditures for 2019–20 were about \$5.1 billion. Of this total, 47 percent came directly from federal agencies, one of the lowest shares in the last two decades. A further seven percent represents federal flow-through funds that came to UC from the State, corporations, nonprofits, or other universities. About three-quarters of UC's federal research support was provided by the National Institutes of Health and the National Science Foundation. Federal cutbacks starting in 2006 ended a long period of growth. This trend was temporarily reversed during 2009–10 by the American Recovery and Reinvestment Act, which provided over \$1 billion in research funds to UC. After peaking in 2010–11, federal funds declined until 2014–15 and have remained essentially flat since then.

9.1 RESEARCH EXPENDITURES

Science, technology, engineering, and mathematics (STEM) and medical fields represent the majority of all research expenditures.





Source: UC Corporate Financial System. Direct amounts have been adjusted for inflation and do not include accrual funds for postemployment retirement benefits or indirect cost recovery funds.

Research expenditures in all STEM (science, technology, engineering, and mathematics) and medical fields represented over 90 percent of total research expenditures each year during the past decade. This figure reflects the availability of funding and parallels the nationwide pattern.

Measures based on expenditures substantially underrepresent research activity in the arts and humanities, social sciences, and professional disciplines, which make important contributions to scholarship and the quality of life, yet have relatively little access to external funding. These data reflect UC's continuing competitiveness in securing federal awards and its ongoing successful relationships with the private sector. UC is the largest single recipient of funding from the two federal agencies principally responsible for academic research: the National Institutes of Health and the National Science Foundation. UC generally receives five to six percent of the NIH annual appropriations for research and seven to eight percent of the NSF annual research appropriations. UC accounts for well over eight percent of all research expenditures at all US universities. Average research expenditures per ladder-rank faculty are higher at UC than its comparison peers.

9.1.4 Research expenditures US 4-year universities 2018–19

	Research expenditures	Percent of US total
UC Universitywide	\$5.4 B	8.6%
Other public universities	\$34.7 B	55.4%
Private universities	\$22.6 B	36.0%

Source: IPEDS. Excludes for-profit institutions, which conduct a negligible share of research. This figure is slightly different from UC's own figures due to differences in how IPEDS treats non-functional expenses.





Source: IPEDS

In the most recent year available, UC spent an average of \$512,000 in externally sourced research funding per tenured and tenure-track faculty member, compared to \$508,000 per faculty member for Association of American Universities (AAU) private institutions, and \$302,000 for AAU public institutions. The largest single source of research sponsorship is the National Institutes of Health, and campuses with medical schools and hospitals are in the best position to compete for these funds. The second-largest source of research support is the National Science Foundation.

With the exception of UC Berkeley, all of the topranked UC campuses for research expenditures per ladder-rank faculty have medical schools. Twentyone out of the 27 AAU Private institutions and 22 out of the 36 non-UC AAU Public institutions have an accredited medical school.

	Research expenditures per
UC Location	ladder-rank faculty
San Francisco*	\$3,581K
San Diego	\$653K
UC AVERAGE	\$512K
Los Angeles	\$516K
Berkeley	\$471K
Davis	\$383K
Irvine	\$258K
Santa Barbara	\$242K
Santa Cruz	\$215K
Riverside	\$183K
Merced	\$170K
*UC San Francisco is an exc	lusively health sciences
campus, where many non-l	adder-rank (clinical) faculty also
conduct significant research	n.

9.2 RESEARCH IMPACT

UC's Open Access policies continue to add to a growing body of freely available research publications in eScholarship, UC's open-access repository and publishing platform, expanding the global reach of UC's research findings.



9.2.1 eScholarship views and downloads of UC scholarly materials Universitywide

This map shows the geographic distribution and concentration of views for scholarly materials deposited in eScholarship, the UC open access (OA) publishing platform and repository managed by the California Digital Library. Since 2002, UC-sponsored research in eScholarship has been viewed and/or downloaded almost 90 million times by readers around the world. The repository contains over 300,000 individual items, including many articles, research reports, working papers, and the 80-plus OA journals that are published on the platform.

Deposits to eScholarship have increased substantially since the adoption of the UC Academic Senate's Open Access Policy in 2013, with faculty submitting almost 30,000 articles under the policy in 2020 alone. The success of this policy has also helped encourage the depositing of nearly 20,000 additional scholarly materials (pre-policy publications, electronic theses and dissertations, working papers, etc.) in that same period, making even more UC scholarship publicly accessible to the world.



eScholarship publication deposits

Source: California Digital Library

The University of California is a major research presence at both the state and national levels, with impacts above both global averages and AAU peers.

 9.2.2 UC research publication performance, by Field-Weighted Citation Impact (FWCI) and discipline group Universitywide
2015 to 2020



Source: SciVal® database, Elsevier B.V., scival.com (downloaded March 31, 2021)

As a premier research university, UC creates and disseminates new knowledge. The publication of UC research findings creates an ever-growing foundation for scientific discovery and social impact.

The quality and impact of UC research publications can be characterized by the Field-Weighted Citation Impact (FWCI) SciVal® tool, which was created by Elsevier. The FWCI tool takes into account differences in research publication practices across disciplines and normalizes impact against a global baseline. The FWCI tool can benchmark the impact of publications regardless of differences in publication length, discipline, age, and type. In any given disciplinary area, the global average FWCI is equal to 1.00; publications with FWCI greater than 1.00 have been cited more frequently than would be expected, while publications with FWCI less than 1.00 have been cited less than would be expected. The UC average FWCI is 1.96, or nearly twice the global average.

UC's publication impact is particularly high in the fields of arts and humanities, economics, computer science, engineering, and medicine.

9.2.3

Licenses issued in California contribute to successful businesses. The number of active plant and utility licenses in California is growing.



New licenses for UC patents issued to

California businesses, Universitywide,

UC patent licenses active in California, June 30, 2020

	Dlaut	Tatal
Utility	Plant	Total
921	553	1,474
580	134	714
	Utility 921 580	Utility Plant 921 553 580 134

UC research often leads directly to new patentable inventions and other innovations; bringing them to the marketplace is part of the UC public service mission. UC inventions take two paths to the marketplace: they may be licensed to an existing company or they may become the cornerstone of a new startup company.

Invention commercialization promotes technological advances, generates economic benefits and helps support UC's research enterprise. UC's patents are commercialized under utility licenses and plant licenses. Utility licenses cover inventions protected by utility patents, such as processes, machines, manufactured items, or compositions of matter, and are often issued exclusively to a single licensee. Plant licenses cover plant cultivars and are often licensed nonexclusively to nurseries and distribution centers.

From the high-tech centers of San Diego and Silicon Valley to the agriculture of the Central Valley, UC licenses its technologies throughout California. As of June 30, 2020, UC's license portfolio in California included 1,474 active utility and plant licenses to 714 separate companies.

Source: UC Knowledge Transfer Office

PUBLIC SERVICE

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PUBLIC SERVICE

Part of the UC mission

Along with teaching and research, UC contributes to the well-being of the state's population and economic growth through its public service efforts. UC's impact goes well beyond its on-campus activities. UC has a significant presence in nearly every community throughout California.

Educational outreach forms a crucial part of UC's service to the state, including a network of world-class museums, libraries, herbaria, and other facilities open to the public for shared learning. Every UC campus administers hundreds or thousands of community-based programs across a range of foci, from community and social services to teacher professional development and K–12 student services.

The University exhibits a steadfast commitment to public service in part through support of sustainable agriculture, environmental stewardship, healthy families, and education. UC Agriculture and Natural Resources (UC ANR), the UC Natural Reserve System (NRS), the community-based programs of the Division of Diversity and Engagement, and all ten campuses are highlighted in this chapter.

UC Agriculture and Natural Resources

UC's land-grant history

The Morrill Land-Grant Acts emphasized that the role of the University is to develop "useful and practical information ... and to promote scientific investigations and experiments." The Acts created a federal-state partnership for agricultural research and technology transfer. The University of California was chartered as California's land-grant university. Subsequently, the Hatch Act of 1887 established state Agricultural Experiment Stations. In 1914, the Smith-Lever Act established Cooperative Extension services to extend university research through outreach and education. UC's Division of Agriculture and Natural Resources is UC's land-grant arm. State legislation incorporated county governments to become the third legal partner, such that today, UC ANR represents a three-way partnership with federal, state, and county governments.

UC ANR personnel and programs deliver resources from the UC system to Californians — even if there is no campus nearby. UC ANR forms teams, across UC and beyond, to develop innovative, multidisciplinary, science-based solutions to complex issues. UC Cooperative Extension (UCCE) is the education and outreach arm, serving all 58 California counties by bringing UC research to local communities. UC ANR's mission is to engage UC with the people of California to achieve innovation in research and education that supports:

- Sustainable, safe, and nutritious food production and delivery
- Economic success in a global economy
- A sustainable, healthy, and productive environment
- Science literacy and youth development programs

UC ANR statewide network

UC ANR operates a statewide network of researchers and educators dedicated to the development and application of knowledge to address local agricultural, environmental, and health issues. This network of local UC Cooperative Extension sites and Research and Extension Centers (RECs) is often the face of the University to Californians with

no other connection to the University. In 2020, 150 Cooperative Extension Advisors were conducting research, outreach, and education in all 58 counties from local UCCE offices. Nine statewide RECs provide education for the public and places for researchers to conduct field experiments. Approximately 565 Agricultural Experiment Station researchers are located at three campuses, and 120 Cooperative Extension Specialists are located at six campuses, RECs, and county offices. UC ANR maintains and enhances connections that engage UC with the people of California through more than 3,000 local partnership programs (10.1.1).

UC ANR's statewide California Naturalist Program promotes stewardship of the state's natural resources through education and service. The program delivery model involves partnering with around 50 well-established institutions to form a statewide network of organizations that offer the California Naturalist certification course. Since its inception in 2012, the program has certified over 3,770 graduates as California Naturalists who volunteer to support conservation and restoration efforts in 51 counties. In response to the 2020 national push for racial justice, the program re-examined its approach. As a result, the program is further emphasizing building meaningful relationships with organizations serving underrepresented groups and focusing on workforce development organizations; ensuring the relevance of program content, language, and delivery to diverse groups; increasing recruitment to those historically underserved by reducing barriers to access, including offering more scholarships; and taking responsibility for their own professional development and growth. In 2020, the program developed new partnerships with the following organizations serving underrepresented groups: Community Nature Connection, Nature for All, Outward Bound Adventures, and Southern California Mountains Foundation's Urban Conservation Corps. In Southern California, the program has seen the largest growth in partnerships with organizations serving underrepresented groups. In the Central Sierra region, non-white participation has gone up from 20 percent in 2019 to 35 percent in 2020.

The UC Master Gardener Program extends to the public research-based information about food gardening and sustainable landscaping, including green waste reduction, pest management, water conservation, and pollinatorfriendly gardens. There are over 6,200 UC Master Gardener volunteers in 50 California counties. In 2020, the program successfully adapted to the COVID-19 pandemic with strategies such as making the help desk completely remote, offering classes and plant clinics online, expanding and maintaining demonstration gardens as allowed by public health orders, creating an online system for plant sales, and increasing use of social media to share sciencebased gardening information. The UC Master Gardener volunteers contributed 395,000 public service hours with an estimated value of \$12.5 million. Participants adopted gardening practices that increased access to fresh produce, especially important given the increased food insecurity experienced during the COVID-19 pandemic. Forty-nine percent of the over 700 members of the public who participated in UC Master Gardener volunteer-led public education events reported that they applied gardening practices that reduced food loss, and 14 percent donated produce to community programs that distribute food to individuals in need of food assistance.

UC ANR's statewide 4-H Youth Development Program uses a positive youth development framework and promotes experiential, inquiry-based science learning. In response to the COVID-19 stay-at-home orders, the program pivoted to remote instruction, and was able to engage over 100,000 youth aged 5—19 working in partnership with over 9,700 caring adult volunteers. The UC 4-H Healthy Living Team adapted the Center for Disease Control and Prevention/4-H Junior Disease Detective: Operation Outbreak project for distance learning. The project focused on epidemiology concepts and included eight interactive, virtual sessions covering public health professions, disease investigation, virus transmission, disease outbreaks, vaccines, immunity, preventative measures, and education. After completing the statewide UC 4-H Virtual Disease Detectives Epidemiology Project, youth reported that they were more likely to wash their hands before food preparation (78.1%), after sneezing or coughing (56.2%), and after shopping in a public space (87.5%). The majority (84.4%) of youth also reported that they were more likely to wash their hands before the project. When youth were asked what they learned from the

project, one youth stated, "I learned why masks work, I learned how hand sanitizer works, and I learned how I can help my community."

UC ANR manages two statewide nutrition education programs: the California Expanded Food and Nutrition Program (EFNEP) in 24 counties, and the CalFresh Healthy Living, University of California Program (CFHL,UC) in 32 counties. EFNEP delivers research-based nutrition education to limited-resource families with young children to improve healthy lifestyle choices. In 2020, EFNEP had over 11,000 adult and youth participants. Program evaluation findings from 2020 indicate that EFNEP adult graduates reported an average monthly food cost savings of \$58.10, which collectively saved California EFNEP families \$1,532,445. Given the COVID-19 pandemic's significant disruption to family finances from cascading shutdowns and layoffs, this extra money monthly made a difference. CFHL,UC operates under a joint agreement involving the USDA, California Department of Social Services, and UC Cooperative Extension to serve persons eligible for the federal Supplemental Nutrition Assistance Program (SNAP). In 2020, CFHL,UC partnered with 320 SNAP education sites to make policy, systems, and environmental changes that reached more than 170,000 people. In addition, UC Cooperative Extension (UCCE) across the state worked to increase farmers' market access and utilization for CalFresh participants. For example, UCCE San Luis Obispo County worked with local groups to promote nearby farmers' markets that accept SNAP benefits. Eight of the county's 13 markets accepting SNAP benefits and offering market match incentive programs saw a 35 percent increase in new CalFresh customers from 2019 to 2020.

The scope of UC ANR impact in response to the COVID-19 pandemic

UC ANR's academics and programs, embedded in communities across the state in all 58 counties, responded quickly and creatively to the COVID-19 pandemic to meet their clientele's new and ongoing needs under the challenging circumstances. Given the severe economic effects of the COVID-19 crisis, California especially needs community economic development approaches to foster economic resilience and vigor across its working landscapes. With the COVID-related shutdowns and layoffs, UC ANR programs were a cornerstone for families' food security and physical health. Below are examples of program outcomes that support the state's economy, health, and environment in the face of the unprecedented pandemic.

Enhancing community economic development — UC ANR research and extension works with stakeholders to develop practices that increase the triple bottom-line: economic, environmental, and social. Multiple grants are available to growers to provide vital financial assistance, helping to absorb sales declines and increased marketing costs associated with the COVID-19 pandemic. However, some small farmers experienced barriers accessing these resources. UCCE in Santa Clara County provided technical assistance to 185 farmers from socially disadvantaged communities resulting in 155 being funded for a total amount of over \$3 million in emergency relief during the pandemic.

Improving food security — In partnership with communities and allied organizations across the state, UC ANR conducts research to design and deliver educational programs that promote individual and community food security. UC ANR's Nutrition Policy Institute (NPI) worked with eight school districts in California's Central Valley to understand how school food operations pivoted during COVID-19. They distilled successes, challenges, and best practices for school districts and community partners to navigate emergent USDA policies related to serving free school meals during the pandemic. NPI's research influenced practice changes in several districts across the Central Valley region, for example:

- Parlier Unified improved school meal delivery logistics so that meals were accessible to families who lived far away from their children's schools. The district also provided culturally relevant foods such as tamales and jicama, which enhanced the appeal and healthfulness of meals;
- Fresno Unified streamlined meal service by offering multiple meals on one pick-up day instead of a daily meal, which increased their capacity to serve meals on weekends and holidays;

• Kings Canyon Unified streamlined their meal pick-up process and made phone calls to parents to remind them of meal distribution times, which increased participation in the program.

These California-based innovative practices were amplified and disseminated through various national networks of child nutrition researchers and providers.

A UCCE Specialist in urban agriculture and food sovereignty provided training and technical assistance, at the UC Berkeley Gill Tract Community Farm, to local farmers on safe production and distribution during COVID-19. Two online training sessions helped farms stay open as an "essential business" to distribute food to community members who are food insecure. The UC Gill Tract Community Farm volunteers, including partners from Black Earth Farms and Sogorea Te Land Trust, organized a mutual aid food distribution program that produced and distributed tens of thousands of pounds of produce to over 30 local organizations and individuals, including the UC Berkeley Student Pantry, the Berkeley Food Pantry, and the Women's Daytime Drop-In Center.

Improving drinking water safety — The UC ANR Nutrition Policy Institute (NPI) provided leadership through the National Drinking Water Alliance to ensure that the nation's children have safe access to drinking water during the COVID-19 pandemic and beyond. A suite of checklists was developed for schools' drinking water safety, access, and promotion. The Centers for Disease Control incorporated NPI's recommended water safety practice language in a recent update of their COVID-19 water guidance for schools.

Improving health for all — A UCCE Nutrition Specialist at UC Berkeley led a literature review of scientific evidence and public health messaging on breastfeeding and providing prepared meals to individuals ages 65 and older during the COVID-19 pandemic. The breastfeeding educational materials were accessed more than 100 times by viewers located in northern and southern California, in other U.S. states, and Mexico and Ireland. The resource for nutrition programs serving aging adults was shared with the Alameda County Great Plates Delivered program, which then further extended it to the California Office of Emergency Services that tailored it for participating restaurants throughout the state.

Improving living and working conditions for California's food system and farm workers — UC ANR is working to help small farmers and farmworkers stay safe during the COVID-19 pandemic. UCCE in Fresno County distributed masks, hand-sanitizing wipes, and COVID-19 safety signage in multiple languages to roadside farm stands. Farmers were concerned both that they might lose customers under the shelter-in-place order and that customers might not follow COVID-19 safety procedures, possibly increasing the risk of COVID-19 spread to other customers or to the farmers and their family members. The Fresno County Fruit Trail commented on the safety practices adopted by the farm stands: "The health precautions taken provided a level of reassurance as they were able to efficiently serve a steady stream of customers (and customers queued up nicely with our masks)." In addition, UCCE in Santa Clara County distributed over 80 COVID-kits to farmers from socially disadvantaged communities to ensure worker safety. Through observations during farm visits, farmworkers started wearing masks when working, and through interviews, learned they were washing their hands more often. These practices ensure a safer working environment for farmworkers, protect workers' health, and limit/slow the spread of COVID-19.

Increasing ecological sustainability of landscapes — In 2020, UC ANR conducted a collaborative research project on COVID-19's impact on gardening, involving a team of researchers in Australia and Germany. A survey in English, German, Spanish, and Vietnamese was distributed in the three countries and received responses from over 3,700 gardeners. In the U.S., the UC Master Gardener Program was instrumental in circulating the survey to a state and national audience. Currently, the team is analyzing the survey data and preparing manuscripts for publication. Ultimately, this work contributes to knowledge about gardens' role in community resilience to crises and about how to support gardeners under these difficult circumstances. **Improving animal management, productivity, and efficiency** — California is the largest dairy-producing state in the nation, and dairy is the state's top-producing commodity. While suffering from income losses and cash-flow constraints, the over 34,000 dairy farms nationwide must ensure the health and safety of their 150,000 employees, mostly of Hispanic ethnicity, who are considered essential workers. Recent U.S. statistics indicate that 30 percent of the reported COVID-19 cases were among Hispanics, even though they represent 17 percent of the U.S. population. A UCCE Veterinary Medicine Specialist at UC Davis conducted a COVID-19 needs assessment to understand how dairy producers, dairy workers, and allied dairy industry perceive the health and economic implications of the COVID-19 pandemic. This project conducted three nationwide surveys to reach three different stakeholder groups: dairy producers, dairy workers, and the allied industry. Summarizing and sharing the surveys' findings with dairy producers are still underway.

UC Natural Reserve System

The UC Natural Reserve System (NRS) is a network of protected natural areas throughout California. These lands are managed for research, teaching, and public service, and are a major component of UC's environmental stewardship. Its 41 reserves, which include more than 47,000 acres owned by UC, make the NRS the largest university-administered reserve system in the world (10.2.1).

As one of four trustee agencies recognized under the California Environmental Quality Act, the University of California holds reserve natural resources in trust for the people of the state of California. Reserve managers protect endangered plants and animals, restore native habitats, and control invasive species. Reserves also serve the public by holding lecture series, guided hikes, and other community events; by lending scientific expertise to conservation initiatives; and by hosting tens of thousands of California schoolchildren on field trips.

Most major state ecosystems are represented in the NRS, from coastal tidepools to inland deserts, oak savannas to offshore islands, and wetlands to Sierra Nevada forests. Reserves also serve as gateways to more than one million acres of public lands. NRS reserves include lands purchased by the University, donated by private landowners, and made available to the reserve system via partnerships with state and national parks, land trusts, and government agencies. Reserve amenities such as classrooms, lodging, laboratories, and internet access attract tens of thousands of users each year. These include researchers, students taking university courses, schoolchildren, and the general public. Those who seek to understand the workings of natural California come to the NRS to take classes, develop field skills, and conduct research.

More than 150 undergraduate courses across the UC system include visits to NRS reserves each year. Topics of study range from botany to zoology, archaeology to environmental planning, public health to the performing and visual arts. Scientists flock to reserves because reserve lands are protected in perpetuity. They feel comfortable launching long-term studies within reserve boundaries. Work at reserves produced more than 1,100 peer-reviewed journal articles between 2015 and 2020.

The emergence of the pandemic severely curtailed reserve use in 2020. In spring, most reserves limited class or public group use. Research visits were reviewed by campus administrators to ensure compliance with COVID-19 safety precautions. Visitor use of facilities remains limited. A handful of reserves had resumed minimal class use by the close of the year.

Despite these limitations, the NRS was able to expand its diversity and inclusion efforts by launching its Field Science Fellowship program. Geared toward students from ethnic and socioeconomic backgrounds traditionally underrepresented in the sciences, the program provided funding for four undergraduates to conduct full-time field research for a summer under the mentorship of a UC faculty member. In addition, a new study demonstrated that field courses, including the NRS's California Ecology and Conservation program, dramatically improve academic achievement, major retention, and graduation rates among students who are from underrepresented minority backgrounds, are the first in their families to attend college, and/or face financial need (Beltran, R., Marnocha, E., Race, A., Croll, D., Dayton, G., Zavaleta, E. 2020. Field courses narrow demographic achievement gaps in ecology and evolutionary biology. *Academic Practice in Ecology and Evolution* doi.org/10.1002/ece3.6300).

The end of 2020 also saw the conclusion of the NRS's five-year, 50th Anniversary Capital Campaign. The campaign raised over \$99 million from private philanthropy, government funding, and other sources of support.

More than fifty years after its inception, the need for the NRS has never been greater. Climate change, pollution, extinctions, and invasive species are fraying the fabric upon which life on Earth depends. By supporting university-level teaching, research and public service, the NRS contributes to the understanding and wise stewardship of the Earth.

Educational partnerships

For nearly 50 years, the University of California's Student Academic Preparation and Educational Partnerships (SAPEP) programs have helped prepare California students for higher education (10.3.1). Program activities are centered on student academic preparation, community college articulation support, school and community partnerships, and online and technology-assisted services. SAPEP programs served more than 210,000 K–12 students at more than 1,400 public schools and more than 28,000 students at all 114 California community colleges in 2018–19, the most recent year available.

The goal is to promote achievement by supporting academic preparation and college readiness. Programs include the Early Academic Outreach Program (EAOP), which focuses on "a–g" course completion (a prerequisite for admission to UC and CSU); K–20 Regional Intersegmental Alliances (aka P–20), creating ties between campuses, schools, local communities, and business organizations; The Puente Project, focusing on college-preparatory English skill development; Transfer Prep, focusing on community college transfer support; and Mathematics, Engineering, Science Achievement (MESA), focusing on STEM (science, technology, engineering, and mathematics) skills development.



The Mathematics, Engineering, Science Achievement (MESA) program integrates UC's core missions of teaching and public service by focusing on the academic preparation of students at K–12 schools, community colleges, and four-year universities. Through its three components — the MESA College Prep Program (formerly known as MESA Schools Program or MSP), the MESA Community College Program (MCCP), and the MESA University Program (formerly known as MESA Engineering Program or MEP) — MESA serves more than 21,000 California students annually.

MESA College Prep centers are housed in 18 locations and serve more than 14,000 students at about 350 K–12 schools. Centers offer classes that reinforce math and science content standards. MESA activities include workshops aimed at strengthening study skills and monitoring progress.

The MESA Community College Program (MCCP) manages 40 centers at community colleges, serving around 4,000 students annually. These centers provide academic excellence workshops, orientation courses, academic advising, and counseling activities to help community college students transfer to a four-year university in a timely manner.

The MESA University Program operates 13 centers located in public (UC and CSU) and private universities across the state. Serving about 3,000 students annually, these centers assist college students in attaining four-year degrees in engineering and computer science by providing tutoring and academic skills workshops. In partnership with local industry leaders, MESA University Program centers also provide career and professional development opportunities for students. In addition to the activities UC undertakes to strengthen K–12 and community college students academically, UC plays an important role in preparing California's teacher workforce. UC's Teacher Education Programs prepare teacher candidates to engage students in rigorous, relevant, and inquiry-based educational experiences. Located at eight UC campuses, Teacher Education Programs recruit, prepare, and support educators who are committed to academic excellence, equity, and integrity, and to cultivating the highest levels of achievement and opportunity for all students.

UC also provides ongoing support to educators already in the workforce through professional development programs. For example, the California Subject Matter Project (CSMP) is a network of nine discipline-based statewide projects, providing more than 2,000 professional development events for educators at more than 10,000 schools each year. CSMP professional learning opportunities are aligned with state-adopted standards and are collaboratively designed by K–12 and university educators to enhance learning for all students (10.3.2).

Social and economic impact

Including the programs of ANR, the Natural Reserve System, and UC's educational partnerships mentioned above, the University of California administers more than 20,000 community-based programs across the state. Because the well-being of every California citizen and community is important, all campuses sponsor and manage programs far from their locations. For example, UC San Diego, near the southern border of California, runs clinical internship sites in Crescent City and other communities near the northern border of California; UC Davis, in the Central Valley, runs the Oiled Wildlife Care Network in Morro Beach on the central coast; and UC Santa Barbara, on the California Coast, runs the Outdoor Science Education Program in several locations on the east side of the Sierra Nevada range. All of UC's community-based programs may be discovered and explored at: ucal.us/maps.

UC's social impact

Through community and social services programs and cultural resources and arts programs, UC administers internship and field study programs that connect students and alumni with their communities; volunteer centers working on issues such as domestic violence, fair housing advocacy, and employment training; arts education and outreach programs that teach art, dance, drama, music, and digital arts in the community (10.4.1).

UC's economic impact

Through business and economic development programs and public policy programs, UC facilitates internships offered in partnership with local companies, where students gain both UC credits and professional experience. Other programs bring local high-tech and green-tech companies together with motivated individuals to foster student participation in community economic development (10.4.1).

As California's economy becomes increasingly dependent on highly educated workers, the role of the University of California in training the state's future workforce becomes more vital. Industries relying on skilled workers in the STEM fields represent a major component of California's economy. UC awards half of the state's bachelor's degrees in STEM fields.

More than 1.2 million UC alumni are known to live and work in California (10.4.2). They are leaders, volunteers, and contributors to the vitality of its communities, businesses, and culture. UC's operations also add significantly to the state's economy. With approximately 210,000 employees, UC is California's third-largest employer (10.4.3). True to its land-grant mission, the UC system touches many aspects of life in California. The UC public service mission has evolved in tandem with the changing needs of our state and local communities, and has developed programs and partnerships that improve the lives of all Californians.

For more information

UC in California interactive map, includes California counties, regions, campuses, UC system, and California elected representative districts: ucal.us/maps

UC Information Center public service dashboards: universityofcalifornia.edu/infocenter#public-service

Division of Agriculture and Natural Resources: ucanr.edu

Natural Reserve System: ucnrs.org and universityofcalifornia.edu/infocenter/UC-NRS

MESA Programs: mesa.ucop.edu

CalTeach: calteach.universityofcalifornia.edu

Early Academic Outreach Program (EAOP): eaop.org

The Puente Project: puente.berkeley.edu

California Subject Matter Project: csmp.ucop.edu

UC's Division of Agriculture and Natural Resources brings the power of UC research and education to local communities across California.

10.1.1 UC Division of Agriculture and Natural Resources programs



Source: UC campuses, most recent data from 2018

UC's land-grant arm, Agriculture and Natural Resources (ANR), operates several of California's most important agriculture and nutrition awareness and education programs, including Cooperative Extension, Research and Extension Centers, the 4-H youth development statewide program, the California Master Gardener program, the California Naturalist program, the UC Master Food Preservers program, UC CalFresh, and Expanded Food and Nutrition Education programs.

The UC Natural Reserve System covers more than 750,000 acres and represents most of California's major ecosystems.

10.2.1 UC Natural Reserve System



Source: UC campuses

As a major component of UC's environmental stewardship role, the UC Natural Reserve System (NRS) manages a network of protected natural areas throughout California. Its 41 sites include more than 756,000 acres, making it the largest universityadministered reserve system in the world. These lands provide undisturbed environments to conduct research, enhance student educational experiences, and provide sites for public service programs. In 2019, Point Reyes Field Station and Lassen Field Station joined the NRS as partnership reserves, which are jointly managed with the National Park Service at Point Reyes National Seashore and Lassen Volcanic National Park, respectively. For more information, go to universityofcalifornia.edu/infocenter/UC-NRS.

UC programs improve academic skills of K–12 and community college students across California.



10.3.1 UC K–12 and community college student services programs

Student Academic Preparation and Educational Partnerships (SAPEP) programs such as the Early Academic Outreach Program (EAOP), Mathematics, Engineering, Science Achievement (MESA), and The Puente Project are designed to increase completion of college preparatory ("a–g") courses, support enrollment directly from high school into four-year institutions, and support preparedness to transfer from community colleges to four-year institutions.

Students who participate in SAPEP programs are more likely to complete "a–g" courses (81 percent of SAPEP participants in AY2018–19 vs. 49 percent of

Source: UC campuses, most recent data from 2018

California public high school graduates) and attend California public two- and four-year universities (65 percent of SAPEP participants in AY2018–19 vs. 55 percent of California public high school graduates¹).

In 2018–19, SAPEP programs served nearly 210,000 K–12 students at more than 1,400 public schools, and over 28,000 community college students at all 114 community colleges. In addition, over 42,000 parents/guardians of K–12 students and nearly 7,000 teachers, counselors, and school administrators also participated in SAPEP programs.

¹ Comparison data are for the Class of 2018, the most recent year available from the California Department of Education's DataQuest (see dq.cde.ca.gov/dataquest/).

UC helps prepare California's teacher workforce and strengthens the skills of teachers throughout their careers.



10.3.2 UC teacher professional development and teacher preparation programs

The University of California plays an important role in preparing teachers for their careers and providing them professional development. UC manages more than 7,800 teacher professional development programs and 65 teacher preparation programs.

The California Subject Matter Project, for example, creates sustainable teacher learning communities throughout California. Its network of nine disciplinebased projects supports professional development to improve instructional practices and student achievement.

Source: UC campuses, most recent data from 2018

Teacher professional development activities include teacher workshops related to Common Core State Standards, writing, mathematics, and in-service teacher training.

Teacher preparation programs include CalTeach, a component of the Science and Mathematics Initiative (SMI). Through this program, UC recruits and prepares its undergraduates majoring in mathematics and science for teaching careers, and provides special coursework and field experiences in K–12 schools. Since its inception in 2005, CalTeach has served more than 15,000 UC undergraduates, many of them now credentialed STEM educators in California public schools.

10.4 SOCIAL AND ECONOMIC IMPACT

UC is involved in communities across California through a wide range of local-level service programs.

10.4.1 UC programs for community and social services, cultural resources and arts, university extension, business and economic development, and public policy



Source: UC campuses, most recent data from 2018

UC administers around 1,630 programs providing community and social services throughout the state, and about 650 arts education and outreach programs that expose students and community members to art and culture through performing arts, theater, cultural events, and other activities. The University operates 235 business-related programs statewide. Serving about 500,000 course registrants, almost 850 UC University Extension programs offering some 17,000 different courses encourage lifelong learning for all Californians. Additionally, nearly 340 public policy programs engage the community and raise awareness of public policy issues.

Of UC's more than two million living alumni, many reside within California.



10.4.2 Location and industry of employment of UC alumni since 2000, in California Fall 2015

Source: UC campuses, EDD; Other includes industries such as retail & wholesale, manufacturing, transportation, construction, legal services, and others.

Campus alumni offices maintain recent residential address information for more than 85 percent of those alumni. These maps display the distribution across California of UC graduates in each of eight different industries, as reported by California Employment Development Department (EDD). The industry with the largest employment of young UC graduates is health care, employing about 12 percent of these alumni, followed by higher education.

UC is one of California's largest employers, with close to 220,000 employees.

10.4.3 Faculty, academics, and staff employees; retirees, in California, 2021



The University of California employs approximately 216,000 faculty, academics, and staff in California, making it the state's third-largest employer. With employees residing throughout the state, UC's economic impact goes well beyond its ten campus locations. Members of its workforce purchase goods and contribute to local economies across the state.

Source: UC Information Center Data Warehouse

In addition to the current employees shown on this map, more than 60,000 of UC's more than 78,000 retirees reside in California, and their UC pension benefits also contribute to the communities in which they reside.

UNIVERSITY OF CALIFORNIA HEALTH



University of California Health

Health expertise in service of three missions

The University's 20 health professional schools, six academic health systems, student health centers, and selffunded health plans — collectively referred to a University of California Health (UCH) — are connected and coordinated through the health division office within the UC Office of the President (UCOP).

The health division office facilitates select systemwide activities, provides a long-term strategic framework, and acts as a catalyst for change to ensure the nation's largest academic health system remains at the forefront of clinical, educational, and research excellence.

A responsive, resilient, and strategic framework

The University's tripartite mission of teaching, research, and public service informs the UCH five-year strategic plan, which is reviewed annually to ensure it addresses changes in the external environment and proactively captures emerging opportunities. This annual refresh is executed through a collaborative process involving multiple stakeholders, including chancellors, medical center CEOs, deans of the health professional schools, UCOP leadership, and division office leadership. Inherent within this collaborative approach is an acknowledgement that local leadership must remain able to respond to the differing needs of communities, employees, faculty, and students at each location.

The resilience of this approach was demonstrated throughout 2020 and into 2021 as UCH vigorously responded to the COVID-19 pandemic. Under the leadership of Executive Vice President Carrie L. Byington, M.D., a pediatrician and infectious disease expert, UCH convened experts from across the academic and clinical enterprise to form the UCH Coordinating Committee. Organized into workgroups to address specific challenges, the Committee's insights provided the foundation for a consistent systemwide response and guidance to the University's Management Response Team and campus leadership for the safe operation of UC's ten campuses. Even as UCH met the challenges of the pandemic, it also made progress on several strategic goals, including strengthening data analytics, quality and population health initiatives, and the Leveraging Scale for Value program.

Driven by mission, vision, and values

UCH's mission is to improve the health of all people living in California now and in the future, promote health equity through the elimination of health disparities, and reduce barriers to access to clinical, educational, and research programs by creating more inclusive opportunities for employees, students, and trainees.

The vision is appropriately expansive for an academic health system of its caliber and boldness: University of California Health will be the pre-eminent, data-driven, learning health care system that improves the human condition. Its actions are rooted in core values of accountability, collaboration, diversity and inclusion, excellence, integrity, innovation, and being mission-driven. This commitment is demonstrated in many ways, including the \$1.4 billion in community benefit in FY 19/20 provided by the hospitals operated by UC.¹

These foundational elements also guided UCH's response to the pandemic, which confronted the system and its personnel in multiple ways.

¹ <u>ucop.edu/uc-health/_files/fy19-20-community-benefit-report-for-university-of-california-health.pdf</u>

The impact of COVID-19 on the health enterprise

The pandemic is not a single challenge, but a series of challenges requiring continual adjustments.

What started in January 2020 as a systemwide preparation for a potential pandemic has evolved month by month. In February 2020, we cared for some of the first patients in the U.S. with COVID-19. What started with a half-dozen inpatients grew to 8,016 inpatients by the end of March 2021. The acute shortages of personal protective equipment (PPE) that marked the earliest phase of the pandemic, and were met by an outpouring of community donations, evolved into spot shortages of vaccines a year later. UCH labs that developed in-house tests for SARS-CoV-2 and were capable of running a few hundred tests a day scaled up to complete 547,458 tests for UCH patients a year later. Plus, the labs also processed more than 500,000 tests for UC students and employees by the fall of 2020, and a nearly equivalent number to help public health agencies, nursing homes, and other systems.

The State of California called upon the University, too. Seeing the impact on hospitals around the world — and then in New York City — Governor Gavin Newsom asked all hospitals in California to increase surge capacity to 40 percent of each facility's licensed beds. At UCH, that meant rapidly reconfiguring non-clinical space into treatment areas, creating 1,481 beds in surge capacity. We created new beds in every hospital location, including setting up a field hospital at UCI Medical Center in December 2020. When the state realized the scope of infection was overwhelming existing contact-tracing capabilities, UCH launched rapid-training programs that added more than 10,000 contact tracers to the effort. When the state's public health department was inundated with disparate streams of data, UCH's Center for Data-driven Insights and Innovations helped harmonize the data to reveal useful patterns enabling data-driven decision and policy making.

Academic health systems are known for innovation and developing new technologies and applications. Here too, UC and UCH rose to the challenge. Early in the pandemic, UCOP responded to more than 300 research proposals by providing micro-grants to jumpstart major initiatives. Dozens of clinical trials were launched, taking a multi-prong approach to exploring new therapeutics, repurposing known drugs, and supporting every COVID-19 vaccine clinical trial conducted in the U.S. UCH physicians tapped into the capabilities of smartphones to set up a Bluetooth-enabled exposure notification system that was rolled out statewide with ten million activations. A breakthrough pooled-testing technology, SwabSeq, expanded the number of samples that could be tested simultaneously while retaining the ability to identify the one positive individual within the sample.

The journey of the pandemic was documented in a series of 30 COVID-19 updates to the Regents from March 2020 through April 2021, as well as year-in-review summaries on <u>UniversityofCalifornia.edu</u>. The number of innovations and extraordinary efforts go beyond what can be captured in this report.

Telehealth evolves into virtual care

When the pandemic made people reluctant to seek in-person care, telehealth rapidly evolved into virtual care. This included direct-to-patient care between clinician and patient, plus it served as a means of extending UC's clinical expertise to physicians in emergency rooms and intensive care units at smaller hospitals inundated with COVID-19 patients but lacking needed specialists.

From February 2020 through March of 2021, the direct-to-patient support model went from a systemwide average of 6,000 visits per month to an average of 137,000 per month. This rapid growth exposed patients and clinicians to the matured capabilities of virtual care, overcoming one of the historic barriers to adoption. Even as in-person visits rebound, we believe the landscape is fundamentally more receptive to virtual care, and we are strengthening our infrastructure to leverage virtual care capabilities across a broader array of settings.



Source: UCH Data Warehouse

Preparing the next generation of health care professionals

California's 40 million people need access to care, now and in the future. The state's growing population is increasingly diverse, growing older, and facing myriad health needs. While some geographic areas have a sufficient supply of health providers, other parts of the state, such as the San Joaquin Valley and Inland Empire, have far fewer health professionals than needed.

UC's health sciences programs are a vital source of the state's future dentists, doctors, nurses, optometrists, pharmacists, public health professionals, and veterinarians. The University is the largest and one of the most comprehensive health sciences training programs in the nation, with nearly 15,000 students. Based on historical averages, more than 70 percent of graduates from these programs will remain in California after graduation or residency.

University of California Health's 20 health sciences schools are:

Dentistry (UCSF, UCLA) Medicine (UCD, UCSF, UCLA, UCR, UCI, UCSD) Nursing (UCD, UCSF, UCLA, UCI) Optometry (UCB) Pharmacy (UCSF, UCSD, UCI) Public Health (UCB, UCLA, UCSD) Veterinary Medicine (UCD)



The caliber of UC's health professional programs is demonstrated in the rankings produced by U.S. News & World Report, current as of April 2021.

Category	UC Berkeley	UC Davis	UC Irvine	UCLA	UC San Diego	UC Riverside	UCSF
Best Medical Schools		48 (tie)	48 (tie)	21	19	93-	4
– Research						123***	
Best Medical Schools		11	41	12	28	93-	2
– Primary Care						123***	
Best Nursing Schools		24	45	16			9
– Masters							
Best Graduate	8	24*	41*	10			
Schools Public Health							
Best Pharmacy					18		2
Schools**							
Best Veterinary		1					
Medicine Schools**							

* Indicates a degree program rather than a school.

** Indicates these graduate schools were ranked in previous years and remain current as of publication date. USN&WR does not rank dental or optometry programs.

*** Indicates a grouped ranking.

In 2021, US News & World Report added a new diversity ranking for medical schools. Four of the six UC medical schools are among the top ten in the nation for diversity.

National Rankings of Medical Schools Based on Diversity

- #4 UC Davis SOM
- #6 UC Riverside SOM
- #9 UCLA DGSOM (tie)
- #9 UCSF SOM (tie)

To make progress toward health equity, we must have health care providers who reflect the diversity of our communities. Following four years of medical school, graduates then enter another period of training — Graduate Medical Education (GME). In May 2021, UC medical school graduates had a 'match rate' of 98.3 percent into GME residency programs and of those, 42 percent matched at a UC hospital. This demonstrates the integral relationship between health education and health care delivery.

GME programs provide in-depth training that may last three to seven years depending on the specialization. All of UC's academic health centers provide residency programs and fund a substantial number of them without traditional federal support. In the 1960s, Medicare began paying for a substantial portion of the cost of residency programs. In 1997, it limited the number of funded residencies. The cap on Medicare-funded residencies has not been revised upward since then, despite a growing and aging national population with more health care needs. As a result, UC academic health centers began absorbing costs for residency training positions. In 2019–20, UCH trained 5,708 medical residents. Of those, 839 positions receive no direct federal GME direct support, at a cost of \$102 million to the University.
Academic Health Centers

UCH includes six academic health centers, five of which own or operate their hospitals, and one that leverages a community-based training and care delivery platform. The hospitals of UC Davis Health, UCI Health, UCLA Health, UC San Diego Health, and UCSF Health admitted 162,318 patients in FY19/20 for 1,052,097 inpatient days. The hospitals also provided 5,177,935 hospital-based outpatient clinic visits. When combined with outpatient services of the health professional schools, UCH provided nearly 8.2 million outpatient visits and cared for approximately 1.8 million unique patients.

UCH is an essential part of California's health care safety net system. Care is provided regardless of whether the person has health insurance. The academic health centers are supported almost entirely by reimbursement for clinical services paid by Medi-Cal (Medicaid), Medicare, and commercial payers. Systemwide, in FY19/20, 35.5 percent of inpatient days were associated with Medi-Cal, 34.1 percent with Medicare, and 29.6 percent with private market payers. The remaining 0.7 percent lacked any form of insurance or were self-paid. Statewide, the pandemic has driven a 6.8 percent increase in Medi-Cal enrollment.¹ Although UC hospitals represent less than six percent of the acute care beds in the state,² they are the third-largest provider of inpatient services and the fourth-largest provider of hospital-based outpatient services.

Clinical quality is another area of distinction. All five UC academic health centers that own or operate hospitals are ranked among California's top hospitals and two are on the national honor roll, according to U.S. News & World Report, which has ranked hospitals for more than three decades. The 2020–2021 Best Hospital rankings for UC hospitals³ are:

Best Hospitals, Nationally #4 UCLA #8 UCSF Best Hospitals, California #1 UCLA #3 UCSF #6 UC San Diego #9 UC Davis #11 UCI

UCH also has a significant economic impact on California. A January 2021 report by Beacon Economics noted the University has an \$82 billion impact on the state, of which the health enterprise represents \$37 billion.⁴

Progress on Systemness

The first move toward 'systemness' began with the Leveraging Scale for Value (LSfV) initiative six years ago, which works on supply chain, revenue cycle, and information technology improvements. The program generated \$550M in value for FY19–20 and a cumulative benefit of approximately \$1.5 billion since its inception six years ago.

¹ DHCA Monthly Medi-Cal Enrollment Report

² American Hospital Directory cites 74,925 non-federal, short-term, acute care staffed hospital beds in CA. <u>ahd.com/states/hospital_CA.html</u>

³ hhealth.usnews.com/health-care/best-hospitals/articles/best-hospitals-honor-roll-and-overview

⁴ <u>universityofcalifornia.edu/sites/default/files/economic-impact-report-2021.pdf</u>

More recently, cross-campus collaborations have expanded to numerous clinical and research programs. By 2021, dozens of active multi-campus collaborations were underway, accelerating the pace of discovery, sharing of best practices and improved coordination. One such example is CORDS, a database of de-identified clinical information from COVID-19 patients across the UCH system, which led to 14 peer-reviewed papers, new treatment insights, and a substantial scientific contribution to the National COVID Cohort Collaborative, a program run by the NIH's National Center for Advancing Translational Sciences.

Another example of systemness is a COVID-19 dashboard that leverages all five instances of UC's electronic health record platform. The dashboard shows the SARS-CoV-2 tests performed each day for UCH patients, the positive tests by gender, age and geography, the inpatients with a COVID-19 diagnosis with details on ICU and ventilator use, and the disposition of patients at the end of treatment. These metrics are reported via UCH's Twitter account (@UofCAHealth).

As noted in the vision statement, UCH intends to be the 'pre-eminent data-driven learning healthcare system,' and its ability to rapidly leverage information from the UCH Data Warehouse is a sample of what can be accomplished.

For more information

UNIVERSITY OF CALIFORNIA SYSTEMWIDE ECONOMIC, FISCAL, AND SOCIAL IMPACT ANALYSIS REPORT: UC HEALTH IMPACT <u>regents.universityofcalifornia.edu/regmeet/feb21/h5.pdf</u>

UC Budget for Current Operations, 2020-21: <u>ucop.edu/operating-budget/ files/rbudget/2022-21-budget-detail.pdf</u>

UC-trained health professionals in California: universityofcalifornia.edu/infocenter/uc-health

Medical Centers Annual Financial Report: <u>finreports.universityofcalifornia.edu/index.php?file=/med_ctr/19-20/medical-center-reports-2020.pdf</u>

University of California Health: ucop.edu/uc-health/index.html

More UCH reports and resources: ucop.edu/uc-health/reports-resources/index.html

11.1 HEALTH SCIENCES STUDENTS

UC is currently training nearly 15,000 health care professionals.



11.1.1 Health sciences students by discipline, fall 2020

Source: UC Information Center Data Warehouse

Nearly 15,000 students are enrolled in University of California Health's health sciences schools and residency programs. This next generation of caregivers is an important part of California's future as its population grows, ages, and becomes more diverse.

11.1 HEALTH SCIENCES STUDENTS

UC-trained health sciences professionals remain in California in high numbers.

11.1.2 Location of doctors, nurses, dentists, optometrists, and veterinarians trained by UC since 1999 and currently licensed in California.



Source: CA Department of Consumer Affairs

Based on the 2017 locations of practice of 2005– 2010 graduates of UC health sciences' schools and residency programs, approximately 72 percent of UC health science students and 61 percent of medical residents are expected to remain in the state after completing training or education.

This high rate of retention makes University of California Health one of the principal sources for the training of health professionals for California.

2005–2010 students and residents retained in

California, combined:		
Doctors	66%	
Dentists	65%	
Veterinarians	60%	
Nurses	71%	
Optometrists	72%	

UC is addressing medical needs in California's underserved communities.

11.2.1 Medically underserved areas and populations



Source: OSHPD, Workforce Development Division, 2018

All of University of California Health's schools emphasize public service and caring for the underserved. These programs include:

UC PRIME: California has large regions that are Medically Underserved Areas (MUAs) and other regions with distinct Medically Underserved Populations (MUPs). PRIME (Programs in Medical Education) is a unique program at UC's six medical schools that supplements standard training with additional curriculum tailored to meet the needs of various underserved populations. Each program has a dedicated area of focus, targeted student recruitment, supplemental criteria for admission, relevant curricular content, and dedicated faculty mentorship. Since inception, PRIME has produced more than 600 medical school graduates. In 2019– 2020, UCH had 365 medical students enrolled in PRIME, with 67 percent coming from underrepresented groups in medicine.

UC Riverside: Persistent shortages in certain areas also led to the creation of a different kind of medical school at UC Riverside. UC Riverside's medical school focuses on training for family medicine, obstetrics and gynecology, psychiatry, pediatrics, general surgery, and internal medicine — medical specialties with significant shortages.

Rather than open an academic medical center to enhance physician training, UC Riverside embeds its students and residents in community-based health organizations, many of which serve people with the lowest incomes and access to care. Additionally, the school uses funds from foundations and individual donors to waive tuition and fees for graduates who agree to practice medicine in underserved areas for five years.

UCLA International Medical Graduate (IMG)

program: In 2018, the Governor signed AB 2311, a bill that extended UCLA's unique IMG program. The UCLA IMG program is a University-based preresidency training program for U.S. citizens and permanent residents who received medical educations from schools throughout Latin America, and who are fully fluent in both Spanish and English. These international graduates undergo an intensive, standardized course of professional instruction and clinical clerkships so they can pass the U.S. Medical Licensing Examinations (USMLE) and compete successfully for Family Medicine residency programs in California. In return, UCLA IMG scholars agree to serve for 24 to 36 months in medically underserved communities in California after completing their residencies.

Health science professional degree fees have leveled off after incurring sharp increases during years of declining State support. Average debt levels are increasing.



11.3.1 Average total charges for health professional degree students, Universitywide, 2010–11 to 2020–21

Source: UC Information Center Data Warehouse





Source: UC Information Center Data Warehouse

The rising cost of graduate education has not been matched by increases in State support. In fact, State support declined significantly during recurring State fiscal crises, which caused the University to increase tuition, campus-based fees, and professional degree supplemental tuition (PDST). This cost-shifting has contributed to students taking on increasing amounts of debt. At least one-third of the revenue raised from professional school fees is used to provide financial aid to current students. As academic health centers and safety net hospitals, UCH hospitals are destinations for some of the most critically ill patients in the state. A large share of these patients are from Medicare or Medi-Cal.

11.4.1 Patient complexity (Case Mix Index) UC medical centers 2020, 2019, and 2018 fiscal years



11.4.2 Patient days UC medical centers 2020, 2019, and 2018 fiscal years



One way to understand the health needs of hospitalized patients is the Case Mix Index (CMI). Index values above 1.0 indicate increasingly poor health. In most acute care hospitals in California CMIs are between 1.1 and 1.5. Source: UC Medical Center Audited Financial Statements

11.4.3 Sources of medical center revenues 2019-20



Source: UC Budget for Current Operations

UC medical centers and UC schools of medicine accommodate millions of outpatient visits every year.







Source: UC Medical Center Audited Financial Statements

Supplementing its inpatient capacity, University of California Health provides robust outpatient services. Outpatient services provided by the Medical Centers include clinic visits, primary care network, home health and hospice, and emergency visits. Medical and dental practice income supports three-quarters of the instructional expenditures in the health sciences.



11.5.1 Health sciences instructional expenditures by category and fund source, 2019–20

Although part of the University of California, only a small portion of University of California Health's funding comes from the State's General Fund. The overwhelming majority comes from reimbursements and payments for clinical services. Source: UC Budget for Current Operations

Three-quarters of the instructional expenditures at the health sciences schools are supported by medical and dental practice income. State and UC general funds only provide about 13 percent of revenue.

INSTITUTIONAL PERFORMANCE



INSTITUTIONAL PERFORMANCE

Overview

UC requires significant resources and planning to support its instruction, research, and public service missions. The indicators in this chapter provide insight into the financial health of the University, the state of capital and space resources, and the environmental sustainability of campus operations.

Financial trends

The University's revenues, totaling over \$39.6 billion in 2019–20 (excluding Department of Energy laboratories), fund its core mission and a wide range of support activities. Over one-third comes from the five UC medical centers, which have collectively nearly doubled in size in the past decade. Contracts and grants, which help sustain the University's research mission and reflect UC's preeminence in research, are the next largest source of funds.

The impact of the COVID-19 pandemic in the final quarter of the 2019–20 fiscal year resulted in large revenue losses across various areas of the University. Shutdowns or drastic reductions in services such as nonessential patient care, housing and dining, and other auxiliary functions, including student refunds for cancelled contracts, resulted in revenue losses of about \$1.5 billion as of July 31, 2020. These losses were partially offset by about \$620 million in federal funding to the University by the Coronavirus Aid, Relief, and Economic Security Act of 2020 ("CARES Act"), which was also intended to help with other costs associated with the pandemic such as facilities cleaning, COVID patient care, and remote instruction. An additional \$130 million of CARES Act funding received by the University was restricted for direct student financial support.

State General Funds, tuition and fees, and UC General Funds make up the core revenues for the University's instructional mission. State funds were historically the largest single source of support for instruction; however, cuts in State funding over the past two decades reduced this resource. State educational appropriations are less today in inflation-adjusted dollars than they were in 2006–07 and over \$1 billion less than what they were in 2000–01, despite substantial enrollment growth. In 2000–01, State funding for UC, including Cal Grants, contributed \$18,530 per student — 72% of the total cost. In 2019–20, the State share declined to \$8,140, or 40% of the total cost. From 2000–01 to 2010–11, systemwide tuition and fees were increased to offset the impacts of reduced funding from the State, though financial aid increases made up for those increases for many UC students. In-state tuition at UC has remained flat for eight of the last nine years. Under these circumstances, the importance of alternative sources of funding, such as Nonresident Supplemental Tuition, has increased. Prior to the COVID-19 pandemic, improvements in the California economy since 2012, combined with the passage of Proposition 30, had brought some stability to the State budget and thus to the University's core budget. Modest increases in State support during times of fiscal stability have not been enough to both fully restore prior funding levels and keep pace with enrollment growth. In addition, the significant impact of the COVID-19 pandemic toward the end of the 2019–20 fiscal year resulted in State budget uncertainty for 2020–21 and 2021–22.

As core revenues per student have declined from \$38,000 in 1990–91 to \$25,700 in 2019–20, driven primarily by decreases in State General Funds on a per-student basis, the University has sought to increase revenues from other sources. Gift funds have become increasingly important. Private giving has increased; however, over 99 percent is restricted. Gift support tends to be for research, departmental support, and capital projects. The small amounts for instruction and student support cannot offset needs created by enrollment growth that has outpaced proportional growth in core revenues. Private giving varies significantly by campus and relates to the campus' age, number of alumni, and the presence of health science programs.

As is typical for universities, salaries and benefits for academic and support staff are the largest areas of expenditures. Although the inflation-adjusted expenditures for educating a student at UC have dropped by 23 percent since 1990, reflecting both operational efficiencies and reductions in available resources, the State's share of this cost has fallen even more steeply. Consequently, students and their families now contribute a larger share through tuition and fees.

Chronic shortfalls in priority areas — graduate student support, faculty salaries, the ratio of students to faculty, capital renewal, the need to upgrade outdated information systems, and a focus on sustainability — present ongoing financial challenges.

Capital program and funding

The University maintains approximately 6,000 buildings enclosing 146 million gross square feet on approximately 30,000 acres across its ten campuses, five medical centers, nine agricultural research and extension centers, and the Lawrence Berkeley National Laboratory. With such a substantial infrastructure, the University strives to be a good steward of the capital resources entrusted to its care.

UC's capital program is funded by a combination of State and non-State funds. Historically, the majority of UC's core academic capital projects were funded by the State. With State funds playing a declining role over the past decade, the University has been forced to rely on other resources. In the past decade, non-State funds, including external financing that utilizes non-State sources to service the debt, have accounted for 80 percent of UC's capital program funding.

During fiscal year 2019–20, UC approved capital project budgets totaling \$2.6 billion. Approximately two-thirds of the cost was met through debt financing, including external financing supported by State General Funds. The remaining capital projects were funded by non-State sources, including public-private partnerships, which have become a growing part of UC's capital projects strategy, particularly for student housing.

In 2015–16 and before, most capital projects were aimed at growing core academic programs and replacing aging facilities. In more recent years (2016–17 onward), there has been an increase in projects that address enrollment growth and program improvements. The majority of 2019–20 capital projects addressed renewal and modernization of the aging plant as well as seismic improvements in recognition that close to half of UC's facilities are more than 35 years old.

UC sustainability

The University of California is a national leader in sustainability. UC's sustainability commitment began in 2003 with a Regental action that led to the adoption of a Presidential Policy on Green Building Design and Clean Energy Standards in 2004. Demonstrating the University's commitment to wise stewardship of its resources and the environment, the Policy has since expanded to include multiple areas of focus: Climate Protection, Green Building Design, Clean Energy, Sustainable Transportation, Sustainable Building Operations, Zero Waste, Sustainable Procurement, Sustainable Food Service, Water, and Sustainability in University of California Health. The University's Sustainable Practices Policy was updated again in 2020.

The University committed to systemwide climate action leadership in 2007, when all ten Chancellors signed the American College & University Presidents' Climate Commitment to achieve carbon neutrality as soon as possible. Furthering this leadership, in November 2013, UC announced an initiative to achieve carbon neutrality by 2025. This initiative will make UC the first major research university system to achieve carbon neutrality. Most recently, UC Merced became the first public research university in the country to achieve carbon neutrality.

The University's Carbon Neutrality Initiative has advanced the University's work on climate and carbon neutrality research and education, and furthers its leadership in sustainable business practices. Even as the campuses expand, overall greenhouse gas emissions have continued to drop due to improvements in energy efficiency, developing new sources of renewable energy, and enacting a range of related strategies to cut carbon emissions. For example, the University's Clean Power Program is providing 100 percent clean electricity to eight campuses and three medical centers that are eligible to select an alternative energy provider. The Clean Power Program supplies approximately 26 percent of the University's electricity use from off-campus sources. UC now generates more on-site renewable energy than any other university in the country and has over 100 renewable energy projects across the system. The University also funded 35 students with Carbon Neutrality Initiative Fellowships during the 2019–20 school year to work on projects supporting UC's carbon neutrality goal.

Upfront investments in energy efficiency are often costly, but energy efficiency projects across the system have so far netted over \$316 million in cumulative avoided utility costs since 2005. Moreover, UC's policy requiring that all new construction projects and major renovations receive LEED® (Leadership in Energy and Environmental Design) certification helps assure that campus growth does not increase energy costs and climate pollution as much as it would otherwise. As of 2020, UC has 352 LEED certifications, the most of any higher education institution in the country. In addition to LEED and energy efficiency requirements, starting in 2019, new buildings are required to take advantage of the University's access to carbon-free electricity and not use fossil-fuel combustion for space and water heating except under special circumstances.

Additionally, UC's fleet continues to move toward zero-emission vehicles. Systemwide, nearly 60 percent of all new light-duty fleet vehicles purchased in fiscal year 2019–20 were battery-electric, plug-in hybrid, or gasoline-hybrid. There are over 1,300 electric vehicle charging stations throughout the UC system.

For more information

UC's Operating Budget: ucop.edu/operating-budget/budgets-and-reports/index.html Annual Financial Reports: ucop.edu/financial-accounting/financial-reports/annual-financial-reports.html Annual Financial Reports (Medical Center): ucop.edu/financial-accounting/financial-reports/medical-center-financialreports.html Revenues and Expenses Data Table: universityofcalifornia.edu/infocenter/revenue-and-expense-data Annual reports on University private support: ucop.edu/institutional-advancement UC's capital programs: ucop.edu/capital-resources-management/index.html Annual Major Capital Projects Report: ucop.edu/design-services/resources/major-capital-projects-implementationreports/index.html Ten-Year Capital Financial Plan: ucop.edu/capital-planning/resources/index.html Information on UC's sustainability: ucop.edu/sustainability/ Annual Sustainability Reports: ucop.edu/sustainability/policy-areas/annual-reports.html

Over time, UC's varied sources of revenue have grown at different rates.



12.1.1 Revenues by source Universitywide

, 2000–01 to 2019–20

Source: UC Revenues and Expense Trend Report. Amounts do not include Department of Energy Laboratories.

Two major trends are reflected in the University's revenue sources over time. First, revenues associated with the University's medical centers and related activities have grown substantially since 2000–01. Medical center revenues now represent 35 percent of all UC revenues. On top of this category, a significant portion of revenues shown as "Educational activities" above is also related to health services.

Second, among the University's core fund revenues, State appropriations now contribute less to the University's operating budget than student tuition and fees. In 2019–20, State General Funds comprised 40 percent of UC's core fund budget, while student tuition and fees comprised 42 percent. Historically, State funding had been the largest single source of support for the University's core budget. State support has declined from 87 percent of core funds in 1980–81 to 42% in 2019–20.

The COVID-19 pandemic further complicated the University's revenue sources. In addition to new State budget cuts driven by the pandemic-related recession, there were significant impacts to medical centers and auxiliary enterprises in particular, over the final four months of the 2019–20 fiscal year. These revenue losses were partially offset by onetime federal funding from the Coronavirus Aid, Relief, and Economic Security Act of 2020 ("CARES Act").

Since 2000–01, available core revenues per student have declined by 35 percent.

12.1.2 Per-student average inflation-adjusted core revenues Universitywide2000–01 to 2019–20



Source: UC Budget Office

Since 2000–01, average inflation-adjusted revenues per student have declined 35 percent. During the same period, the State General Fund portion has fallen even more steeply, by 58 percent.

In some years, the University increased student tuition and fee levels to partly offset the long-term decline in State support. Financial aid increases have covered some or all of these cost increases for families with financial need. These increases in student fee revenue have not, however, fully offset the reduction in State funding per student. UC General Funds are composed mostly of Nonresident Supplemental Tuition Revenue and indirect cost recovery from research contracts and grants.

Overall, decreases in available core revenues per student have put downward pressure on spending per student, as seen in indicator 12.1.5. Ultimately, this pullback may affect the quality of instruction and the student experience.

Virtually all gift funds (99 percent) are restricted by donors in how they may be used.



12.1.3 Current giving by purpose Universitywide 2000–01 to 2019–20

Source: UC Institutional Advancement

The University is energetically pursuing increased philanthropic giving as a means to help address budget shortfalls and expand student financial aid. Philanthropic support has been key to supporting the University, particularly through the challenging impacts of COVID-19.

In 2019–20, new gifts to the University totaled over \$2.9 billion. Virtually all of these funds are restricted for specific purposes and are not available to support general operating costs. In addition, approximately \$619 million was designated for endowment, so only the income/payout is available for expenditure. Gifts designated for department support are only eligible for use by a specific department or academic division. In response to the COVID-19 pandemic, campuses received gifts to support remote learning resources, critical student financial needs, procurement of protective equipment, and expansion of infection testing.

The University's remarkable achievement in obtaining private funding in recent years — even during state, national, and global economic downturns — is a testament to UC's distinction as a leader among the nation's public colleges and universities in generating philanthropic funds. These gifts reflect the high regard in which the University is held by its alumni, corporations, foundations, and other supporters.

Personnel costs and medical centers are an increasing portion of UC expenditures.



12.1.4 Expenditures by function and type, Universitywide 2000–01 to 2019–20

Source: UC Revenue and Expense Trends Report. Dollars are inflation-adjusted dollars using CCPI-W. Amounts do not include Department of Energy Laboratories.

When viewed by function, the combination of instruction, research, and public service accounted for 36 percent of total expenditures during 2019–20, while medical centers (UC's teaching hospitals) accounted for 33 percent. Other expenses by function include interest, depreciation, and miscellaneous expenditures.

Looking at expenditures by type, about 68 percent are dedicated to personnel costs, since higher education, health care delivery, and research are inherently labor-intensive enterprises. Salary costs have increased both due to higher average salaries and increased full-time equivalent (FTE) employees, particularly at the medical centers. These increases also affect employee benefits; however, benefit costs also fluctuate due to variations in investment returns on the pension and the discount rate for retiree health.

In the final few months of the 2019–20 fiscal year, the University spent an additional \$255 million in costs related to treating COVID-19 patients, transition to remote instruction, and facilities cleaning. These cost impacts will likely continue through the 2020–21 fiscal year.

12.1 FINANCES

Since 1990–91, total instructional expenditures per UC student have declined by 21 percent, yet students and their families bear a greater share of that cost.





Since 1990–91, average expenditures for instruction per student from core funds have declined by 23 percent in inflation-adjusted dollars. Of this amount, the share provided by State support for the University's budget declined from 78 percent in 1990–91 to only 40 percent of the total in 2019–20. In contrast, the contribution from tuition and fees has increased from 13 percent to 42 percent during the same period. Source: UC Budget Office, inflation-adjusted amounts.

The State's Cal Grant program has covered tuition and fee increases for many California resident undergraduate students. However, even after taking Cal Grants into account, State funding covered only 51 percent of instructional expenditures from core funds in 2019–20 compared to 80 percent in 1990– 91.

12.2 CAPITAL PROJECTS

The majority of UC's capital project funding over the last ten years continues to be derived from non-State fund sources. Starting in 2013–14, changes to the California Education Code allowed UC to direct a portion of its existing State operating funds support to capital.





Source: UC Capital Asset Strategies

The University's capital program is driven by the campuses' and medical centers' strategic plans. UC's capital program is funded by a combination of State and non-State funds. The nature of State funds has changed in recent years.

As illustrated in indicator 12.2.1, the dominant source of capital is non-State resources. Public-Private Partnerships are not included in the 2018–19 totals. A GO bond was placed on the March 2020 ballot but voters did not pass it.

Legislation in 2013–14 and 2018–19 enacted a change in how UC could fund its debt service, availability payments, and capital outlay expenditures. Instead of receiving dedicated capital funding from the State, UC can direct a portion of its State General Fund appropriations to fund debt service for State-eligible capital projects. The portion of State General Funds directed to capital does not represent new State funding and is made up of funds that are redirected from operations to support capital.

State funds were historically the primary source of funding for core academic facilities and seismic compliance for acute care hospitals. However, due to the elimination of specific State appropriations, some needs have been financed by the University. Non-State sources fund most of UC's State-eligible capital needs and all self-supporting enterprises, such as housing, parking, athletics, and medical centers. To the extent that non-State funds are used to support core academic capital needs, less funding is available to support other high-priority needs such as deferred maintenance, seismic, and enrollment growth.

The 2019–20 capital project program is heavily supported by external financing.





Source: UC Capital Asset Strategies

The University and each campus carefully consider how to deploy resources to optimize the benefits to academic programs and the University's mission as a whole.

With State funding playing a declining role in the University's capital program over the past decade, the University has relied on other means to fund capital projects. As noted in indicator 12.2.2, approximately one percent of capital funding for the 2019–20 capital program utilized external financing supported by State General Funds that could have been used to support operations.

Campuses also redirect non-State funds to projects that otherwise would have been funded with State resources.

External financing continues to play an important role in funding capital needs. About 36 percent of capital project funding in 2019–20 came from non-State supported external financing. The non-State financing supports student housing projects and research projects related to program improvements in the sciences as well as medical centers.

The remainder of UC's capital program is funded by gift funds, campus funds, and other non-State sources. These campus funds are derived from a variety of sources, including indirect cost recovery and investment earnings.

12.2 CAPITAL PROJECTS

The majority of capital funds approved for expenditure in 2019–20 supported projects addressing growth in enrollment and renovation or replacement of aging facilities.



12.2.3 Types of capital projects, based on budgets approved by year Universitywide 2013–14 to 2019–20

Capital projects may address several objectives. Continuing enrollment growth has largely driven the University's requirement for new teaching laboratories, classrooms, student housing, and services. In 2019–20 alone, UC approved \$285 million for projects that address enrollment needs. The campuses must expand teaching laboratories and classrooms to meet the increases in enrollment.

Program improvements and modern program initiatives require state-of-the-art space, often necessitating the repurposing of existing facilities or new construction. In 2019–20, UC devoted approximately \$436 million for program improvements to address academic, research, and clinical priorities. Source: UC Capital Asset Strategies

Campus facilities age and must be renewed and modernized to ensure safety, extend the buildings' useful life, and improve energy efficiency. Building systems, elevators, and roofs need periodic replacement and renewal during the lifespan of a building. In 2019–20, UC approved \$1.6 billion for these types of projects.

In addition to general renewal, the University continues to review the seismic safety of its facilities. UC devoted \$319 million to seismic and life-safety improvements to buildings in 2019–20.

12.2 CAPITAL PROJECTS

In the past decade, UC space has increased by approximately 16 percent, with most of the growth targeted for instruction and research, and residential uses.



12.2.4 Assignable square footage (ASF) Universitywide 2010–2020

Source: UC Capital Asset Strategies

Assignable square footage (ASF) is the space available for programs or assigned to specific uses. It does not include corridors, bathrooms or building infrastructure.

Indicator 12.2.4 illustrates the growth in space over the last decade, according to categories for assignable space. Since 2010, space has increased by 11.5 million ASF for a total of 82 million ASF.

In the past decade, instructional and research space increased by about 1.6 million ASF, office space by 3.7 million ASF, and residential space by 3.4 million ASF. The space increase for these areas (17 percent) is has not kept pace to the to the increase in fall enrollment (25 percent) for the same period. Residential space has grown as campuses strive for more on-campus student housing to improve student life in living/learning communities and to reduce environmental impacts from commuting. Increases in the student population have also required additions to athletic, recreational, and food service space.

Hospital space grew significantly in the past decade. All five medical centers experienced growth but most of the growth in hospital space can be attributed to UCSF Medical Center at Mission Bay and Ron Conway Family Gateway Medical Building (2015), and the Jacobs Medical Center at UC San Diego Health (2016).

UC has made consistent progress toward its greenhouse gas emission goals.

12.3.1 Greenhouse gas emissions compared to climate goals Universitywide 2009-2025



Source: UCOP Energy and Sustainability Office

The University's scope 1 and scope 2 greenhouse gas (GHG) emissions decreased by 15 percent since the Carbon Neutrality Initiative was announced in 2013, committing the University to carbon neutrality by 2025. This includes a one percent increase in scope 1 emissions and a 20 percent reduction in scope 2 emissions in 2019 compared to 2018. Scope 2 emissions in 2020 are expected to decrease even

further as the UC Clean Power Program is now procuring 100 percent carbon neutral electricity.

The University also generates more on-site renewable energy than any other university in the country, approaching 50 megawatts. UC's inventory of renewable energy supplies includes generation from over 100 on-site and off-site sources.

12.3 SUSTAINABILITY

Energy efficiency upgrades resulted in cumulative net avoided costs for the University of \$316 million by the end of 2020.





Source: UCOP Energy and Sustainability Office

In 2004, the University formed a statewide energy efficiency partnership program with California State University and the state's four investor-owned utilities to improve the energy performance of higher education facilities. The partnership has provided funding for equipment retrofits and monitoring-based commissioning. Since its inception, over 1,000 energy efficiency and new construction projects have registered with the Energy Efficiency Partnership Program, which has allowed UC campuses to avoid over \$316 million in utility costs while reducing greenhouse gas emissions. Sixty-one UC projects participated in the program in 2020.

While campuses have used a portfolio approach to balance projects with shorter and longer paybacks, the future focus on the remaining deeper energy efficiency retrofits to achieve climate goals will result in lower levels of net avoided costs due to larger upfront investments.

12.3 SUSTAINABILITY

12.3.3 LEED[®] certifications Universitywide

2005-2020 (cumulative)

By the end of 2020, UC had achieved 352 LEED[®] certifications, more than any other university in the country.



2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020

Source: UCOP Energy and Sustainability Office

The University's sustainable practices policy requires that all new buildings and renovations are designed and constructed to a minimum LEED® (Leadership in Energy and Environmental Design) for New Construction Silver rating. The policy also states that each campus shall seek to certify as many buildings as possible through the LEED – Existing Buildings, Operations and Maintenance (EBOM) rating system to "green" the day-to-day, ongoing environmental performance of its existing facilities. UC has 352 LEED certifications systemwide, with 45 projects certifying under the LEED – EBOM system. In 2020, UC added fifteen new LEED certifications, including one new LEED Silver, ten LEED Gold and four LEED Platinum certifications. UC's total of 352 LEED certifications is the most of any university.

UC LEED[®] certifications are listed at: ucop.edu/sustainability/policy-areas/greenbuilding/index.html

AWARDS AND DISTINCTIONS



AWARDS AND DISTINCTIONS

Overview

Honors and rankings are one way to demonstrate the University's performance and prestige. They reflect reputations and help to position the University nationally and internationally. This chapter first presents metrics of faculty awards and memberships. These represent some of the highest aspirations of research faculty, signaling noteworthy participation and contribution to research and scholarship in a particular area of expertise. In 2020, two UC professors were awarded Nobel prizes: Andrea Ghez, professor of Physics and Astronomy, UCLA, was awarded the Physics prize and Jennifer Doudna, professor of Biochemistry and Molecular Biology, UC Berkeley, was awarded the Chemistry prize,

While the University's faculty demonstrate unparalleled excellence, also notable is the opportunity for students of diverse backgrounds to learn and study with these distinguished researchers and educators. One of the points of pride for the University of California is providing students from the bottom end of the economic spectrum with access to an educational and research environment comparable to the nation's finest private institutions but on a significantly larger scale.

Universities are ranked in numerous ways, with publishers of rankings choosing criteria based on different audiences and different aims. This chapter highlights three well-known rankings. U.S. News and World Report (USNWR) focuses on academic reputation, graduation rates, student selectivity, and financial resources to create its list of America's Best Colleges. The Shanghai Academic Ranking of World Universities ranks institutions around the globe, primarily using faculty research productivity. The Washington Monthly ranking looks at doctoralgranting research universities based on contribution to the public good. Additional rankings for UC campuses are available at the link in the section below. While recognizing that these rankings may be useful sources of information, UC does not endorse any particular ranking system nor does it have specific goals with respect to any of them.

For more information

Rankings topic brief with additional rankings:

ucop.edu/institutional-research-academic-planning/_files/rankings-brief-2020.pdf

13.1 FACULTY AWARDS

UC faculty receive prestigious awards as leaders in their fields.

13.1.1 Nobel Prizes by campus affiliation

Sixty-eight faculty and researchers affiliated with the University of California have won 69 Nobel Prizes, adding two new Nobel Prize winners last year and representing seven percent of the 962 laureates.

A list of UC's laureates can be found at nobel.universityofcalifornia.edu.

	Chemistry	Economics	Literature	Medicine	Physics	Peace
Berkeley/ Berkeley Lab	10	5	1	1	9	
Irvine	2				1	
Livermore Lab					1	
UCLA	3	1		1	2	
Riverside	1				1	
San Diego	5	3		6	2	1
San Francisco				5		
Santa Barbara	2	1			4	
Santa Cruz				1		

13.1.2 Prizes, medals, and awards won by UC faculty



presented in the chart above, many UC faculty are members of prestigious National Academies, providing leadership in service and general welfare to the nation.

National Academy of Sciences	040
National Academy of Engineering	272
National Academy of Medicine	249
National Academy of Inventors	96

Of the top ten national public universities in the U.S. News and World Report ranking, six are UC campuses.

13.2.1	U.S. News: America's Top National Public Universities
	2021

	Public	National
UCLA	1	20
UC Berkeley	2	22
Santa Barbara	6	30
Irvine	8*	35*
San Diego	8*	35*
Davis	11	39
Riverside	34	88
Merced	40*	97*
Santa Cruz	40*	97*
*:		

*indicates a tie

The U.S. News and World Report, in its 2021 national university rankings, focused on academic reputation, financial resources, and selectivity in undergraduate admissions. Its assessment on these metrics placed UC campuses among the very best public universities in the country:

- UCLA and UC Berkeley were ranked first and second as the top public institutions.
- Five UC campuses were among the top ten public institutions in the nation.

• For public and private institutions combined, six UC campuses ranked among the top 50.

Numerical rankings can provide false precision based on very small actual differences among campuses. Campuses are first assigned a score, and the scores are ranked. When the scores are clustered closely, a small change in score can have a large effect on the rank.

Four UC campuses appear in the top 25 of the Academic Rankings of World Universities.

Global	National
5	4
13	11
18	14
21	16
49	30
69	35
91	39
151-200	57-65
201-300	66-94
401-500	115-133
	Global 5 13 18 21 49 69 91 151-200 201-300 401-500

13.2.2 Shanghai Ranking Consultancy: Academic Rankings of World Universities 2020

The Academic Rankings of World Universities (ARWU) was created in 2003 by Shanghai Jiao Tong University in China to determine the global standing of Chinese research universities. Since 2009, the Shanghai Ranking Consultancy has published these rankings.

The rankings are based entirely on measures of research strength and faculty honors and awards. English-speaking universities, especially those in the United States, tend to dominate the ARWU rankings. This ranking system emphasizes research outputs, such as total research expenditures. Because research outputs are not normalized by number of faculty, larger institutions tend to rank more highly than smaller ones. Institutions with strong research programs, especially in the sciences, also tend to score higher than those whose major strengths are in the humanities and social sciences. Washington Monthly ranked five UC campuses in the top 20 and all in the top 100 out of 395 institutions.

13.2.3 Washington Monthly Research University Ranking 2020

	Public	National
San Diego	1	9
UCLA	3	11
Davis	5	13
Berkeley	8	17
Santa Barbara	11	20
Irvine	13	22
Riverside	15	27
Merced	31	56
Santa Cruz	54	91

Washington Monthly ranks "National universities four-year institutions that award a significant number of doctoral degrees — based on their contribution to the public good in three broad categories: social mobility, research, and promoting public service."

GLOSSARY

- AAU Association of American Universities. The AAU is a highly selective membership organization of preeminent public and private research universities. AAU currently has 60 American and two Canadian member institutions. In this report, the Canadian institutions are excluded from calculations. Of the ten UC campuses, seven are AAU members: Berkeley, Davis, Irvine, Los Angeles, San Diego, Santa Barbara, and Santa Cruz.
- **AB 540** AB 540 is an Assembly bill passed in 2001. It allows undocumented high school students who meet certain requirements to pay in-state, instead of nonresident, tuition at California's public higher education institutions.
- Academic Senate The Academic Senate represents the faculty in the shared governance of the University of California.
- **ARRA** American Recovery and Reinvestment Act, passed in 2009, was an economic stimulus package intended to ameliorate the effects of the 2007–09 recession.
- Auxiliary enterprises Auxiliary enterprises are campus services that charge fees for goods and services, and therefore are self-supporting. Examples include student housing, dining facilities, and bookstores.
- **Clinical faculty** Clinical faculty are instructors in medical and health sciences fields. They include professors in residence, professors of clinical __ (__ being the name of the discipline or specialty), and health science clinical professors. Clinical faculty are not members of the Academic Senate.
- **Comparison institutions; comparators** UC historically has used eight universities against which to benchmark faculty salaries. The comparison institutions four public and four private are: University of Illinois, University of Michigan, University at Buffalo, and University of Virginia (all public); and Harvard, Massachusetts Institute of Technology, Stanford, and Yale (all private).
- FTE Full time equivalent a unit of measurement of employee or student workload or attendance. Two individuals each engaged in half-time employment constitute a single FTE. In this report, FTE counts are represented with a single decimal to differentiate them from headcounts. (See *headcount*.)
- **General campus** Used to distinguish the non-health science areas of a campus from the health science areas. Berkeley, Davis, Irvine, Los Angeles, Riverside, and San Diego include both general campus and health science areas. Merced, Santa Barbara and Santa Cruz are general campus only, and San Francisco is an exclusively health science campus.
- **General funds** General funds include State General Funds, which are funds from the State of California, and UC general funds, which are primarily indirect cost recovery and nonresident tuition.
- **Graduation rate** The proportion of students in a cohort who finish their degrees within a specified period. Undergraduate graduation rates are generally measured in four-, five- .and six-year increments for entering freshmen, and two-, three-. and four-year increments for transfer students.
- **Headcount** Headcount is the actual number of individuals without accounting for full- or part-time status. Two students each attending school half-time constitute a headcount of two. (See *FTE*.)
- Health sciences instruction Seven UC campuses offer health sciences instruction. Davis, Irvine, Los Angeles, San Francisco. and San Diego have schools of medicine and other health sciences such as pharmacy, nursing. and dentistry; Riverside has a school of medicine; Berkeley offers health sciences instruction in optometry and public health.
- **K–12** Kindergarten through 12th-grade instruction.
- **Ladder-rank** Ladder-rank faculty are faculty who are tenured or have potential to receive tenure, and generally are members of the Academic Senate.

- Master Plan The Master Plan for Higher Education establishes a system of public higher education in California that defines the roles of public institutions, with the goal of making higher education available to all Californians. The Master Plan was originally drafted in 1960 and has been updated several times to accommodate changing circumstances.
- **Non-ladder-rank faculty** Non-ladder rank faculty are faculty who are neither tenured nor on track to receive tenure, and generally are not members of the Academic Senate. Non-ladder rank faculty includes lecturers, visitors, adjuncts, instructional assistants, and clinical faculty.
- **Nonresident** Nonresident students come from outside California to attend a UC campus. They must pay the full cost of attendance.
- **Pell Grant** The Pell Grant is a federal program that provides need-based grants to low-income individuals for the purposes of obtaining a college degree. A Pell Grant recipient is defined as a student who received a Pell Grant at any point while attending an institution.
- **Postbaccalaureate teaching credential** The postbaccalaureate teaching credential trains individuals to meet state standards for teacher certification.
- **Postdoctoral scholar** Postdoctoral scholars are engaged in further research or training in the fields in which they obtained their doctoral degrees for the purpose of gaining additional expertise and skills. Postdoctoral scholars may hold concurrent titles in other academic or staff categories.
- SCH, student credit hours Student credit hours are a measure of faculty teaching workload. SCH are calculated as the number of student enrollments in a course multiplied by the number of credits available from that course. For example, a 4-credit course with 50 students generates 200 SCH; a 2-credit course of 15 students generates 30 SCH.
- **STEM** Science, technology, engineering, and mathematics. In this report, includes physical sciences and mathematics, life sciences, engineering, computer science, and health sciences.
- Transfer students Transfer students enter UC after completing their freshman- and sophomore-level studies at a California Community College. The Master Plan calls for UC to admit as juniors all qualified California Community College students and specifies that the University maintain a 60:40 ratio of upper-division (juniorand senior-level) to lower-division (freshman- and sophomore-level) students.
- **TICAS** The Institute for College Access and Success. TICAS is an independent, nonprofit organization that conducts and supports nonpartisan research, analysis and advocacy with regard to access and affordability of higher education.
- **UCUES** University of California Undergraduate Experience Survey. UCUES is a biennial survey that solicits undergraduate opinions on all aspects of the UC experience. *See Data Sources entry below for more information.*

Data Sources

Association of American Universities (AAU)

The Association of American Universities (AAU) is an association of 62 leading public and private research universities in the United States and Canada. A list of the institutions can be found in Table 6 of this glossary. Membership in AAU is by invitation and is based on the high quality of programs of academic research and scholarship and undergraduate, graduate and professional education in a number of fields. Throughout this report, the two AAU institutions in Canada are excluded from the "Non-UC AAU Public" group because they do not submit data to the U.S. Department of Education, the source of the AAU data used here. For more information, visit aau.edu.

American Association of University Professors (AAUP)

The American Association of University Professors is an organization of professors and other academics in the United States. It conducts an annual survey of faculty compensation, used in this report to compare UC's faculty salaries. More information on the AAUP data set can be found at aaup.org/our-work/research/annual-report-economic-status-profession.

Consumer Price Index (CPI)

The CPI is a measure of inflation experienced by consumers, and an important indicator of the condition of the economy. It can be used to adjust other economic data for changes in price level and to convert them into inflation-free dollars. For example, retail sales and income data are "deflated" to assess their "real" movements over time. This report uses the calendar year average of the CPI-W (CA), which is the Consumer Price Index for Urban Wage Earners and Clerical Workers.

Integrated Postsecondary Education Data System (IPEDS)

IPEDS is a system of interrelated surveys conducted annually by the National Center for Education Statistics (NCES) of the Institute of Education Sciences, U.S. Department of Education. IPEDS gathers information from every college, university, and technical and vocational institution that participates in federal student financial aid programs. IPEDS provides basic data needed to describe — and analyze trends in — postsecondary education in the United States, in terms of the numbers of students enrolled, staff employed, dollars expended, and degrees earned. For more information, visit nces.ed.gov/ipeds.

National Student Clearinghouse (NSC)

The National Student Clearinghouse reports on all institutions that a student has attended or received a degree/credential at. Estimates are conservative due to imperfect matching of students. For more information, visit studentclearinghouse.org/.

Survey of Earned Doctorates (SED)

The Survey of Earned Doctorates (SED) is a federal survey conducted by the National Opinion Research Center (NORC) for the National Science Foundation and five other federal agencies (National Institutes of Health, U.S. Department of Education, National Endowment for the Humanities, U.S. Department of Agriculture and the National Aeronautics and Space Administration). The SED gathers information annually from new U.S. research doctorate graduates about their educational histories, funding sources and postdoctoral plans.

UC Audited Financial Statements

UC, like all public entities, is audited by an external auditing firm. UC's external audit is performed by Price Waterhouse Coopers, an independent certified public accounting firm reporting to the Regents. UC's audited financial statements can be accessed at universityofcalifornia.edu/reportingtransparency.

UC Budget for Current Operations

UC budget documents can be found at ucop.edu/operating-budget/budgets-and-reports/index.html.

UC Corporate Financial System (CFS)

The Corporate Financial System (CFS) contains financial data for all UC campuses. The primary source of data in the CFS is a monthly transmittal file from each of the ten UC campuses. Each campus file contains data reflecting current financial, budgetary, and encumbrance balances, and current month financial activity in the campus' general ledger. More information can be found at data.ucop.edu/subject-area/financial-data-warehouse.html.

UC Corporate Personnel System (CPS)

The Corporate Personnel System (CPS) is a reporting system with demographic, personnel and pay activity data on employees. More information can be found at data.ucop.edu/subject-area/cps-assets/personnel-data-warehouse.html.

UC Data Warehouse

The Data Warehouse is a set of databases and processes that provides information to meet the management, analytical, and operational needs of the UC Office of the President. The databases are created and/or updated with data received from the campuses and other sources. More information can be found at data.ucop.edu/subject-area/index.html.

UC Faculty Instructional Activities dataset ("TIE" data collection)

UC conducts annual data collections from campuses on faculty instructional activities. This data collection was originally undertaken in response to a state reporting requirement that was not renewed. The 2007 annual report to the Legislature was the last mandated report; it can be found at ucop.edu/academic-planning-programs-coordination/_files/documents/fia/fia_annlrpt2007.pdf. Since that time, UC has continued to collect these data for management and accountability purposes.

UC Graduate Student Support Survey

The UCOP Student Affairs department conducts periodic surveys of the competitiveness of UC graduate student support. Reports on this survey can be found at ucop.edu/student-affairs/data-and-reporting/graduate-student-support/index.html.

UC Information Center

The UC Information Center is a website providing a central source of information about the University that allows the public to explore the UC story through data. The site can be accessed at https://www.universityofcalifornia.edu/infocenter.

UC Medical Centers Audited Financial Statements

The UC medical centers, like all public entities, are audited by an external auditing firm. The medical center audited financial statements are published separately from UC's external audit. UC's audited financial statements can be accessed at universityofcalifornia.edu/reportingtransparency.

UC Medical Schools

Six UC campuses include medical schools: Davis, Irvine, Los Angeles, Riverside, San Diego, and San Francisco. More information on these schools can be found at health.universityofcalifornia.edu/medical-centers/.

UC Student Financial Support Annual Reports

These reports, produced by the UCOP Student Affairs department, can be found along with other financial aid information at ucop.edu/student-affairs/data-and-reporting/index.html.

University of California Undergraduate Experience Survey (UCUES)

The University of California Undergraduate Experience Survey (UCUES) biennially solicits student opinions on all aspects of the UC experience. UCUES content is broad and covers most aspects of students' academic and co-curricular experiences. Students evaluate such things as instruction, advising, and student services. More information can be found at www.ucop.edu/institutional-research-academic-planning/services/survey-services/UCUES.html.

Breed Dissipling	CIP Categories Included		
Broad Discipline	When Using UC Corporate Data	When Using IPEDS Degree Data	
	Visual/Performing Arts	Visual/Performing Arts	
Arts & Humanities	English Literature	English Literature	
	Foreign Languages	Foreign Languages	
	Philosophy	Philosophy	
	History	History	
	Liberal Arts	Liberal Arts	
	Bio/Life Sciences	Bio/Life Sciences	
Life Sciences	Conservation Science	Conservation Science	
	Agricultural Science (select 01 CIPs)	Agricultural Science (select 01 CIPs)	
Dhyrical Sciences, Technology	Math	Math	
Engineering and Mathematics	Physical Science	Physical Science	
(DCTENA)	Engineering	Engineering	
(PSTEIM)	Computer Science	Computer Science	
	Area Studies	Area Studies	
	Psychology	Psychology	
Social Sciences	Social Sciences (except UCSD Pacific	Social Sciences	
Social Sciences	Affairs, UCI Criminology)	Agricultural Business/Production (select	
	Agricultural Business/Production (select	01 CIPs)	
	01 CIPs)		
	Interdisciplinary	Interdisciplinary	
	Other/Unknown	Other/Unknown	
	Business	Business	
	Architecture	Architecture	
	Education	Education	
	Public Admin.	Public Admin.	
	Law (non-J.D.)	Law (non-J.D.)	
Other Disciplines	Communications	Communications	
	Criminology	Criminology	
	Health Sciences	Health Sciences	
	Library Science	Library Science	
	Social Sciences (UCSD Pacific Affairs and	Theology	
	UCI Criminology)	Parks & Recreation	
		Military Science	
		Homeland Security	

Table 1. Broad Discipline Classification

Mapping Developed 1/7/2011, UC Institutional Research and Academic Personnel

Discipline Grouping -		Discipline Grouping -	LIAS Discipline	
Accountability	ono biscipinie	Accountability	ono Discipline	
Arts & Humanities	Fine & Applied Arts	Life Sciences	Biological Sciences	
Arts & Humanities	Foreign Languages	Life Sciences	Agriculture & Natural	
Arts & Humanities	Letters	Life Sciences	Resources	
Arts & Humanities	Theology	Math	Mathematics	
Business/Management	Business & Management	Medicine	Medicine	
Education	Education	Other Coneral Compute Professional	Architecture &	
Encircoving & Computer Science	Computer & Information	Other General Campus Professional	Environmental Design	
Engineering & computer science	Sciences	Other General Campus Professional	Criminology	
Engineering & Computer Science	Engineering	Other General Campus Professional	Social Welfare	
Interdisciplinary/Other	Interdisciplinary Studies	Other General Campus Professional	Communications	
Interdisciplinary/Other	Physical Education	Other General Campus Professional	Library Science	
Interdisciplinary/Other	Military Sciences	Other Health Science	Veterinary Medicine	
Interdisciplinary/Other	Home Economics	Other Health Science	Dentistry	
Law	Law	Other Health Science	Nursing	

Table 2. Faculty Discipline Groupings
Discipline Grouping - Accountability	UAS Discipline	Discipline Grouping - Accountability	UAS Discipline	
Other Health Science	Pharmacy	Physical Science	Physical Sciences	
Other Health Science	Public Health	Social Science & Psychology	Psychology	
Other Health Science	Optometry	Social Science & Psychology	Social Sciences	
Other Health Science	Other Health Professions	Social Science & Psychology	Area Studies	

Table 3. Faculty Categories, Faculty Series, and Class Title Outline Codes Category Faculty Series Included

Category	Faculty Series Included	Class Title Outline (CTO)	
		Codes ¹	
Faculty – Ladder-rank and	 Professorial – Tenure, Non-Tenure and Recall² 	 010, 011, 012 	
Equivalent (LRE)	 Clinical Prof. of Dentistry – 50% or More 	• 030, 031	
	 Supervisor of Physical Education – Tenure, Non-Tenure and Recall 	• 040, 041, 042	
	 Acting Professor – Senate and Non-Senate 	• 114, 124	
	 Lecturer with Security of Employment and with Potential Security of Employment – 100%, and Recall³ 	• 210, 211, 212	
	 Astronomer – Tenure, Non-Tenure and Recall 	• 520, 521, 522	
	 Agronomist – Tenure, Non-Tenure and Recall 	• 530, 531, 532	
Faculty – Clinical/In-	Professor in Residence	• 311	
Residence/Adjunct	 Professor of Clinical (e.g., Medicine) 	• 317	
	Health Sciences Clinical Professor	• 341	
	Adjunct Professor	• 335	
	Visiting Professor	• 323	
Faculty – Lecturers	Lecturer	• 225	
	 Lecturer with Potential Security of Employment – Part 	• 221	
	Time	• 357	
	 Instructional Assistant (non-student) 		

¹ The CTO code identifies a group of titles with similar duties and/or conditions of appointment.

² "Recall" denotes retired faculty who have been recalled to active service to perform teaching, research, and/or public service duties. They are included in reporting on headcounts and FTE of incumbent faculty, but they are excluded from reporting on faculty new hires and separations.

Note: Faculty members with tenure are conferred the Emeritus title upon retirement. If they return to University service in a paid position, they are appointed in Recall titles. Emeritus faculty without Recall appointments are not included in faculty counts in the Accountability Report.

³ Lecturers in these titles are also called "Senate Lecturers." They have or are eligible for the equivalent of tenure, and they are represented in the Academic Senate.

Student Level Classification Summary:

UCOP classifies graduate students into five enrollment levels that rely on campus-provided information on program type and student enrollment level. Within UCOP's central student data system, campuses indicate whether each of their programs of study is academic or professional at the master's and doctoral levels. These indications, combined with the actual enrollment level (masters or doctoral) of the student, serve as the determination of whether a student is enrolled in an <u>academic doctoral</u>, <u>professional doctoral</u>, <u>academic master's</u>, or <u>professional master's</u> program. Two exceptions to this rule include: (1) all self-supporting students are treated as professional (master's or doctoral based on level) regardless of how the campus may have classified the program; and (2) all students enrolled in programs associated with professional licensure (law, medicine, and other health professions) are treated as <u>professional practice</u>.

Non-UC Public	Private
Georgia Institute of Technology — Main Campus	Boston University
Indiana University — Bloomington	Brandeis University
Iowa State University	Brown University
Michigan State University	California Institute of Technology
Ohio State University — Main Campus	Carnegie Mellon University
Pennsylvania State University — Main Campus	Case Western Reserve University
Purdue University — Main Campus	Columbia University in the City of New York
Rutgers University — New Brunswick	Cornell University
Stony Brook University	Dartmouth University*
Texas A & M University	Duke University
The University of Texas at Austin	Emory University
University at Buffalo	Harvard University
University of Arizona	Johns Hopkins University
University of Colorado at Boulder	Massachusetts Institute of Technology
University of Florida	New York University
University of Illinois at Urbana — Champaign	Northwestern University
University of Iowa	Princeton University
University of Kansas	Rice University
University of Maryland — College Park	Stanford University
University of Michigan — Ann Arbor	Tulane University of Louisiana
University of Minnesota — Twin Cities	University of Chicago
University of Missouri — Columbia	University of Pennsylvania
University of North Carolina at Chapel Hill	University of Rochester
University of Oregon	University of Southern California
University of Pittsburgh — Pittsburgh Campus	Vanderbilt University
University of Virginia — Main Campus	Washington University in St Louis
University of Washington — Seattle Campus	Yale University
University of Wisconsin — Madison	
University of Utah*	*Joined in 2019.
	Non-UC PublicGeorgia Institute of Technology — Main CampusIndiana University — BloomingtonIowa State UniversityMichigan State UniversityOhio State University — Main CampusPennsylvania State University — Main CampusPurdue University — Main CampusRutgers University — New BrunswickStony Brook UniversityTexas A & M UniversityThe University of Texas at AustinUniversity at BuffaloUniversity of ArizonaUniversity of Colorado at BoulderUniversity of FloridaUniversity of Illinois at Urbana — ChampaignUniversity of KansasUniversity of Maryland — College ParkUniversity of Missouri — ColumbiaUniversity of North Carolina at Chapel HillUniversity of OregonUniversity of Virginia — Main CampusUniversity of Virginia — Main CampusUniversity of Washington — Seattle CampusUniversity of Wisconsin — MadisonUniversity of Wisconsin — Madison

Table 5. AAU Member Universities, as of July 2020 (United States only)

Table 6. Inflation Adjustments

Unless otherwise noted, all inflation adjustments are to 2019 calendar year dollars using the consumer price index for urban wage earners and clerical workers, California (CPI-W) published by the California Department of Finance at http://www.dof.ca.gov/Forecasting/Economics/Indicators/Inflation/.

	Fiscal/	CCPI-W,		Fiscal/	CCPI-W,		Fiscal/	CCPI-W,
Calendar	Academic	CA (1982–	Calendar	Academic	CA (1982–	Calenda	r Academic	CA (1982–
Year	Year	84=100)	Year	Year	84=100)	Yea	r Year	84=100)
1996	1996–97	152.0	2005	2005–06	195.9	201	4 2014–15	239.0
1997	1997–98	155.0	2006	2006–07	203.3	201	5 2015–16	241.6
1998	1998–99	157.6	2007	2007–08	209.9	201	5 2016–17	246.2
1999	1999–00	162.2	2008	2008–09	217.6	201	7 2017–18	253.2
2000	2000–01	168.1	2009	2009–10	216.3	201	3 2018–19	263.0
2001	2001–02	174.7	2010	2010–11	219.7	201	9 2019-20	270.8
2002	2002–03	179.0	2011	2011–12	226.4	202	2020-21	275.6
2003	2003–04	183.8	2012	2012–13	231.6			
2004	2004–05	188.9	2013	2013–14	234.9			