

Building 2030 capacity: UC traditional and non-traditional enrollment growth strategies

University of California Council of Chancellors capacity working group

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1. Organic Growth and Regional Collaborations

- I. **Introduction** – Provost Michael T. Brown and Vice President Pamela Brown, Director Todd Greenspan, and Program Lead Brianna Moore-Trieu (of Institutional Research & Academic Planning (IRAP)) met with campus representatives identified by Chancellors (see Appendix). These conversations focused on campus strategic plans and priorities, identifying opportunities for organic growth (both traditional and non-traditional). In addition, existing and potential regional collaborations that might identify opportunities for off-campus growth and inclusive access were discussed. The following sections outline those opportunities.
- II. **Campus strategic plans and priorities** – Campuses are in various stages of strategic planning processes. For example, UCB, UCD, UCM, UCSB and UCSD have completed strategic plans; UCSC and UCR have input from strategic plans supporting the transition for new campus/academic leadership; and UCI is refreshing its strategic plan. Enrollment growth advances campus strategic plans and priorities in at least three ways: (1) raising the campus research profile, (2) advancing academic program opportunities, and (3) growing student and faculty diversity.

Raising the campus research profile

Two UC campuses discussed their ambitions to raise their research profile – high impact research and research grant awards. UCM’s goal is to become an R1 institution. UCR’s goal is to join the American Association of Universities (AAU). Those achievements would raise the stature for both institutions – increasing student enrollment demand, advancing the University of California’s national leadership as research universities, and expanding economic development in key, underserved regions of California.

UCM needs to grow and has invested in the campus infrastructure to support that growth. It needs to add faculty and students, including academic doctoral students, to expand research capacity. UCR has grown its faculty. The campus now needs to expand support for those faculty to increase their research productivity and grant awards, in part by growing academic doctoral students.

A number of other UC campuses discussed expanding research capacity overall or in critical areas, with some focusing on growth of faculty, academic doctoral students, and staff to support that work.

Advancing academic program opportunities

Each UC campus discussed various academic program areas that will be established or expanded. In some cases, it could involve the creation of a new college or program, some campuses identified areas of strategic investment that would advance reputational gains, and others described impacted academic program areas which would continue to grow. It was not immediately clear how much enrollment this would generate.

Growing student and faculty diversity

When planning for future growth, the University of California has an opportunity to demonstrate national leadership by becoming a Hispanic Serving Institution (HSI) and/or Minority Serving Institution (MSI) research university system. UC can act as an exemplar of campus and systemwide efforts to promote inclusive access and equity that will not just increase capacity, but also support efforts to diversify UC's student, faculty and staff populations.

For example, five UC campuses (UCI, UCM, UCR, UCSB, and UCSC) are already designated HSIs, UCD has its designation pending, and three UC campuses (UCB, UCLA, and UCSD) are emerging HSIs. In Fall 2019, the University launched the UC-Hispanic Serving Institutions Doctoral Diversity Initiative (UC-HSI DDI) to enhance faculty diversity and pathways to the professoriate by attracting underrepresented students from California HSIs. In addition, a number of UC campuses are focused on improving representation and experience for African American, Native American and underrepresented Asian subpopulations.

- III. **Traditional growth opportunities** – For some campuses, enrollment growth is critical to advancing strategic goals, including being more competitive with AAU institutions. The table on the following page provides one way to think about enrollment capacity and growth opportunities. Campus Long-Range Development Plans (LRDP) provide an on-campus student population goal and growth potential over a planning horizon, recognizing that growth may be stalled or prevented by community complaints or lawsuits. In addition, campuses can expand enrollment in non-traditional ways, adding capacity beyond LRDP caps.

The graphic to the right compares the campus size and LRDP student population goals for UC campuses to the size of AAU public institutions.

UCM indicates it could immediately add 2,000 students on campus and plans for 6,000 by 2030. One factor that has affected the campus's ability to grow is the extent that other UC campuses grow and/or pull from their wait lists. UCR has the land and opportunity to add thousands of students on campus, but needs greater support expanding and upgrading its infrastructure. Both campuses have support of their local communities and legislative leadership to grow and they are not impacted by external planning bodies, like coastal commissions.

Total Student Population Size		
UC	UC (LRDP Goals)	AAU Public
		Penn State (90K) Texas A&M (68.1K) Ohio State (60.2K)
		Univ of Florida (51.5K) Texas at Austin (50.7K) Illinois at Urb-Chmp (50.6K) Rutgers University (49.8K) Michigan State Univ (49.6K)
	UC Berkeley (48.2K)	Univ of Michigan (47.9K) Univ of Minnesota (47.5K) Univ of Washington (46.4K) Purdue University (45.3K)
UCLA (44.4K)	UCLA (44.2K)	
UC Berkeley (43.2K)		Univ of Arizona (43.8K)
		Univ of Wisconsin (43.0K) Indiana University (43.0K)
	UC San Diego (42.4K)	AAU Public Average (41.9K) Univ of Maryland (40.1K)
UC San Diego (38.7K) UC Davis (38.6K)	UC Davis (39.0K)	
UC Irvine (36.9K)	UC Irvine (37K)	Univ of Colorado (37.4K)
	UC Riverside (35K)	Georgia Tech (35.5K)
		Iowa State Univ (33.0K) Univ of Utah (31.8K) Univ of Buffalo (31.8K) Univ of Iowa (30.7K) Univ of Nth Carolina (29.7K) Univ of Missouri (29.4K) Univ of Pittsburg (28.3K)
UC Average (28.5K)	UC Santa Cruz (28.0K)	Univ of Kansas (26.9K) Stony Brook Univ (26.7K)
UC Santa Barbara (26.3K) UC Riverside (25.5K)	UC Santa Barbara (25.0K)	
		Univ of Virginia (24.7K) Univ of Oregon (22.4K)
UC Santa Cruz (19.5K)	UC Merced (15.0K)	
UC Merced (8.8K)		
UC San Francisco (3.2K)	UC San Francisco (5.4K)	

UCB and UCSC have recently approved LRDPs with opportunities for growth. Both campuses also face strong neighborhood opposition and current/expected lawsuits could delay expansion. In addition, UCSB noted it is at approved capacity; the campus is behind in its ability to provide the level of student housing expected by the local community.

Campus long-range development plans

	UCB	UCD	UCI	UCLA	UCM	UCR	UCSD	UCSF	UCSB	UCSC
Goal	48.2K	39K	37K	34.2K	15K	35K	42.4K	5.4K	25K	28K
Growth	8.1K	3K	<1K	over	6K	9.4K	3.7K	<1K	4K	9.5K
Horizon	2037	2031	2026	2025	2030	2035	2036	2035	2025	2040

LRDP issues don't just affect one UC campus, but can have an impact across the system. As one UC campus described, every LRDP comes with a lawsuit which is followed by a resolution that, then, feeds into the next LRDP resolution that other UC communities expect. The campus recommended the State play a role, as it has in the housing arena, to work with local communities to prevent this ramp up in mitigation costs. Doing so would protect the State's investment in enrollment and redirect campus funds currently directed to local mitigation that could be used to support student throughput or other strategic goals.

At least three campuses (UCSD, UCSB, UCSC) cited housing as a major challenge to enrollment growth, highlighting a need to align future enrollment growth with the expansion of bed spaces. UCSD did note the recent expansion of the San Diego Trolley line to the campus might open up housing possibilities along other stops on the trolley line. If possible, that expansion could help preserve core campus land for academic, research and classroom facilities.

Finally, the State has proposed UCB, UCLA and UCSD swap nonresidents for California residents with the promise of receiving funds that would cover non-resident supplemental tuition (NRST). That swap could add seats for California residents while not having an impact on campus LRDP caps. Campuses expressed some concern that future Legislatures may not honor the funding promise of this current Legislature and a recognition that California residents require more financial aid than nonresidents, resulting in some loss of funds with the swap. Other UC campuses noted the inherent unfairness of this arrangement, with one LRDP-constrained campus indicating it would be interested in a similar offer where it would swap California residents for nonresidents to remain under the existing LRDP cap.

Graduate growth

Graduate students include state-supported (e.g., graduate academic masters and doctoral, health sciences) and self-supporting students. Across the board, campuses indicated an interest in growing graduate students to mediate significant undergraduate enrollment growth and advance other campus goals, including becoming or remaining competitive with AAU institutions.

As the table on the right shows, most UC campuses fall at the bottom when looking at AAU public institutions' percent of graduate students. UCM, UCSC, UCSB and UCR, who have the lowest percent of graduate students on the chart, all emphasized the importance of graduate student growth. For UCM and UCR, the growth of graduate academic doctoral students is essential to advancing their goals to become R1 and AAU institutions, respectively. UCSC is also the newest AAU member and sees graduate academic doctoral student growth as critical, noting their smaller graduate footprint compared to AAU peers.

Other UC campuses highlighted the importance of graduate student enrollment growth. For example, UCI has a goal to increase graduate enrollment to 25 percent, with most of the growth in PhDs (from 9 to 12 percent). Some campuses (UCD, UCSD, UCSB) emphasized graduate enrollment growth as important because it had not kept pace with the growth in undergraduate students.

Percent of students who are graduate students and specifically academic doctoral

	UCB	UCD	UCI	UCLA	UCM	UCR	UCSD	UCSF	UCSB	UCSC
Fall 2010	29%	23%	20%	34%	6%	12%	21%	100%	14%	9%
Fall 2020	27%	22%	20%	31%	8%	14%	21%	100%	11%	10%
Fall 2010	16%	11%	10%	12%	5%	9%	10%	26%	11%	7%
Fall 2020	12%	10%	9%	11%	8%	8%	9%	29%	10%	8%

Source: <https://www.universityofcalifornia.edu/infocenter/fall-enrollment-glance>

A number of UC campuses (UCB, UCI, UCSB, UCSC) are considering or engaged in efforts to right-size graduate programs to focus enrollment growth in emerging fields, research expansion areas, and/or fields with robust career and professional opportunities in California and beyond. Graduate growth would also need to provide holistic student support, including five-year guaranteed funding packages for academic doctoral students and housing support.

Several campuses cited challenges in growing graduate academic doctoral students because of limited financial aid support. For example, UCI's growth is stalled by needing to provide additional funding for current PhD students affected by COVID-19. In addition, UCSF noted that challenges in providing guaranteed funding packages are a main limitation to PhD program growth, citing an ability to cover the first two years with grant funds but the absence of undergraduates limiting traditional GSI support.

Additionally, a number of UC campuses envision opportunities to grow graduate professional masters and self-supporting programs. Some campuses also thought they could increase graduate degree attainment and diversity through creative 3+2 or 4+1 programs. For example, if senior year courses could result in graduate credit toward a Master's degree, it could make this option more affordable. UC

Percent Graduate Students

Public (UC/AAU)	% Grad
UC San Francisco	100%
Georgia Tech	57%
Univ of Nth Carolina	36%
Univ of Michigan	35%
Illinois at Urb-Chmp	35%
Univ of Minnesota	34%
Univ of Washington	34%
Stony Brook Univ	33%
Univ of Florida	33%
Iowa State Univ	33%
Univ of Pittsburg	33%
Univ of Virginia	32%
Univ of Buffalo	32%
Univ of Kansas	29%
UCLA	29%
Rutgers University	28%
Univ of Wisconsin	28%
UC Berkeley	27%
AAU Public Average	27%
Univ of Utah	26%
Univ of Maryland	26%
Univ of Iowa	25%
Univ of Missouri	25%
Ohio State	24%
Purdue University	24%
Indiana University	24%
Univ of Arizona	23%
Texas A&M	22%
Texas at Austin	22%
Michigan State Univ	21%
UC Average	21%
UC San Diego	21%
UC Davis	20%
Univ of Colorado	18%
UC Irvine	18%
Penn State	17%
Univ of Oregon	16%
UC Riverside	14%
UC Santa Barbara	11%
UC Santa Cruz	10%
UC Merced	8%

is also expanding online opportunities for graduate degrees, such as UCD's self-supporting and fully-online MBA.

UCSF also noted that a major constraint to expanding health science professional programs is the growing limitation of clinical training sites. Students are having to travel greater distances to receive clinical training. The affiliations agreement may further limit these opportunities with restricted organizations. In addition, private universities – like Vanderbilt, Georgetown and Drexel's Medical Schools – are establishing clinical branches within the state and are *paying* providers for clinical training slots. UC health science programs do not pay for clinical training slots.

- IV. **Non-traditional growth opportunities** – Every UC campus discussed ways it would expand capacity through non-traditional means, ranging from efforts to improve timely graduation to online, summer and off-campus internship opportunities.

Reducing time-to-degree

UC undergraduate campuses have established ambitious goals to improve timely graduation and/or eliminate equity gaps. Every UC campus identified these efforts as a critical way to expand capacity and advance educational equity. Campuses identified a range of strategies they were examining, starting with ways to improve first-year retention (e.g., summer bridge, first-year immersion courses). UCM, UCR and UCSB have traditionally enrolled a larger proportion of students with lower levels of academic preparation, at both the transfer and freshman levels. With no standardized test scores and inconsistent high school grading over the pandemic, a number of UC campuses said it was more challenging to assess college readiness and where to proactively target support services. UC campuses cited the importance of providing additional academic preparation support, with a likely increased need resulting from the learning loss new and continuing students experienced during the remote instruction period.

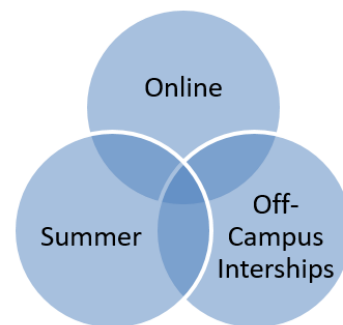
Campuses are also reviewing pandemic-related policies that appear to support student outcomes (e.g., grading policies, changes in probation policies). In addition, campuses were looking to curricular strategies for courses, particularly bottleneck courses, with higher proportions of D/F/W grades and ways to help students change degree trajectory without suffering delays in time-to-degree (e.g., parachute courses). Campuses also emphasized the importance of additional advising support to advance these goals.

The February 2 COC meeting will focus on a UC 2030 update, including promising strategies and “shovel-ready” projects where investments can advance timely graduation and eliminate equity gaps.

Online, summer and off-campus internship opportunities

The pandemic had a significant impact on online, summer, and off-campus internship opportunities and post-pandemic, campuses are seeing these strategies as inter-related ways to expand capacity while not impacting LRDP caps.

Almost every UC course was converted to **remote instruction** with instructors having some insight into what courses or elements of courses can continue to be delivered in a remote way. Almost half (45 percent) of instructors indicated their “interest in online teaching”



has increased and one in ten (12 percent) said their interest in online courses was and continued to be high.

While assessments are ongoing to understand student performance in subsequent courses, a number of UC campuses noted the importance of building on this momentum to increase the number of **online** course opportunities. It provides a way to expand access, advance throughput, and remain under LRDP caps. Campuses are considering both wholly online programs, especially at the masters' level, as well as ideas around having students take some fixed percentage of their coursework online (e.g., one course, a term or year). Some campuses noted a need to share online course opportunities (e.g., specialized language courses) across UC campuses, expressing frustration that sometimes it is easier for students to get credit for CCC courses, instead of ones offered at other UC campuses.

In addition, most UC campuses have online graduate programs with at least one UC campus (UCI) piloting a fully-online undergraduate program for transfer students. UCSD also noted that Muir College saw an increase in enrollment from previous stop-outs because they could enroll in remote courses to complete their degree. UCM is currently piloting an online degree completion program, which hopefully will increase completion rates for those students who have stopped out.

Faculty governance, including campus and systemwide academic senate review, will play a role in whether and/or how quickly the expansion of online programs will occur.

Summer 2020 enrollments spiked to an all-time high when students had an opportunity to take courses remotely. Some of that increase was because students had limited or no opportunity to participate in other activities (e.g., employment, travel) and while summer 2021 enrollments declined compared to summer 2020, it still remained higher than prior summer terms.

Multiple UC campuses (UCD, UCR, UCSD, UCSB, UCSC) recognize this opportunity to increase summer enrollment and capacity by increasing the number and mix of online and impacted fall-winter-spring course offerings. UCLA is looking at a better use of summer with a goal of eventually treating it as another quarters (year-round operations).

A number of campuses were hopeful that their Academic Senates would provide flexibility for expanded summer remote options. For example, UCSD has a Senate/Administration working group looking at remote options, with the hope that a policy can emerge that would allow high quality remote courses offered at scale during the summer. UCI believes it can expand summer enrollment by growing the percent of online courses from 30 to 50 percent.

Financial aid and outreach is critical to ensure underrepresented, first generation and Pell students can take online courses. UCSB used HSI and COVID-19 relief funds in 2021 to expand summer bridge and summer financial aid support as one way they were addressing concerns about learning loss for recent high school graduates educated through remote instruction. Finding a way to have enhanced financial support for financially needy students in summer start programs would be helpful (right now, financial aid offices are hesitant to count that first summer because that means eligibility could be lost sooner at the other end of the student's tenure). In addition, summer enrollment programs help expand capacity by improving timely graduation and closing equity gaps.

Furthermore, multiple campuses pointed to ***off-campus internship opportunities***, including UC Education Abroad Program, UCDC and UC Sacramento Center, as another way to increase capacity or as one chancellor describes it, parking your car in someone else's lot. These programs were unable to operate during the pandemic; even this term, campuses say they have more students on campus because these programs are not fully operational. Increasing a student's ability to take online courses can further their ability make progress to their degree as they participate in off-campus internships.

The December 1 COC meeting will focus on summer session, University Extension, and degree completion programs and the January 5 COC meeting will focus on internship and online/remote opportunities.

- V. **Neighboring institution opportunities** – IRAP produced a [dashboard on enrollment trends for neighboring CCC, CSU and private institutions by proximity of UC campuses](#) that shows a number of institutions with declining enrollment that may have capacity or opportunities for partnership.

The University of California was created through a series of ***mergers and acquisitions (M&A)***. UCB was established with donations of the College of California and land in Berkeley. The Toland Medical College became UCSF. UCLA and UCSB began as state Normal Schools. The University Farm and the Riverside Citrus Experiment Station became UCD and UCR. UCSD began as the Scripps Institute of Oceanography.

More recently, a number of UC campuses have considered or been approached regarding various M&A opportunities that have not come to fruition (e.g., UCB-Mills, UCSC-Monterey Institute of International Studies, UCLA-American Jewish University, UCSD-Western College of Law). UCSF and Oakland Children's Hospital merged to become UCSF Benioff Children's Hospital, but campus representatives noted that the merger wasn't as smooth as they hoped. UCSF and other campuses described the challenge that UC campuses have had when they go into communities to create partnerships. They were interested in support or meta thinking on how to be more proactive in creating successful partnership that could support UC efforts in the future.

To partially support that need, IRAP found a recent Education Advisory Board (EAB) presentation on "Consolidation in US Higher Education: What Boards and Cabinets Need to Know about the Industry Consolidation Landscape Before Evaluating New Opportunities." EAB evaluated hundreds of other M&As and had the following takeaways:

- Lead with mission and strategy: does the M&A fit into campus strategic goals or priorities?
- Strategic asset: is there value-added for both institutions? Are there differing or overlapping strengths (e.g., expansion of degree, programmatic or course offerings)?
- Buy rather than build into new markets: can the M&A serve as a cost-effective way to diversify and grow enrollment?
- Risk to brand and reputation: does the M&A strengthen or harm an institution's brand? How may the other institution's reputation impact enrollment, alumni and local communities?
- Shared governance: does the M&A align with faculty goals and priorities or will there be challenges in combining faculty, programs, and/or courses?
- Few deals of true equals: what are the costs and benefits of the M&A? Most M&As are asymmetric in institutional resources and strategic positions, so what deferred maintenance or debt may a campus inherit?

- Accreditation: does the M&A involve an institution that is already accredited or will it require additional review?
- Politics: will state or local leaders rally behind or obstruct the M&A? Are there ways to gain legislative support?

EAB found that M&A attempts frequently have low success rates and limited return-on-investment. There is often an underestimation of the implementation costs, including due diligence, accreditation and regulatory approval; integrating academic portfolio; shared administrative services; and creating a united brand. The M&A can frequently result in higher costs to the institutions and costs that frequently are passed on to students through higher tuition.

The adult and graduate education market is more primed for M&A than traditional undergraduate institutions. Adult and graduate markets often involve online education, potentially providing resources that create economies of scale to expand beyond regional to national markets. Traditional undergraduate institutions have a residential model with higher fixed costs that don't necessarily scale when students value a particular brand or experience. EAB did note a rise in state-mandated consolidation because of rising costs and declining enrollments (e.g., University System of Georgia, Pennsylvania State System of Higher Education).

M&As can be a cost-effective way to diversify and grow enrollments. Common markets for expansion include:

- Specialized undergraduate programs that require specific infrastructure, accreditation or faculty expertise (e.g., nursing, architecture). North Dakota State University & Sanford Nursing School merged in 2014 to address a nursing shortage in North Dakota.
- Professional master's programs or schools (e.g., business, law). Texas A&M and Texas Wesleyan Law School merged in 2013 when TAMU determined buying TWA's law school was more cost effective than building new.
- International real estate, accreditation, academic programs and/or brands that provide a global footprint. Middlebury College and Monterey Institute of International Studies merged in 2010 so Middlebury could access MIIS's global partnership, programs and internships.
- Online and virtual programs and support services (e.g., marketing, recruitment and advising). Purdue and Kaplan merged in 2012 and University of Arizona and Ashford merged in 2020, both so Purdue and UA could build a global online campus targeting non-traditional and underserved students. Both mergers have had challenges and controversy¹.

Because of the complexities associated with M&As, some campuses instead consider partnership opportunities such as neighboring campuses sharing space, particularly if an institution has flat or declining enrollment. A number of UC campuses have partnerships with local community colleges and CSU campuses. Below are a few examples of strategic alliances and joint courses or programs.

¹ <https://www.forbes.com/sites/dereknewton/2019/08/31/early-troubles-in-the-purdue-kaplan-marriage/?sh=3008b907670d> and <https://www.nytimes.com/2020/08/11/upshot/university-of-arizona-ashford-zovio-online-college.html>

Strategic alliances	Joint course offerings	Joint programs
UCI's engineering program has a transfer guarantee program with Irvine Valley College (IVC). Local high school seniors apply to UCI Samueli School of Engineering and IVC sends an invite letter to the UCI-IVC Engineering Academy where they can transfer to high demand program at UCI.	UCD partnered with Los Rios Community College to provide access to courses that were impacted or not available (e.g., English, Math, or Farsi).	UCSD has more than a dozen joint PhD programs including joint programs with San Diego State University (SDSU) where students take courses at SDSU but research training at UCSD.
UC Health Science campuses are dividing the state to provide health care training coverage in underserved regions of the state. For example, UCSF is covering the Central Valley, UCD is covering Northern California, and UCLA and UCR are covering the Inland Empire.	Middlebury Institute and CSU Monterey Bay allow students to participate in an exchange program taking a certain number of courses that are unavailable on their campus.	UCB and UCSF announced a joint PhD in Computational Precision Health that will be offered in the new College of Computing, Data Science and Society.
	CSU in-state students can take one free online course per semester and receive credit. Out-of-state students pay partial tuition.	UCSF and UCM are partnering so students can receive a BS degree from UCM and MD from UCSF's SJV-PRIME program. The ultimate degree will be to into an independent medical school.

UC campuses identified other ideas for future consideration:

- UCSF expanding the SJV-PRIME program to include students that receive a bachelor's degree from CSU-Fresno and CSU-Stanislaus
- Both UCM and UCSB expressed an interest in partnering with other institutions that could provide nursing training, along with other health care training (e.g., physical therapy, kinesiology)
- UCB is examining possible opportunities with CSU-Sonoma State to provide housing and coursework that could support first-year training, similar to UCB's fall program for freshmen
- UCSD might consider a model used by Claremont Graduate University to partner with cultural entities (e.g., Balboa Park groups) to award degrees

VI. Off-campus centers – Another opportunity to expand capacity without impacting campus LRDPs is through academic programs and enrollment in off-campus centers (e.g., UC extension or research parks). These programs can't replicate the residential experience, so there needs to be some unique aspect that will attract students to choose that location. These programs need to be strategic and sustainable, meeting a local need or market, if they are to be successful.

UC Extension Centers

UCSC's [Silicon Valley Center](#) host Extension programs and a multi-disciplinary teaching and research hub that is home to a master's degree program in Games and Playable Media – a high demand program in that region.

UCSD Extension is opening a [Downtown Center](#) which will be focused on adult education and community partnerships. It provides a place for UCSD students in particular majors (e.g., Education, Urban Studies, Theater and Dance) to complete their practicum or capstone project. In addition, it may provide a place for UCSD's Eight College courses/activities that will focus on Engagement and Community.

Off-campus research parks

UCD's [Aggie Square](#) is a planned innovation hub on UC Davis' Sacramento campus. It will include buildings designed for science and technology, a lifelong learning classroom building, and student housing. Up to a few hundred undergraduates can spend a Quarter at Aggie Square.

UCB is looking at [Moffett Field](#) as a mixed-use site for public and private sector research, professional education, and housing. It could include a new graduate degree program in aerospace engineering.

UC campuses brainstormed about other possible ideas, including:

- UCSC is envisioning a networked multi-campus approach to provide education and research opportunities through physical and remote locations. In addition to the Silicon Valley Center, it could include a Scotts Valley Center, a West Side Research Park and Coastal Science Center in Santa Cruz, and its [Monterey Bay Education, Science, and Technology \(MBEST\) Center](#) at Fort Ord.
- UCR is examining ways for its [Palm Desert Center](#) in Coachella Valley to be self-sufficient, maybe as a site to provide outpatient clinics for UCR's Medical School. It once had a master's in business administration program that was not successful.
- UCD is focused on [Aggie Square](#) but in its strategic plan, it described the potential for a Policy School in Sacramento, one that might partner with the UC Sacramento Center.
- UCB is focused on the Moffett Field operation but may examine future opportunities at the [Richmond Field Station](#) location, particularly if there may be available funding through future federal infrastructure legislation.
- UCLA brainstormed a number of ideas, including a Downtown Center (particularly with Arizona State University establishing a center there), a Santa Clarita institute (where the UCLA Film Archive has been working with the Packard Humanities Institute), and closer main campus locations (e.g., Los Angeles Pierce College).

VII. K-16 collaboratives – Building on the [Recovery with Equity](#) report, the Department of Finance is expected to issue an RFP in the fall for competitive grant program supporting regional K-16 education collaboratives. One UC campus is likely to submit an RFP, with other UCs considering that option. When discussing this item, several campuses described existing efforts, particularly for UCs serving region with lower educational attainment levels.

UCM is considering submitting a RFP for the recently approved K-16 collaborative. They have an existing K-16 regional collaboration in partnership with Merced Union High School District and have the Merced Automatic Admissions Program for students who complete specific requirements at the time of high

school graduation. Additionally, they have the [Merced Promise](#) in partnership with Merced College to streamline the transfer process. The aim of both initiatives is to increase enrollment at Merced and college going in the region. UC Merced is interested in expanding these guarantees to students in Los Angeles Unified School District (LAUSD), Modesto Junior College and CSU-Stanislaus.

UCR is engaged in a major, ongoing K-16 regional collaboration in the Inland Empire called [Growing Inland Achievement \(GIA\)](#). GIA brings together business community, K-12, community college, CSU and UC Riverside leaders to support educational attainment and advance economic improvement opportunities in San Bernardino and Riverside counties. UCR's role is particularly important, considering its national recognition as a leader in social mobility. UCR existing partnership would fit well within the RFP for programs supporting K-16 collaboratives.

UCI has several collaborations, such as K-16 collaborations with Santa Ana Unified, CSU Fullerton and Santa Ana College, known as the [Santa Ana Partnership](#). The goal is to ensure that Santa Ana public school students to these two- and four-year institutions succeed. The partnership has received prior financial support (\$5M with \$1M coming to UCI). These programs increased diversity to UCI. The campus will look at the K-16 grant proposal, as it could offer additional funding opportunities.

UCLA has a number of regional collaborations with local school districts, most notably LAUSD. Other districts interested include Pasadena and Inglewood. One way to provide more access to college credit is to offer UC credit for a program like Cambridge Assessment (similar to the credit UC provides for AP and IB) which is used in districts like Inglewood. However, UCLA noted that successful partnerships require long-term funding (not just one-time funding, as in the K-16 competitive grant program) and that all the partners have a financial stake in the partnership. The campus will look at the K-16 grant proposal and see if it might be leveraged for proposed programming.

VIII. Advancing educational equity

The University's comprehensive plan on capacity is not just about growth, but intentional growth. It must show how traditional and non-traditional growth and partnerships with other institutions advance educational equity (e.g., expanding access to underserved regions or communities).

For example, UC is coupling its request for additional academic doctoral students, with a systemwide *Growing our Own Graduate Enrollment and Diversifying PhD Pathways* initiative that would expand access from UC undergraduate programs, along with HSI, Historically Black Schools and Colleges (HBCU) and Tribal Colleges and Universities (TCU). This initiative will help ensure that, as UC grows Ph.D. students, those doctoral students better reflect the state's diversity and diversify future researchers and faculty for UC, CSU and CCC.

There may be other ways to describe how existing, enhanced, or proposed campus strategies are intentional about expanding educational equity. For example, what strategies or support is UC using or does UC need to ensure those benefiting from summer, online or internship opportunities reflect California's diversity? Do or can programs like UCI-IVC Engineering Academy and UCSD's joint programs with CSU promote access and diversity, similar to what the PRIME programs have done for the health sciences?

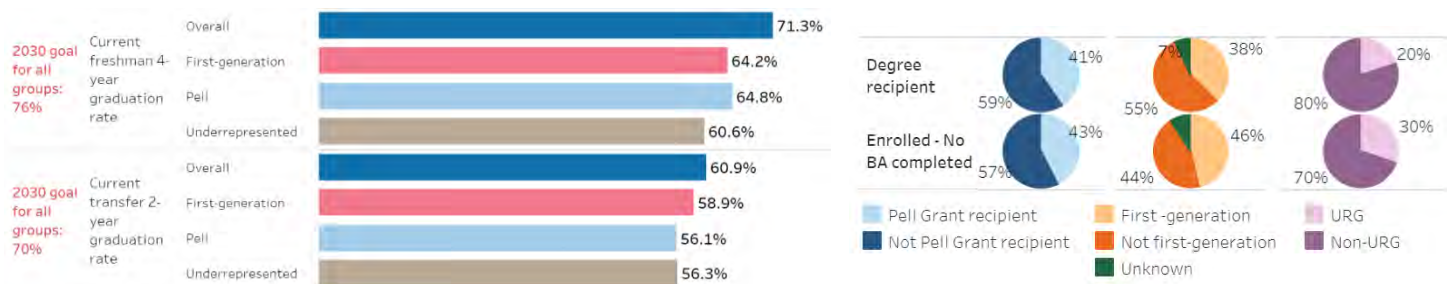
This effort provides a way for the University to demonstrate how it can further address California's needs and hopefully garner state support.

2. Summer Session, University Extension, and Degree Completion

- IX. Introduction** – Summer Session and University Extension provide additional UC capacity through new freshman and transfer transition programs to campus and additional curricular offerings. Both efforts promote throughput by advancing first-year success and timely graduation. These operations can support re-entry to the main campus, degree program continuity, and advance degree completion.

Summer Session and University Extension can also play a key role in advancing educational equity. UC's new generation students (i.e., Pell Grant recipients, first generation, and underrepresented students) are less likely to graduate in a timely manner (e.g., four-year freshman and two-year transfer graduation rates), experience degree progress interruptions (like retention and probation challenges), and more likely to exit without completing a degree at UC or any other four-year institution.

UC 2030 goals with four- and two-year graduation rates and comparisons of UC bachelor degree recipients and UC undergraduates that enrolled but do not complete a degree



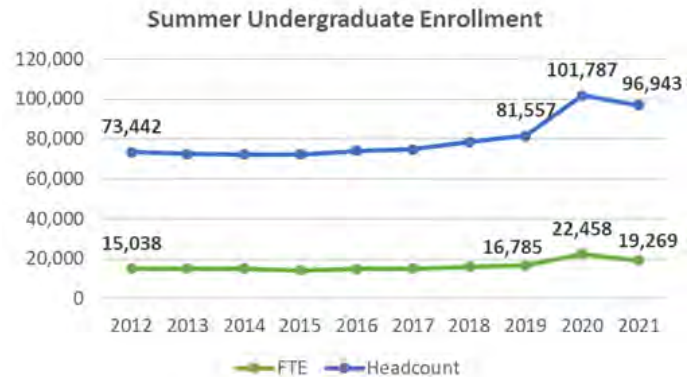
Sources: <https://www.universityofcalifornia.edu/infocenter/ug-outcomes> and <https://www.universityofcalifornia.edu/infocenter/ug-non-completion>

Institutional Research & Academic Planning (IRAP) representatives interviewed campus leadership in Undergraduate Education, Summer Sessions, University Extension, and related areas ([see Appendix](#)) about these operations, how they managed during the pandemic, and future opportunities and challenges to promote capacity and advance educational equity. This brief summarizes key findings from these discussions and relevant institutional data, including a recent survey of UC undergraduates who started and did not complete a degree.

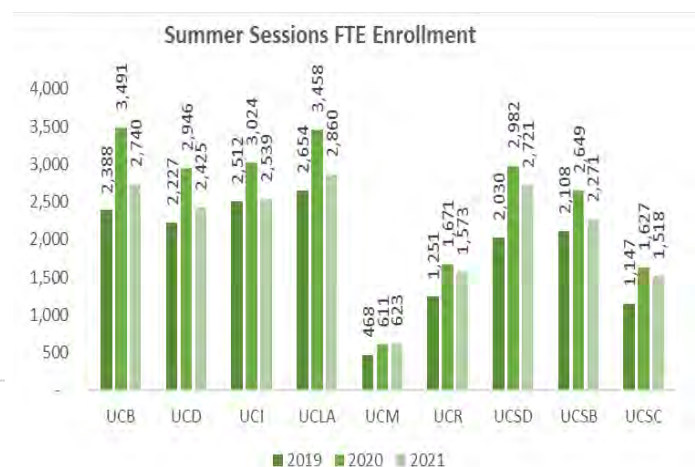
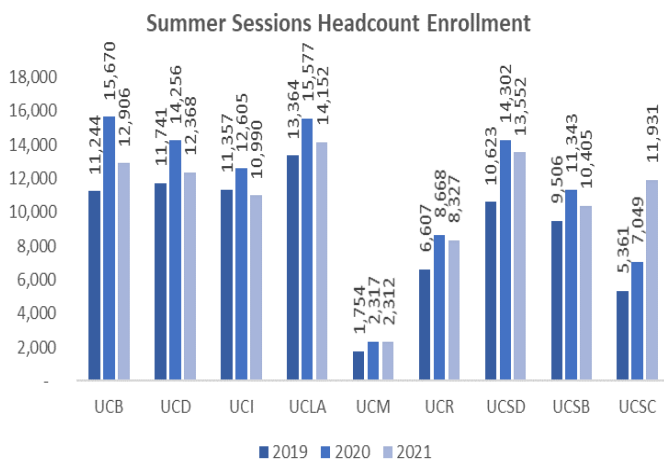
X. Summer sessions

Enrollment trends and participation

UC Summer Session undergraduate enrollment – both headcount and full-time equivalent (FTE) – grew just over 1.5 percent a year between 2012 to 2019. In summer 2020, when classes shifted to remote and students had few-to-no alternatives (e.g., no travel or work), there was a 25 percent headcount and 34 percent FTE increase in one year. Instructional and student support personnel, similarly, were restricted to remote operations. In summer 2021, many summer courses remained remote and students had more alternatives (e.g., opportunities to work). While there was a decline in summer 2021 enrollment, it still represented a 19 percent headcount and 15 percent FTE increase from pre-pandemic levels.



The two figures below show undergraduate summer headcount and FTE enrollment by campus over the last three years. In most cases, the trends follow that of the system with a couple exceptions. Summer headcount and FTE enrollment between 2020 and 2021 remained flat for UCM. For UCSC, summer headcount increased significantly, while FTE declined slightly due to a new online, one-unit Slug Orientation² summer course (required of all new entering students).



Source: <https://www.universityofcalifornia.edu/infocenter/summer-enrollment>

² Slug Orientation Online Course (<https://orientation.ucsc.edu/summer/index.html>)

Estimated summer 2021 participation rates averaged just over 40 percent, ranging from 28 to 69 percent by campus. Overall, summer participation for Pell, first generation, and underrepresented (URG) students mirrored those enrolled in the fall. Differences of five points or more to the UC average and/or between the fall and summer terms are highlighted, showing a couple campuses with opportunities to improve summer participation for first generation and URG students. One campus said a culture change is needed so first generation and URG students see summer as not just supporting academic preparation, but also timely graduation.

Comparing Summer 2021 to Fall 2020 Undergraduates

	Summer % of Fall 20	% Pell Grant		% First Generation		% URG	
		Fall 20	Sum 21	Fall 20	Sum 21	Fall 20	Sum 21
UCB	42%	26%	36%	29%	28%	22%	23%
UCD	40%	34%	42%	41%	41%	27%	26%
UCI	37%	38%	40%	48%	43%	28%	22%
UCLA	45%	28%	34%	31%	28%	27%	23%
UCM	28%	63%	72%	74%	73%	63%	61%
UCR	37%	49%	55%	55%	50%	46%	39%
UCSD	43%	33%	40%	37%	37%	24%	25%
UCSB	45%	32%	38%	38%	37%	29%	29%
UCSC	69%	30%	35%	35%	33%	31%	32%
UC	43%	35%	40%	40%	35%	30%	28%

The latest UC Undergraduate Experience Survey (UCUES) found nine of ten UC undergraduates responding that summer enrollment was important to help them graduate on time, with higher percentages of URG students indicating it was very important compared to peers (see [appendix item on UCUES Summer Session Survey Results – Spring 2020](#)). Primary reasons students enrolled in summer at another institution were because it was more affordable or a more convenient location, particularly for first generation and Chicano/Latino students.

Transition and special programs

Summer Session, with online offerings and affordability support, can improve timely graduation for students, thereby expanding capacity for additional students. Early preparatory programs can provide a jump start to the first year, promote a sense of belonging, and advance educational equity. A few campus highlights include:

- **Summer Bridge/Summer Start:** These programs are targeted to students who could benefit from academic and social transition to campuses. They provide wrap around services, along with enrollment in critical first-year courses (e.g., entry-level writing and mathematics).
 - **UCLA's Freshman Summer Program**³ is a seven-week rigorous academic program open to Academic Advancement Program students who are more likely first-generation, URG and/or from under resourced high schools. UCLA offers a similar **Transfer Summer Program** to promote confidence of intellectual ability and awareness of campus programs, services and resources.
 - **UCD's Summer Start**⁴ program is an online academic program for international and multilingual freshmen. Students can take the entry level writing requirement series, English Composition, the Math course series, General Education and elective courses. Students take between two to four courses that are unique, have smaller instructor-to-student ratios and not offered during the regular academic year. Academic advisors are also available to help with registration and to ensure that all course are appropriate and will count towards degree completion.

³ UCLA Freshman and Transfer Summer Program (<https://summer.ucla.edu/newUCLAstudents>)

⁴ UCD Summer Start Program (<https://summerstart.ucdavis.edu/>)

- **Summer Edge:** These programs are open to freshman and transfer entrants who want to get a jump start on critical gateway courses.
 - **UCI's Freshmen and Transfer Edge Programs**⁵ give newly admitted students the opportunity to learn about the campus and student life before the year officially starts while taking courses that fulfill breadth and prerequisite requirements.
 - **UCM's Summer Edge Program**⁶ improved the placement of students in writing and math courses based on performance in summer courses and subsequent placement exams; it was particularly useful given the lack of prior assessments used to place students
- **STEM Orientation:** Several UC campuses have curricular specific orientation programs.
 - **UCSD's Summer Engineering Institute**⁷ is a 5-week, virtual program where students earn six credits, receive transitional support to the rigors of a university-level engineering curriculum, and gain awareness of relevant campus programs and resources.
 - **UCM's STEM Up Program** is an exclusively online program that seeks to boost academic preparation for students pursuing STEM fields.
- **Summer orientation:** Curricular offerings that serve to orient incoming students to the campus.
 - **UCSC's online slug orientation** is a required one-unit course for all new frosh and transfer students that start fall quarter, promoting a smoother registration process. With more than 6,000 students enrolled, it also generated around 130 FTE.

Several campuses identified programs and strategies increase summer participation, including

- **Financial incentives:** Tuition or financial aid programs to encourage students to take more units.
 - **UCI's Pay for Eight**⁸ charges students for up to eight units with no charge for any additional units
 - **UCSC's Summer Grants Program** requires students enroll in a minimum of 10 units to get institutional aid. UCSC also provides a significant discount on tuition for students who enroll in at least 15 units.
- **Educational enrichment:** Programs that provide student opportunities to pursue interests outside of their degree areas or policies that encourage timely progress to degree.
 - **UCB's summer minor program**⁹ allows student to complete a minor in programs like Digital Humanities (online), Educating in the 21st Century (online and multilingual), Global Public Health and Journalism in a Digital Age. Students can complete a minor over multiple summers, but many do it in one taking core courses in the first session and electives in following sessions.

⁵ UCI Freshman & Transfer Edge (<https://summer.uci.edu/freshman-edge/> and <https://summer.uci.edu/transfer-edge/>)

⁶ UCM Summer Edge (<https://summersession.ucmerced.edu/academics/summer-edge>)

⁷ UCSD Summer Engineering Institute (<https://summer.ucsd.edu/program-finder/summer-engineering-institute.html>)

⁸ UCI Pay for Eight (<https://summer.uci.edu/services/pay8/>)

⁹ UCB Summer Minor Programs (<https://summer.berkeley.edu/special-programs/summer-minors>)

- **UCLA's Expected Cumulative Progress Policy¹⁰** is designed to promote 4-year graduation for undergraduates, with a progress check that occurs every two quarters that you are enrolled. If a student is not making steady progress, the students meets with a College Counselor and may be encouraged to take summer courses to get back on track.

Remote instruction

Every campus discussed how the shift to remote instruction increased student participation in summer, particularly because it became a more affordable and convenient option for students to return home and continue taking courses at their home institution.

A UCLA summer session survey with over 1,600 respondents asked if courses were only available in-person, would you have taken the same number of courses? Fifty percent said “no” or “probably no” and of those respondents, when asked how many would you have taken, 61 percent said they would not have taken any courses. Furthermore, 85 percent indicated it was “extremely or very important” to have the option to participate in online summer courses.

UCSB also conducted a summer sessions survey and noted three key takeaways:

1. **Remote offerings matter.** The convenience of taking courses online, when they are pulled in many different directions, made a difference for some. When many other options were unavailable (e.g., work, travel), there was an interest in taking courses.
2. **Financial incentives matter.** UCSB students could take courses at home. They did not have to pay to live in Santa Barbara for the summer. Housing is available, but expensive at UCSB – so remote instruction became a more affordable option.
3. **Bridge programs matter.** UCSB provided a new “second summer” bridge program for second-year students who would be transitioning to campus for the first time because their freshman year was remote. They had more students wanting to participate than capacity.

In fact, **UCSD's Spring 2021 Summer Bridge** expanded offering by providing both remote and in-person options and attributed the dual modality as a critical component to maintaining summer FTE.

A number of UC campuses noted that the ability to provide some remote offerings will be critical to expanding summer capacity. A challenge to increasing summer remote/online course offerings is the approval process for new or existing courses, including how these courses are taught. Many campuses are hoping local Academic Senates will simplify the process for summer courses, with some creating Senate-Administration working groups to evaluate opportunities to continue remote offerings. Several campus efforts that may result in more flexible opportunities:

- UCI has a goal to have half of summer enrollments online, with a lower but significant proportion of larger online courses. To that end, UCI's Academic Senate is making it easier to approve summer online instruction, requiring only a one-page questionnaire to request approval and the possibilities that this review may be delegated to the department in the future.

¹⁰ UCLA Expected Cumulative Progress Policy (<https://caac.ucla.edu/policies/expected-cumulative-progress/>)

- UCSC's Academic Senate has liberalized policies for remote course approval in Summer 2022 where the course sponsoring agency can make a decision on course modality for approved courses. The Senate will evaluate that policy change in the future.
- UCSD's working group would like to suspend the current remote instruction policy, treating summer as pilot and monitoring that shift; they will suggest that to the Academic Senate, in lieu of a current proposal for remote summer offerings requiring a follow-up assessment.

Some campuses are expecting to see a continued decline in summer enrollment, in part because of a likely decline in remote summer course offerings. UCR is working on a proposal to treat summer term offerings as a "sandbox" – a way to provide more opportunities to experiment with modality during the summer (to make it different from the fall, winter and spring terms).

Opportunities and challenges

In addition to the existing programs and strategies identified earlier, UC campuses noted the following opportunities for expanding capacity in summer:

- **More strategic course offerings:** Current offerings are often negotiated between Summer Session and Departments, but there may be ways to identify courses that could advance timely graduation (e.g., bottleneck, general education, or degree requirement courses).
- **More online course offerings:** Offering more summer online courses could provide ways for students returning home, working or participating in internships to make degree progress.
- **Support for longer summer terms:** In lieu of campuses converting from quarter-system to a semester-system, some campuses noted the opportunity to treat summer more like a fourth term. If they could offer more courses over longer sessions (e.g., 10-week, instead of six-week), that might address the challenge of completing intensive classes (e.g., calculus or writing).
- **Expanding pre-matriculation programs:** Provide access to a larger number of first-year students (freshmen and transfers). This expansion may become even more important with fewer indicators on academic preparation levels and greater concerns about missed/lost learning of high school and California Community College (CCC) students during the pandemic.

Campuses also noted a number of challenges in expanding summer capacity, including

- **Summer financial aid:** As it is, summer is a rider on the previous academic year's financial aid, so if students use up all their eligibility during the year, they don't have any left for summer. New generation students, who want to start in summer, may be at a disadvantage due to policies at seven of the nine UC campuses require students to file two FAFSA forms to receive financial aid – one for the prior year (i.e., summer) and the current year
- **Current budget incentives:** Several campuses referenced "FTE leak" where departments are funded for Fall-Winter-Spring FTE and moving courses to summer can have an adverse financial impact.
- **Faculty workload credit:** Give Colleges and Departments the opportunity to allow faculty to teach summer on-load and expand curricular opportunities in the summer. Another option is to support faculty who wish to teach degree credit courses during the summer (or their graduate students) to teach them through Extension (as concurrent or "X" courses), where they can, by policy, support supplement their compensation.

- **Instructional support:** Ladder-rank faculty may see summer as the time for research or creation but incentives like sabbatical credit for summer teaching might help. Also, there is a challenge getting enough graduate student instructors – especially those in the STEM fields when they can get more lucrative offers through other summer employment.
- **Staffing:** A number of campuses expressed concerns about having a sufficient number of staff to manage a larger summer session program.

Future capacity scenarios

All UC campuses identified summer as a possible way to expand capacity, the most recent Table 1 submissions shows a one percent decline systemwide, with most campuses either remaining flat or declining.

UCOP has created three scenarios for summer growth through 2029-30:

1. Growing by 1.5 percent annually (comparable growth from 2012 to 2019)
2. Growing to summer 2020 levels
3. Growth of 3 percent annually

2030 Growth Scenarios						
Campus	Summer 2021 FTE	Summer 2022 FTE	Change	Scenario 1: Growth @ 1.5% per year	Scenario 2: Growth to achieve Summer 2020 levels	Scenario 3: Growth @ 3% per year
Berkeley	2,740	2,437	-303	347	751	731
Davis	2,402	2,250	-152	304	526	641
Irvine	2,539	2,578	39	321	474	677
Los Angeles	2,846	2,850	4	360	593	759
Merced	623	510	-113	79	-12	166
Riverside	1,556	1,400	-156	197	136	415
San Diego	2,723	3,000	277	344	259	726
Santa Barbara	2,268	2,346	78	287	382	605
Santa Cruz	1,548	1,700	152	196	79	413
UC	19,245	19,071	-174	2,434	3,187	5,134

These three scenarios would add between 2,400 to 5,100 FTE, relieving pressure to grow California residents in the fall, winter, and spring terms.

- XI. University Extension** - There are a couple of key ways University Extension can expand capacity, including transition programs and curricular offerings (e.g., senate approved courses and possibly concurrent enrollment).

Transition programs

Below are two examples of transition programs run through University Extension – the first has been operating since the mid-1980s and the second is a pilot program which is being developed. Both programs are examples of ways to promote student success and expand capacity.

UCB's fall program for freshmen¹¹ provides incoming freshmen a different way to transition to the campus with close-knit cohort experience, access to smaller courses – allowing for high-impact learning, a core curriculum to meet key requirements (e.g., breadth and major prerequisites, Reading & Composition courses, electives), personal advising support, and access to Berkeley programs and services. Students participating in the program have had stronger student outcomes than those entering directly to the main campus. Currently, students pay an additional fee to participate in the program. UCB Extension is considering changing the current practice and having students admitted directly into the program. Under this approach, they would enroll students up to a certain cap (e.g., 750). They would not charge additional fee, because the proposed size of the program would make it financially feasible to rely just on regular tuition support.

UCSB's Pathway to UC: A California Central Coast Project is focused on increasing access to transfer eligible students who apply and are admitted to UCSB, but do not come. The campus received one-time funds to target students located north of Santa Barbara (e.g., Lompoc) and provide the first-year of coursework where they live. The hope is by successfully completing that work closer to home, it would support their eventual transition to UCSB, reducing the amount of time they would need to complete their degree on campus.

Expanded curricular offerings

There are two primary ways that University Extension can expand capacity – first through enrollments in X-courses and possibly through concurrent enrollment.

"X" courses are UC Extension Courses that have been approved by the Academic Senate and deemed equivalent to UC courses on a given campus (e.g., XB at UC Berkeley, XL at UCLA, XR for UC Riverside). Credit isn't automatic, though UC students can request and should be able to receive transferrable credit when taking these courses.

Concurrent courses are ones where non-matriculated students enroll in existing UC courses being offered through the main campus. Concurrent enrollment doesn't expand capacity if it only takes existing seats in courses. But University Extension will pay departments for this concurrent enrollment and when demand is sufficient, it can result in adding an additional section which could generate additional capacity. Concurrent enrollment varies across the system, with the following table providing three years of concurrent course offerings, enrollments and enrollments per course.

¹¹ UCB Fall Program for Freshmen (<https://fpf.berkeley.edu/>)

	Concurrent Courses			Enrollments			Enrollment/Courses		
	2017-18	2018-19	2019-20	2017-18	2018-19	2019-20	2017-18	2018-19	2019-20
UCB	1,735	1,899	2,063	5,869	7,744	8,972	3.38	4.08	4.35
UCD	1,583	816	769	2,489	1,439	2,094	1.57	1.76	2.72
UCI	2,519	2,261	2,212	6,880	4,674	4,160	2.73	2.07	1.88
UCLA	691	493	507	802	559	569	1.16	1.13	1.12
UCM		18	20		20	23		1.11	1.15
UCR	2,060	1,932	1,826	4,386	4,439	4,206	2.13	2.30	2.30
UCSD	1,247	2,031	914	2,514	2,024	1,974	2.02	1.00	2.16
UCSB	433	519	444	659	669	569	1.52	1.29	1.28
UCSC	151	126	115	297	152	127	1.97	1.21	1.10
UC	10,419	10,095	8,870	23,896	21,720	22,694	2.29	2.15	2.56

Opportunities and challenges

UC Extension officials identified a couple opportunities to expand capacity included:

- **Remote offerings:** Two campuses noted the shift to remote instruction expanded opportunities for concurrent enrollment. **UCD's Open Campus**¹² and **UCSB's Open University**¹³ both saw an uptick in their concurrent enrollment (not shown in the table above) because there were not the regular capacity constraints when courses were offered online.
- **University Degree Start Program:** UCI proposed a program to provide students provide lower-division courses, along with a non-degree Leveling Up for College Success course to provide an alternative to preparing for and transferring into any college or university that would accept UCI XI courses (i.e., senate-approved courses that can be run through Extension). The curriculum would include basic English Writing and Mathematics preparation, along with other courses that would fulfill the General Education requirement on the UCI campus. Preference would be given to courses developed for online delivery using a combination of synchronous and asynchronous formats. The program could be scalable nationally or internationally.

There are a number of existing barriers to leveraging Extension to expand capacity, including:

- **Financial sustainability:** UC Extension programs must be self-supporting, which means they need to have the right number of participants and charge enough to cover costs. Without funding coming in from other sources, it can limit some of the ways to both expand capacity and equity.
- **Financial aid:** Students taking extension courses, even if they are taking courses on the main campus through concurrent enrollment, will not receive financial aid. This dis-incentivizes students from enrolling in extension courses, even if they could help with degree obtainment. Extension can create scholarship programs to inclusive expand access but these are expensive to operate and administer.
- **Residency requirements:** On the quarter campuses, the senior residency requirement mandates that 35 of 45 of the final units be completed on campus. At the semester campuses, UCB requires 24 of the last 30 units be done on campus while UCM requires 24 of the last 36.

¹² UCD Open Campus (<https://cpe.ucdavis.edu/open-campus>)

¹³ UCSB Open University (<https://professional.ucsb.edu/open-university>)

Residency requirements are not applied the same to systemwide internship programs that are not on-campus. For example, Participants in UC Education Abroad Program (EAP), UC Washington, D.C. (UCDC) and UC Center in Sacramento (UCSAC) at the quarter campuses must meet the modified senior residency requirement where 35 of the final 45 units in the college or school in which the degree is to be awarded is modified to 35 of the final units and 12 of the final 24 at the semester campuses.

In its current form, Extension cannot be part of the solution – unless students take it during the summer term where residency does not apply. Every campus has a different spin; some are stricter on how the final 45 units can be completed or for others there may be broader interpretation about senior standing. It is worth considering a systemwide solution to senior residency requirements, especially given the likely growth of remote offerings

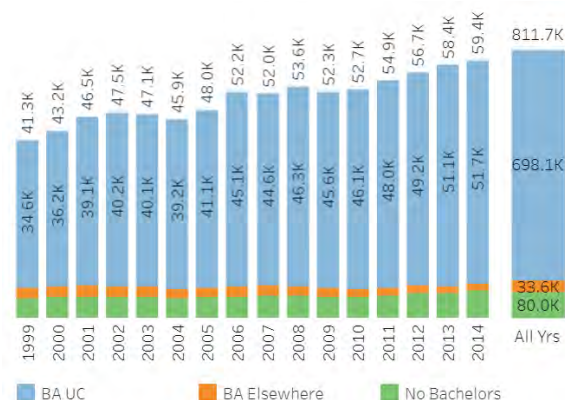
- **Articulation challenges:** Several Extension leaders noted the lack of articulation agreements for courses and degree programs as a problem. While these agreements exist with other universities, including a number of California State Universities and nearly all CCCs, they do not exist across UC campuses. Articulation agreements within UC could incentivize students taking X courses. For example, the Pre-Health Certificate at UCLA is the largest in terms of serving students who go on to other institutions, as the courses are recognized at several institutions outside of UC. UC Education Abroad has addressed this challenge and could be a model for expansion to other courses across the system.

XII. Degree completion

Profile of non-degree population

Over the last 15 years, just under 10 percent - 80,000 UC undergraduates – started but did not receive a degree from UC or any other institution.¹⁴ UC non-degree completers are often undeclared (22 percent), but over one-third left having completed over 100 units and 18 percent left after three years.

The table below provides detail on the number of UC non-degree completers for the fall 1999 to 2014 entry cohorts by campus and for the system. It also compares the proportion of Pell grant recipients, first generation and underrepresented UC bachelor degree and non-degree recipients. For the system, it shows non-degree recipients are more likely underrepresented and first-generation students. Differences of 5 points or more between UC bachelor and non-degree recipients are highlighted.



UC major as of final term enrolled and quarter units completed

Major	Under 15	15 to 50	50 to 100	Over 100	All
Undeclared	35%	36%	27%	6%	22%
Social Sciences	15%	13%	17%	25%	19%
Arts & Humanities	12%	11%	16%	22%	17%
Biological Sci	11%	12%	10%	12%	11%
Engnr & CS	10%	12%	11%	11%	11%
Phys Sci/Math	4%	4%	5%	8%	6%
Business	5%	4%	4%	4%	4%

¹⁴ Degree non-completion dashboard (<https://www.universityofcalifornia.edu/infocenter/ug-non-completion>)

Number and profile of degree non-completers to UC bachelor degree recipients

1999-2014 cohorts	UCB	UCD	UCI	UCLA	UCM	UCR	UCSD	UCSB	UCSC	UC
Number	6.4K	10.9K	9.8K	7.1K	3K	14K	8K	9.8K	11K	80K
% Pell										
UC bachelors	36%	41%	41%	39%	64%	55%	42%	35%	39%	41%
UC no degree	43%	43%	37%	48%	62%	48%	44%	37%	36%	43%
% First generation										
UC bachelors	28%	40%	39%	36%	56%	51%	37%	36%	36%	38%
UC no degree	38%	49%	44%	48%	60%	53%	46%	45%	40%	46%
% URG										
UC bachelors	15%	17%	18%	19%	46%	35%	14%	23%	23%	20%
UC no degree	27%	26%	26%	31%	51%	39%	24%	30%	28%	30%

Source: <https://www.universityofcalifornia.edu/infocenter/ug-non-completion>

IRAP conducted a survey¹⁵ of UC undergraduates that started but did not complete a degree and received over 3,500 responses. Detailed results are found in the [appendix item on IRAP survey of UC non-degree population – fall 2021](#). Some key findings include:

- 90 percent are interested in finishing a degree, with 92 percent wanting it to be a bachelor's degree and 62 percent indicating willingness to consider a Liberal/General Studies degree
- 64 percent are working full-time and 13 percent part-time
- Half wanted online learning (either completely or mostly) and another quarter wanted a hybrid program (online and in-person)

Financial reasons were often the top obstacles identified to finishing a degree, along with concerns of balancing work and studying. Respondents indicated accelerated courses, followed by financial aid, flexible courses and advising/guidance would make it easier to return to finish a degree.

These UC results were similar to findings by the Education Advisory Board (EAB) in its survey of 1,000 prospective degree completers (detailed results in the [Education Advisory Board report on non-degree population appendix item](#)). EAB highlighted the importance of acknowledging prospective degree completer's concerns, reducing unnecessary barriers to re-enroll, and providing flexibility, financial incentives, and support to keep students on-track.

Re-entry programs

All UC campuses have programs and support for re-entry students. For example, **UCLA's Bruin Readmission Program**¹⁶ is a one-term intensive readmission options for students who have been academically dismissed. It is a collaboration between the Center for Academic Advising in the College, the Academic Achievement Program and the Student Retention Center. The program is designed to help students succeed in completing their academic goals. A key component of the program is that some students receive financial aid.

¹⁵ UC Degree Non-Completers Survey (<https://www.universityofcalifornia.edu/infocenter/degreecompletion>)

¹⁶ UCLA Bruin Readmission Program (<https://caac.ucla.edu/center-programs/bruin-readmission-program/>)

There were a couple of UC examples where campuses are using Summer Sessions and one using University Extension to support re-entry students.

Summer session re-entry programs

UCB's Retention Grant Program has been in place for over 20 years. The program waives summer fees, except the campus fee, for re-entry students. This waiver of tuition addresses a key concern of not receiving financial aid. Students have to receive a grade (i.e., not fail or withdraw from the course). Summer Session allocates between \$100,000 to \$120,000 a year, supporting around 60 students.

UCSB's Summer Session partnered with the Registrar and using CARES funds, they reached out to late career stop-outs to encourage them to take summer courses remotely. They leveraged the existing **Scholar Retention Program** that provides scholarships and support to academically dismissed students wanting to complete their degree. After thousands of emails and current UCSB students following up by phone, they had around 120 serious inquiries.

UCR's Extension has been used to help non-matriculated students or those on academic preparation return to campus. Leveraging COVID funding, **UCR's Vice Provost and Dean of UG Education** has ramped up these efforts by partnering with **Extension** on pilot program to support the reentry of these UCR students through concurrent enrollment.

Degree completion opportunities

Students participating in degree completion programs require significant advising support to know what additional courses and requirements are needed to complete a degree.

UCSC is participating in the **Degrees When Due**¹⁷ consortium that seeks to build expertise, capacity, and infrastructure on campuses across the nation to get near-completers over the finish line. This initiative supports near-completers by:

- Providing access to an interactive online tool and live coaching to guide staff through implementation of degree reclamation strategies
- Building and facilitating communities of practice among campus staff and state agencies
- Performing important research into best practices for reengaging students

As part of this work, UCSC is looking to improve degree audit systems, advising, and registrar issues. There are looking to identify a couple hundred prospects of near completers and looking at ways to reach these students and bring them back to complete a degree.

UCM received one-time funds for its **Degree Completion Project**, a hybrid certificate and bachelor degree completion program. UCM is currently looking for models for a Liberal Studies program. It will be housed at the UCM Extension and the UCM School of Social Sciences, Humanities and Arts. The goal of the program is multi-faceted and includes: expanding the capacity of existing major degree and certificate programs, designing and initiating a study of stop out students, promoting and expanding major completion, enhancing academic support and capacity growth, and developing facilities for synchronous learning opportunities among others. The program is designed with many of the obstacles returning students face in mind.

¹⁷ Degrees When Due Consortium (<https://degreeswhendue.com/>)

They are currently hiring a director and recruiter, as well as registrar staff to help this area. They are outlining the requirements of the program, starting with former UCM students. Its goal is to start small and then expand capacity (e.g., begin with 20-50 FTE and grow to hundreds). They are creating recruitment and outreach plans and have a goal to admit students in the spring and launch offerings in fall 2022. One way the program might be able to broaden its efforts more quickly could be by leveraging existing online courses, either through UC Online or X-courses from other UC Extension operations.

UC Extension officials identified a number of existing degree completion programs, including the following California State University and University of Wisconsin examples.

Sacramento State Degree Completion Program¹⁸

Sacramento State's College of Continuing Education offers a variety of degree completion programs to meet the unique needs of non-traditional students, including one-on-one advising, to make returning to college a reality. Its programs provide the academic quality of a traditional four-year university but designed to balance school with personal commitments.

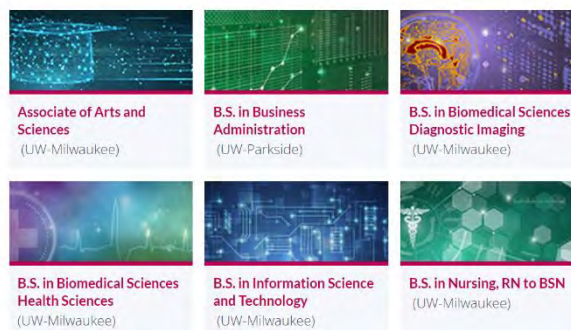
University of Wisconsin Flexible Option Programs¹⁹

Designed specifically for busy adults, UW Flexible Option's self-paced, competency-based programs respect your time and money by letting you advance at your own pace for a flat tuition rate. You'll also be able to make your experience work for you by using existing knowledge to advance through your program more quickly.

Degree programs:

- Bachelor of Arts in Arts & Letters (hybrid)
- Bachelor of Arts in Child and Adolescent Development (3-year hybrid)
- Bachelor of Arts in Psychology (online)
- Bachelor of Science in Career and Technical Studies (2-year online)
- Bachelor of Science in Criminal Justice (online)

Degree Programs



XIII. Advancing educational equity

As highlighted at the beginning, UC's new generation students often take longer to graduate and are more likely to not complete a degree. These students view taking summer courses as important for graduating on time, but may need additional supports to do so.

UCOP identified several scenarios to grow summer enrollment, such more strategic offerings in summer, additional online options, expanding pre-matriculation programs and supporting longer summer terms. Expanding summer enrollment programs can promote educational equity by ensuring these students successfully transition to campus and prepare for challenging programs (e.g., STEM). In addition,

¹⁸ Sacramento State Degree Completion Program (<https://www.cce.csus.edu/degreecompletion/>)

¹⁹ University Wisconsin Flexible Option Program (<https://flex.wisconsin.edu/degrees-programs/>)

University Extension programs may provide an alternate pathway to support that transition, such as UCB's Fall Program for Freshmen.

Degree completion programs must serve new generation students, who are more likely working, needing program flexibility, and financial support. They require extensive advising and support to re-engage and promote student success. It is useful to think about the best ways to meet this need, either as a way to share decentralized practices in supporting local re-entry and degree completion efforts or a consolidated function at a campus to support the system. UC has an additional \$5 million in one-time funds that can be useful to advance this challenge and critical work.

3. Online and Off-Campus Opportunities

- XIV. Introduction** – Online and remote opportunities can expand capacity at the curricular and programmatic level. This modality can also support other off-campus opportunities, including education abroad and internship programs by providing students a way to make progress to their degree as they participate in external activities.

Study abroad and internship program provide critical experiences, including a greater appreciation of different cultures and development of 21st century skills. These programs may also expand capacity when students are off-campus, but these students will likely return to campus when their program is complete. For these opportunities to provide additional capacity, they need to grow and maintain consistent participation such that campuses can expect a certain number of additional students will be off-campus, thereby increasing on-campus capacity.

Institutional Research & Academic Planning (IRAP) staff interviewed campus and systemwide leadership in online curricular and programmatic development, along with study abroad and internships ([see Appendix](#)). This brief summarizes key findings from those discussions, along with relevant institutional data.

- XV. Online and remote courses and program offerings** – Online and remote offerings are different and should not be conflated. Instructional designers, production and multimedia specialists, and other support is needed to produce high-quality online education. The rapid shift from in-person to emergency remote instruction allowed students to continue their education with faculty providing access to lectures and course materials leveraging tools like Zoom and learning management systems.

After the launch to remote instruction, undergraduate students and faculty were asked to compare prior online course offerings to courses offered through remote instruction. Recognizing a difference in scale, almost 60 percent of undergraduates who had taken an online course thought remote learning was worse and 45 percent of instructors who had taught online courses thought remote teaching was worse. It should be noted that these questions were asked right at the beginning of the pandemic, but it reinforces, for those who had both experiences, online and remote are not the same.

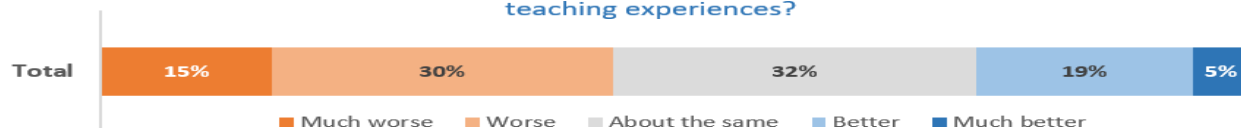
2020 UC Undergraduate Student Experience Survey and Faculty/Instructor Survey responses comparing online and remote instruction

My remote learning experience in this period is worse than previous online learning experiences that I have had.



Data source: 2020 UC Undergraduate Experience Survey (UCUES), Updated on 9/11/2020

Has this remote experience been better or worse compared to previous online teaching experiences?



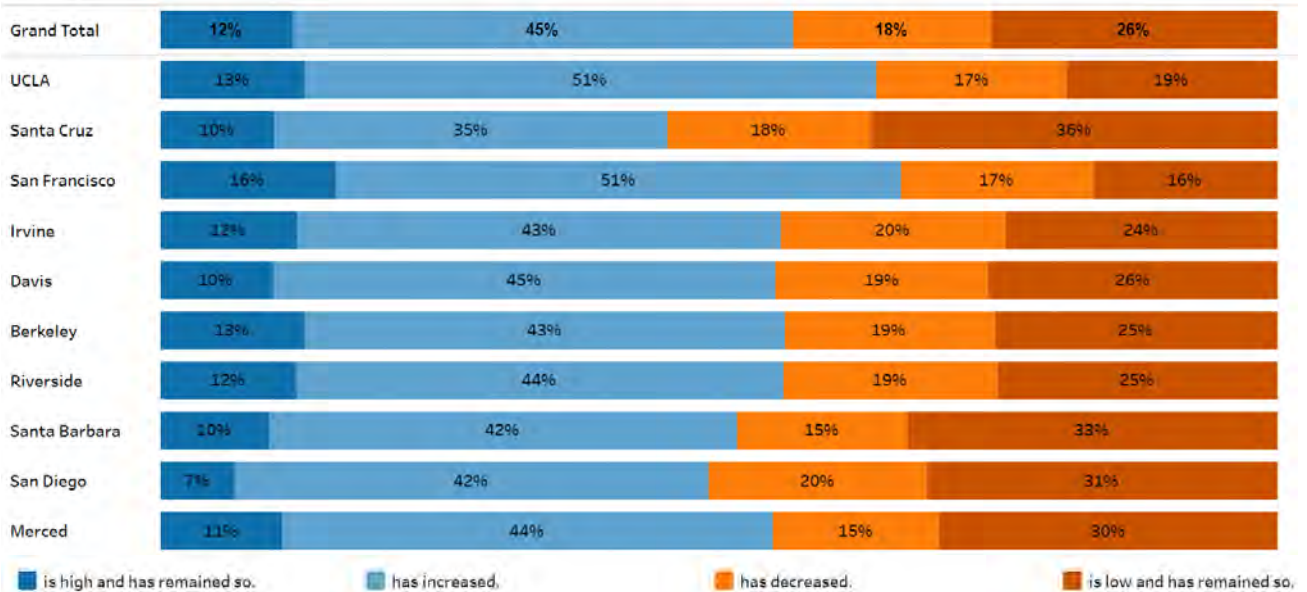
Data source: 2020 Faculty and Instructor remote instruction survey administered by systemwide Academic Senate

In Spring 2021, the systemwide Academic Senate administered a follow-up survey and while faculty continued to note the distinction between remote and online instruction, over half (57 percent) reported that faculty interest in online teaching either “increased” or “was high and remains high,” ranging from 45 to 67 percent by campus.

2021 Faculty/Instructor survey responses on interest in online teaching

Online interest

How has your experience teaching remotely during the pandemic affected your interest in online teaching? My interest in online teaching...

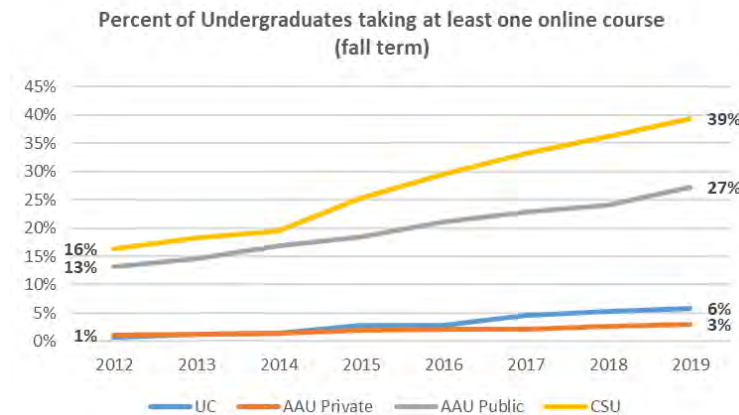


Data source: 2021 Faculty and Instructor remote instruction survey administered by the systemwide Academic Senate

Online and remote instruction data

Over the last eight years, UC undergraduate exposure to online courses has remained low, particularly when compared to American Association of University (AAU) public and California State University (CSU) institutions. In Fall 2019, six percent of UC undergraduates took at least one online course, compared to 39 percent of CSU, 27 percent for AAU publics and three percent for AAU privates. Additional 2019-20 detail by term shows variation by campus and term. UC Irvine has the largest percent (17 percent) of undergraduates taking at least one course in fall 2019, up from three percent in fall 2012. In addition, 22 percent of UC undergraduates have taken at least one online course in the summer – 56 percent for UC Irvine, 44 percent for UC Santa Cruz and 34 percent for UCLA undergraduates.

Percent of undergraduates taking at least one online course



Campus	2019-20			
	Summer	Fall	Winter	Spring
Total	22%	6%	8%	9%
Berkeley	11%	4%		4%
Davis	8%	6%	8%	8%
Irvine	56%	17%	19%	23%
Los Angeles	34%	6%	6%	13%
Merced	7%	1%		3%
Riverside	6%	6%	8%	9%
San Diego	2%	1%	1%	2%
Santa Barbara	17%	2%	0%	2%
Santa Cruz	44%	4%	14%	18%

Data source: Integrated Post-Secondary Educational Data System (IPEDS) and campus course enrollment data files

As for participation in online courses, the percent of new generation students (i.e., Pell, first generation, and underrepresented) taking online courses was mostly comparable to all undergraduates.

Percent of UG taking at least one online course (Pell, first generation and underrepresented students)

	Summer 2019						Fall 2019					
	All UG	Pell	First Gen	Afr Am	Am Ind	Hispanic	All UG	Pell	First Gen	Afr Am	Am Ind	Hispanic
Berkeley	11%	12%	12%	8%	6%	9%	4%	4%	4%	3%	1%	2%
Davis	8%	7%	7%	10%	16%	6%	6%	6%	6%	6%	6%	4%
Irvine	56%	53%	57%	54%	29%	52%	17%	19%	19%	21%	15%	19%
Los Angeles	34%	28%	29%	31%	27%	27%	6%	6%	6%	8%	9%	5%
Merced	7%	6%	6%	7%	25%	7%	1%	1%	1%	1%	0%	1%
Riverside	6%	6%	5%	5%	8%	6%	6%	6%	6%	7%	4%	6%
San Diego	2%	2%	2%	2%	0%	1%	1%	1%	1%	2%	0%	1%
Santa Barbara	17%	16%	18%	17%	8%	16%	2%	1%	2%	2%	0%	1%
Santa Cruz	44%	43%	44%	45%	40%	43%	4%	5%	5%	6%	3%	4%
System	22%	18%	20%	21%	17%	18%	6%	6%	6%	7%	4%	5%

Data source: Campus course enrollment data files

In addition, the table to the right presents undergraduate course drop rates for in-person and online courses (i.e., students who withdrew after the add/drop deadline or who dropped the course prior to the add/drop deadline).

The differences between in-person and online courses and with Pell, first generation and underrepresented students was not significant. Data by campus is included in [Appendix](#).

Undergraduate Course Drop Rates by Instruction Modality (2019-2020)

	Lower Division		Upper Division	
	Summer	Fall	Summer	Fall
In-person course drop rate				
All students	2%	2%	1%	3%
Pell recipients	2%	3%	2%	3%
First generation	2%	3%	1%	3%
Underrepresented group	2%	3%	1%	3%
Online course drop rate				
All students	3%	3%	2%	3%
Pell recipients	3%	4%	3%	3%
First generation	2%	3%	2%	3%
Underrepresented group	3%	4%	3%	4%

In spring 2020, UC transitioned to remote instruction and 2020-21 data show all undergraduates took at least one course remotely.

We continue to be in a pandemic and fall 2021 data reflects a mix of online and remote offerings and various stages of transitioning back to campus. UC Irvine has around half of undergraduate courses online, remote or hybrid. Similar offerings at UC Berkeley, UCLA, UC Riverside and UC Santa Cruz seem concentrated in larger courses (i.e., lower percent courses but higher percent units). UC Davis, UC Merced and UC Santa Barbara have lower percentages compared to other UC campuses.

Fall 2021 online, remote or hybrid courses and units by level

	Online/Remote/Hybrid Courses			Online/Remote/Hybrid Units		
	LD	UD	All UG	LD	UD	All UG
Berkeley	11%	8%	11%	68%	34%	50%
Davis	10%	7%	10%	13%	12%	13%
Irvine	49%	59%	49%	50%	42%	46%
Los Angeles	18%	15%	18%	54%	46%	50%
Merced	4%	5%	4%	5%	7%	6%
Riverside	31%	27%	31%	62%	52%	59%
San Diego	38%	52%	38%	26%	35%	30%
Santa Barbara	9%	7%	9%	6%	4%	5%
Santa Cruz	37%	31%	37%	73%	56%	67%
Grand Total	23%	23%	23%	42%	33%	38%

Data source: Campus course enrollment data files

Academic Senate leadership and engagement

The curriculum is the purview of the faculty and in most cases, the Academic Senate committees that approve courses and curricula (e.g., COCI at UC Berkeley). The faculty made heroic efforts to quickly transition to remote instruction, with local and systemwide Academic Senate support for that transition. With the return to campus, Academic Senate support for continued remote and online offerings in the regular terms and summer varies by campus (see [Appendix for campus detail on approval of summer online/remote offerings](#)).

UC Davis, UC Merced, UC Riverside and UC Santa Barbara Academic Senates have returned to requiring course-by-course approvals for each online or remote offering citing a variety of concerns (e.g., cheating and/or academic integrity issues, proportion of online courses to receive WASC accreditation, lack of data on online course learning outcomes, requiring higher standards for online vs in-person courses).

UC Berkeley and UCLA Academic Senates have simplified and/or expedited the process for approving online and remote courses. UC Santa Cruz Academic Senate has liberalized policies for remote course approval whereby the course-sponsoring agency can decide course modality; its Academic Senate may evaluate the policy for on-going years. Some campuses are still discussing the issue – UC San Diego established an administration-senate working group and hopes to have some flexibility to continue online or remote offerings in the summer.

Current UC Irvine Academic Senate policy is that any course using less than standard meeting times receives approval for online delivery aspects of that course, but that approval process has been simplified to a one-page set of questions developed in consultation with UC Irvine's Director of Pedagogical Technology. There are ongoing discussions about whether the modality of some approved courses (e.g., hybrid) might not require additional Senate approval and could be handled at the School or Department level. In addition, while the schedule of classes notes the mode of delivery so students can choose, there is no differentiation on a student's transcript at Irvine.

Campuses identified ways to support this work:

- Provide **consistent guidelines** to support local discussions, including criteria to review and assess viability of online courses, support to create a common vocabulary (e.g., synchronous and

asynchronous courses), provide guidance on why or when to distinguish course modality (i.e., code virtual or online courses differently), and support training for Senate course committee staff.

- Share **assessments and research** for online course learning outcomes. UC Santa Cruz shared a study that examined the impact of online course instruction in calculus courses on subsequent performance on campus ([see Appendix](#)). A number of campuses thought that kind of research, particularly from UC campuses, could inform what works and does not work with online instruction.
- Collect **best practices** for providing high-quality online instruction (e.g., guided by instructional designers, use of shorter videos rather than recordings of long face-to-face lectures, prioritized faculty-students interaction by providing ongoing and varied feedback, identify actionable weekly learning outcomes, evaluate the design and delivery of online courses and incorporate feedback from students in future iterations)²⁰

Opportunities and challenges

One campus representative commented “the genie is out of the bottle.” The remote experience for students and faculty, while challenging, will likely lead to increased call for and/or use of online or hybrid opportunities, particularly regarding:

- **Summer:** By far, campuses see the ability to offer summer online and/or remote offerings as critical to expanding enrollment, advancing educational equity for new generation students, and supporting summer internship, education abroad, and bridge programs. Remote and online offerings are particularly important for students who want to continue to make progress to degree but can’t afford to live on campus or have other faculty and/or work obligations during the summer.
- **Timely graduation:** Online courses, particularly for major requirements, can support degree completion and timely graduation. A study published in Educational Evaluation and Policy Analysis²¹ found online course-taking is associated with a higher likelihood of successfully graduating college within four years, with smaller, but still positive, benefits for first generation and low-income students.
- **Rethinking large lectures:** Several UC campuses used remote or online offerings in Fall 2021 for large lectures. An Education Advisory Board report²² quoted Chancellor Christ, “Berkeley has a lot of very big lecture courses, with more than 1,000 students. Those are working better online. Flipping the classroom, creating breakout experiences for students is working better online.”
- **Remote experience:** UC faculty have taught remotely for more than a full academic year and a majority of those surveyed in 2021 expressed ongoing or increased interest to teach online after the remote instruction period. Faculty are also more aware of the instructional design, student outcome and assessment support that the campus Teaching & Learning Centers provide.
- **Campus investments:** A growing number of campuses are investing in centers that support instructional innovation (e.g., UC Irvine’s Anteater Learning Pavilion) and/or have renovated classrooms with technology (e.g., lecture capture) to support greater use of high flex or dual mode classrooms.

²⁰ “[What We Know About the Cost and Quality of Online Education](#),” Third Way, September 2, 2020

²¹ “[Increasing Success in Higher Education: The Relationships of Online Course Taking With College Completion and Time-to-Degree](#),” November 22, 2021

²² “On the Leading Edge of Multi-Modality: Innovative Examples of Higher Ed Institutions Using Multi-Modal Experiments to Improve Student Experiences” 2021.

- **High demand programs:** Online delivery may be a way to increase access to high demand majors, like business or engineering. Under a high flex model, campuses may be able to add online sections and expand capacity or provide students choices to different modalities which could expand access.
- **Online programs:** Most campuses cited professional masters' degree programs as the greatest opportunity for online growth. UC Berkeley has a several summer online minor programs²³ in Digital Humanities, Educating for the 21st Century, and Educating for the 21st Century – Teaching English to Multilingual Students. Other UC campuses are considering online summer minor programs, including UC Santa Barbara with a new minor in Creative Computing. UC Santa Cruz is also considering an online completion/transfer program in Creative Technology with digital content amenable to online instruction format. UC Irvine's business school is piloting a fully online transfer degree program for undergraduates.

Campus representatives identified a series of challenges with developing and expanding high-quality online courses and program, including:

- **Adequate resources (\$):** Online investment is the new capital, with its own kind of construction and maintenance costs. UC Berkeley estimates the cost to produce a high-quality 3-unit online courses at \$160,000 (\$100,000 per course and \$20,000 per unit). In addition, there are on-going costs required to keep courses current particularly in rapidly changing fields, like data science.
- **Adequate resources (FTE and skill set):** Many campuses have a limited number of instructional design staff to support online course development, along with limited Senate staff support to review of online courses. A shift to more fully-developed, high-quality online courses will require investments to handle an increased volume and complexity of courses that require development and review. Some campuses are adding staff, others – like UCLA – are looking at ways to pool resources by connecting the campus's Office of Course Technology and Course Review Panels to share expertise and support.
- **COVID-19 fatigue:** Campus representatives noted faculty and staff needed to make this transition are exhausted – the same folks who helped support the rapid shift to remote are the ones who would be needed to ramp up online course development.
- **Lengthy approval process:** Some campuses discussed it taking between two to three years to approve an online program. The process is slow and it needs to be nimble enough to match the changing dynamics and needs of students and employers.
- **Assessment challenges:** Remote instruction increased academic integrity and cheating concerns with some faculty, particularly because of outside entities like Chegg. As noted earlier, campus response ranges from restricting future online opportunities to requiring the use of testing centers for final exams to re-evaluating of assessment techniques.

Considerations regarding online expansion

- **Setting online strategy:** As campuses consider opportunities to expand capacity, faculty and administrative leadership can discuss the role online instruction and programming can play (e.g., first year transitions, impacted programs, timely graduation). Deciding on the online direction can help campuses make strategic investments to ensure those online courses and programs are high-quality, advance educational equity, and achieve enrollment goals. It can also help determine who should be producing these courses (e.g., on campus, UC online, or third party developers).

²³ <https://summer.berkeley.edu/special-programs/summer-minors>

- **Faculty-led processes:** Faculty own the curriculum and post-pandemic a growing number are interested in online opportunities. UC Irvine said its culture of embracing online instruction was a strategic faculty-led effort, with online instruction initiatives originating within the summer term that eventually led to increased offerings during the academic year. UC Santa Cruz believes its most promising approach is to support interested faculty in the early stages of their online proposals and then get out of the way and let them present the proposal to Senate colleagues. The campus's proposed Creative Technology online completion/transfer program is a faculty-initiated. It is well thought out and framed around quality and equity, not access.
- **Administration-supported:** Centralized leadership around teaching and learning, instructional innovation and delivery assessment, online development and student outcome support can bring together the key resources to scale and support educational equity and quality.
- **Accessibility:** UC Berkeley representatives shared an interesting proposal to focus on curricular enhancements that support accessibility, something the Governor understands and might appreciate because of his personal experience and challenges faced learning with dyslexia. The ADA passed 30 years ago, but instructional models have not kept pace and after the pandemic, the number of students seeking accommodations has increased significantly. Curricular investments that support accessibility (e.g., video captions, pdf tagable, alternate assessment models) is a big ask (maybe \$2 billion), but it could also support online course development.

XVI. Off-campus opportunities – The UC system and campuses support global programming through study abroad, off-campus internships, and a combination of both. All provide co-curricular experience, with some providing academic credit and job experience. To the extent these programs consistently pull students off campus and grow, they may also support efforts to expand capacity.

UC Education Abroad Program (UCEAP)

UCEAP has the potential to grow substantially. Prior to the pandemic, UCEAP was serving over 6,000 students annually. The program believes it can grow to 10,000 students annually. The 6,000 participants generated about 2,700 FTE, so **an increase to 10,000 by 2030 would result in about another 1,750 FTE systemwide**, a significant amount of growth that could contribute toward a plan to grow 20,000 FTE by 2030. This would require modest increases in staffing on each campus both for recruitment and for attention to international risk management issues.

UCEAP is exploring expansion of programs for first year students that would enroll frosh students directly into overseas programs similar to the model of UC Berkeley's Global Edge program. The program is collecting information on the 10-20 courses that would be the most desirable to first year students that could be offered by overseas partners. They would need to coordinate with campus admissions offices to populate these programs.

The table below presents UCEAP participants by campus and for Pell, first generation and URG status. When compared to fall 2020 undergraduate (right hand column), a comparable proportion of Pell grant recipients, greater proportion of first generation students, and lower percent of URG students participate in UCEAP. These rates vary by campus.

UC Education Abroad Program participants by campus and Pell, first generation and URG status

Academic Year		2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Fall 2020
UC	Students	4883	4704	4652	5363	5701	4851	5778	6074	3508	298	
	% Pell	47%	47%	50%	49%	47%	45%	47%	43%	44%	35%	35%
	% FG	57%	55%	55%	55%	54%	55%	56%	60%	60%	67%	40%
	% URG	23%	26%	29%	30%	33%	31%	33%	31%	33%	22%	30%
Berkeley	Students	1,003	999	1,032	1,033	1,078	684	1,104	1,251	691	34	
	% Pell	48%	45%	47%	45%	43%	38%	37%	32%	29%	53%	26%
	% FG	60%	58%	61%	62%	63%	66%	67%	73%	76%	59%	29%
	% URG	21%	22%	23%	24%	22%	23%	22%	21%	25%	26%	22%
Davis	Students	265	218	290	319	375	349	375	324	197	35	
	% Pell	38%	41%	37%	41%	37%	38%	34%	33%	34%	49%	35%
	% FG	59%	62%	67%	62%	65%	64%	65%	71%	65%	63%	41%
	% URG	14%	13%	16%	18%	21%	15%	21%	18%	29%	31%	27%
Irvine	Students	459	478	514	552	595	623	627	614	371	51	
	% Pell	46%	47%	49%	55%	51%	56%	52%	49%	54%	29%	38%
	% FG	55%	57%	53%	45%	42%	39%	46%	49%	47%	51%	48%
	% URG	21%	20%	22%	26%	31%	32%	30%	29%	29%	18%	28%
Los Angeles	Students	614	721	527	1,022	1,060	719	1,164	1,211	451	31	
	% Pell	41%	37%	38%	38%	34%	29%	34%	30%	22%	32%	28%
	% FG	64%	66%	66%	66%	70%	72%	69%	74%	81%	71%	31%
	% URG	18%	19%	22%	21%	22%	21%	24%	26%	19%	23%	27%
Merced	Students	102	112	104	96	120	127	127	115	124	4	
	% Pell	65%	63%	73%	68%	65%	66%	76%	77%	79%	25%	63%
	% FG	48%	38%	39%	38%	26%	32%	29%	30%	23%	75%	74%
	% URG	31%	50%	53%	56%	58%	59%	69%	61%	63%	25%	60%
Riverside	Students	201	222	193	196	213	251	197	167	133	20	
	% Pell	60%	61%	65%	65%	65%	58%	65%	55%	62%	55%	49%
	% FG	44%	41%	41%	47%	42%	44%	45%	47%	50%	75%	55%
	% URG	40%	39%	39%	38%	51%	37%	41%	42%	46%	25%	45%
San Diego	Students	583	497	456	560	567	471	501	558	300	35	
	% Pell	46%	52%	55%	46%	37%	39%	43%	36%	35%	29%	33%
	% FG	57%	55%	50%	59%	65%	60%	63%	62%	65%	77%	37%
	% URG	13%	14%	20%	19%	17%	21%	18%	20%	26%	26%	24%
Santa Barbara	Students	1,113	938	1,025	1,065	1,132	1,107	1,171	1,349	935	49	
	% Pell	37%	38%	40%	37%	37%	38%	39%	35%	33%	33%	32%
	% FG	61%	60%	60%	63%	64%	60%	60%	67%	68%	63%	38%
	% URG	26%	26%	29%	29%	28%	33%	30%	28%	29%	12%	29%
Santa Cruz	Students	543	519	511	520	561	520	510	485	304	37	
	% Pell	39%	43%	44%	48%	55%	45%	41%	40%	44%	14%	30%
	% FG	62%	59%	56%	55%	47%	58%	59%	66%	65%	65%	35%
	% URG	21%	27%	35%	36%	43%	36%	36%	30%	34%	11%	31%

The UCEAP leadership identified the three areas that could contribute the most to growth:

- The addition of more **freshman abroad programming** as discussed above. This would have an impact on not only courses at the campus but the housing crisis at some campuses.
- **Course pre-approvals.** EAP has a good system that lets students know the likelihood that a particular course will count for credit toward their majors, but having more courses where it is known in advance that the credit will transfer would make it more likely that more students would participate in EAP.
- **Simultaneous registration in EAP and at the home campus.** Right now there are policy barriers to students taking an online/remote campus course while they are overseas in EAP. If students overseas could take some key courses online while in EAP, that could make it more likely that students in particular majors would participate in EAP.

Campus study abroad and global internship opportunities

Beyond UCEAP, campuses identified a number of campus-led or supported global programs that enroll many more UC undergraduates. An incomplete but illustrative list of examples include:

- **Study abroad:** UC Berkeley's **Global Edge**²⁴ program is a program where new freshmen spend their first semester in London taking Berkeley courses – a way to provide early overseas experience and reduce campus capacity for the fall term. These students then return to the campus in the spring semester. UC Davis's **Global Learning Hub**²⁵ includes **Quarter Abroad** and **Summer Abroad** programs offer students a chance to earn UC Davis units while participating in quarter-length programs designed by UC Davis faculty.
- **Faculty-led seminars:** Most UC campuses provide international experiences accompanied by UC faculty. UC Santa Cruz has around a dozen faculty-led **global summer seminar programs**²⁶ that allow students to take UCSC courses abroad, with excursions and cultural activities in each location.
- **Research internships:** UC Davis has a number of **global research internships**,²⁷ including the Humboldt Research Internship Program in Berlin that provides in-person research or business start-up project experience. UC San Diego has **global exchange program plus**²⁸ programs include a three to four month research internship with the Swiss Federal Institute of Technology in Lausanne International Internship Program where students receive hands-on research in a lab, pioneer projects, and an intensive professional experience.

During the COVID-19 pandemic, a number of UC campuses launched virtual programs that could be an area of future expansion with existing partners and other external colleagues or alumni. It is unclear whether this expansion would also help increase capacity.

Capitol internship programs: UCDC and UC Center Sacramento (UCCS)

UCDC and **UCCS** are important and visible UC programs in Washington, D.C. and Sacramento. Each can grow, but limited by the size of their buildings and the number of internships in their respective cities:

- The **UCDC** building has living space for 275 undergraduates. Current campus bed commitments are 205 and the remaining spaces are leased to non-UC institutions (e.g., Michigan, Notre Dame, USF). The count of UC campus and non-UC participants for all four terms (fall, winter, spring and summer) is shown in the chart below. It highlights non-UC students have occupied more spaces in the building over the last 10 years than any single UC campus, highlighting an opportunity for expansion. If UC campuses increased its commitments, the annual enrollment at UCDC could increase by 25 percent, from 205 to 275 students per term (820 to 1,100 per year). The FTE associated with this level on enrollment is somewhat higher since UCDC operates at this capacity year-round, including the summer. Thus, **the total FTE increase would be about 90, from 255 to 345 FTE.**
- **UCCS** participants are more diverse than the overall undergraduate population. The program just broke ground on its new building and has growth plans to double in size, from its current capacity of just under 200 students per year (50 per term) to 400 students per year (100 per term). This growth is contingent on adequate resources and the ability to secure sufficient housing and internships for that many students and **could result in doubling the number of FTE from 62 to 125.**

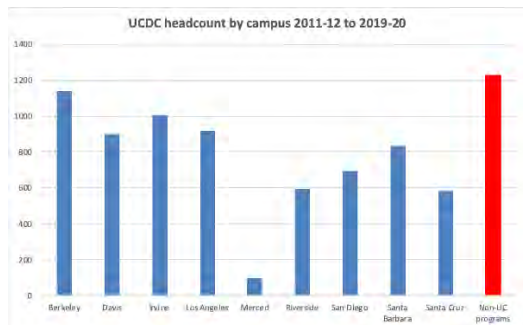
²⁴ <https://globaledge.berkeley.edu/>

²⁵ <https://globallearning.ucdavis.edu/pathways/academics/studyabroad>

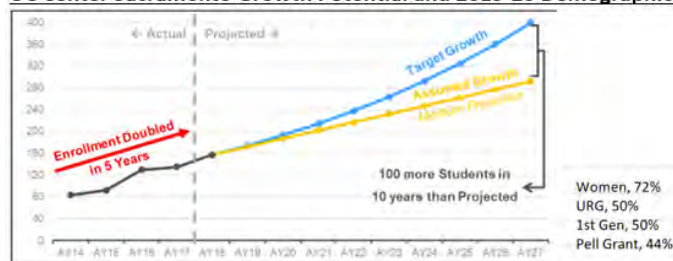
²⁶ <https://globallearning.ucsc.edu/programs/global-seminars/index.html>

²⁷ <https://globallearning.ucdavis.edu/pathways/experience/internships/research>

²⁸ <https://global.ucsd.edu/programs-partnerships/global-exchange-programs/gep-plus.html>



UC Center Sacramento Growth Potential and 2019-20 Demographics



Campus internships

Campuses have a number of internship programs, below is an incomplete but illustrative list.

- **Off-campus internships:** UCLA's **Center for Community Engagement** administers internship programs that provide academic credit through their **195CE courses**²⁹. The campus has around 15 departments with a faculty of record, bi-weekly meetings with a graduate student instructor, requirements to complete a final paper or project, and a minimum of 80 hours of work with internship site.

Benefits

- INDIVIDUALIZED 1:1 INSTRUCTION
- ACADEMIC CREDIT FOR REAL-WORLD EXPERIENCE
- RECEIVE UPPER-DIVISION COURSE CREDIT

- **Quarter/Semester in a City:** UC Davis's **Quarter at Aggie Square**³⁰ is an off-campus program that couples coursework with internship opportunities. Students spend a term off the main campus, taking four courses built around an interdisciplinary theme and with community impact. In the future, there will be housing at Aggie Square, providing additional programming and a better experience from that location. The current projected capacity is around 190 students in the academic year and another 50 in the summer, with the potential to having 400 students participate a year. UCLA is considering a similar **Quarter in Los Angeles** program with students immersed in the city, taking courses off-campus and participating in a local internship.



- **Transfer pathways:** UC Davis has two Transfer Admissions Guarantee (TAG) pathway programs – **Avenue B and Avenue E**³¹ – where students admitted to UC Davis spend the first two years in a local community college, but connected to the campus through mentorship and research opportunities. A program goal is to increase the women and underrepresented minorities in biological sciences and engineering and computer science programs. UC Merced is campus is partnering with local institutions, including Bakersfield College and CSU Bakersfield, to have students participate in summer research projects before they transfer to UCM, in part to support the campus's **Grow our Own** initiative goals.



²⁹ <https://communityengagement.ucla.edu/programs/internship-courses/>

³⁰ <https://qas.ucdavis.edu/>

³¹ <https://avenuee.engineering.ucdavis.edu/program-overview> and <https://avenueb.ucdavis.edu/>

Opportunities and challenges

Campuses identified opportunities to grow study abroad or internship opportunities, potentially adding FTE or expanding capacity on campus:

- **Summer programs:** Growth for study abroad and internship programs could provide a means of growing student FTE. STEM majors and transfer students may benefit from these programs, in part because of their difficulty completing required courses in sequence during the academic year and wanting to maximize time on campus, respectively.
- **Research internships:** Capitol internship programs tend to focus on opportunities for political science, policy, and social sciences majors. Multiple campuses noted expansion of programming to include more research internships could expand participation from STEM majors, particularly if they could be offered in the summer.
- **Remote internships:** A number of campuses launched remote internship programs during the pandemic and some plan to continue citing that remote experiences may mirror the future of work for some companies. UC Riverside has launched its second pilot of a remote internship program with the Environmental Protection Agency and Chamber of Commerce which has gone very well.
- **Virtual courses:** There may be opportunities to take online courses at other universities which might cover impacted courses and support timely graduation. For example, almost all UC campuses belong to the Association of Pacific Rim Universities³² and UC Santa Cruz students are accessing online courses at universities in Melbourne, Tokyo, and other foreign institutions.

There are a number of existing barriers including:

- **Housing:** This was a top concern that students fear losing their existing housing or not being able to get on-campus housing if they returned during the academic year. In some cases, it was a concern for participating in off-campus program, so programs that provided guaranteed housing (e.g., UCDC) reduce those concerns.
- **Financial constraints:** These can include program participation costs (e.g., business clothing, travel, housing), challenges receiving financial aid for non-credit internships, and non-paid internships with non-profit organizations coupled with potential costs to receive academic credit. Scholarship support and/or partially remote or virtual programs can help address some of these concerns.
- **Course articulation:** Some campuses said students take a risk participating in some programs, not knowing if courses would articulate when they returned to campus. Faculty-led seminars or UCDC courses that articulate with all the campuses alleviated some of these concerns. UC Education Abroad has a database that allows students and advisors to see which overseas courses successfully articulated for major credit in the past, providing more certainty about articulation in advance. This idea could be expanded to other programs such as the cross-campus online courses.
- **Time to degree:** Building off the course articulation challenges, some campuses noted concerns that these opportunities might delay timely graduation, particularly for programs that did not provide academic credit. The availability of online courses could help address this issue.
- **First generation and undocumented students:** Some campuses noted lower participation from first generation students, citing a need to increase outreach to these students and their parents to increase awareness of the benefits these opportunities provide. UC Merced also noted

³² <http://apru.org/>

undocumented students were less likely to participate in UCDC program, because of concerns about their status when outside of California.

- **Academic calendar alignment:** Campuses cited some challenges students may face when study abroad and internship programs don't align with the academic calendar.

XVII. Advancing educational equity - Online education and off-campus programs provide different opportunities to expand capacity and different ways to advance educational equity.

Access to online courses, particularly in the summer, have the potential to reduce costs, provide necessary flexibility, and support timely graduation for new generation students. Limited UC data shows that Pell, first generation, and URG students have comparable participation rates with online courses compared to the overall population and similar outcomes (e.g., drop rates). A recent study found the impact of online vs. face-to-face instruction for calculus courses had no effect on subsequent student learning in calculus courses. Another study published in Educational Evaluation and Policy Analysis found online course-taking is associated with a higher likelihood of successfully graduating college within four years, with smaller, but still positive, benefits for first generation and low-income students. But there are also studies that show students do not perform as well in online courses compared to in-person courses. Additional research is needed to understand what works and what doesn't with online instruction, particularly for new generation students.

Campus teaching and learning centers support instructional design, student success, and educational equity. They can share existing knowledge about pedagogy, support and collect relevant research, and identify best practices or criteria to support high-quality online course and program development. They can partner with interested faculty who understand the curricular content and support key Academic Senate committees, like COCI and Graduate Councils.

Campuses have been intentional in trying to increase participation for new generation students in study abroad and internship opportunities. In some cases, campus outreach for first generation students needs to also target parents about the benefits these programs can provide. Costs can be a factor for many of these students, including Pell grant recipients. So scholarship opportunities and support are critical to reduce or eliminate financial barriers, particularly when internships are unpaid or to cover fees associated with getting academic credit. In some cases, virtual study abroad and internship programs expanded access for these students. Advising support is critical to help these students navigate the process and fully participate in these programs.

4. UC 2030 Update on Timely Graduation and Eliminating Equity Gap Goals

- XVIII. Introduction** – As UC examines how to expand capacity, it also focuses on advancing educational equity. Improvements in timely graduation (i.e., four-year freshman and two-year transfer graduation rates) provide a way to do both.

Students graduating sooner, such as transfer entrants graduating in two years instead of three or four, and freshman entrants graduating in four years instead of five or six, may increase capacity for other students to enroll. UC Office of the President's Institutional Research & Academic Planning (IRAP) unit is working to estimate potential enrollment capacity gained by campuses achieving their respective UC 2030 timely graduation goals. There are several key considerations that complicate these capacity projections, such as eliminating double-counting by distinguishing students who are any combination of Pell, first generation, or underrepresented (URG) and accounting for increased credit loads associated with shorter time-to-degree. IRAP plans to present estimates that account for these key considerations at a future Council of Chancellors (COC) meeting.

In addition, timely graduation can reduce a student's cost of attaining a degree and increase their future earnings. For new generation students (i.e., Pell, first generation and underrepresented – URG students), graduating in four years compared to six results, on average, is \$7,500 less debt at graduation and \$215,000 more in cumulative earnings 16 years after graduation.

Comparison of student loan debt and earnings for 4- and 6-year UC new generation graduates

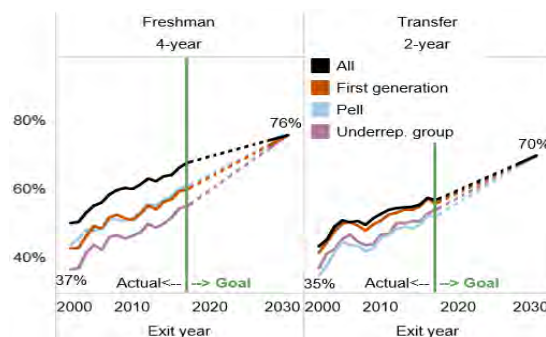
Grad in 4 years	\$21,107	\$37,000	\$640,054
Grad in 6 years	\$28,748	\$33,948	\$422,552
	Debt	Earnings 2 years after graduation	Cumulative earnings 16 years after entry

IRAP staff interviewed campus representatives working to support student outcomes ([see Appendix](#)). This brief summarizes key findings from those discussions, along with relevant institutional data.

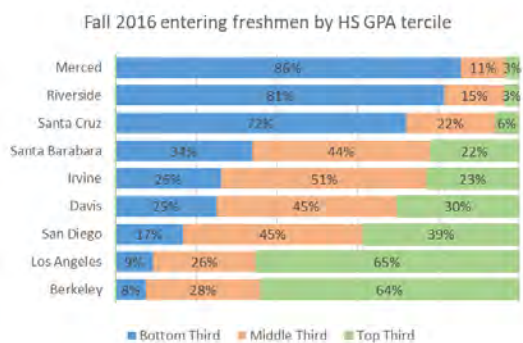
- XIX. UC 2030 goals** – In 2018, the University of California celebrated its sesquicentennial, reflecting on numerous UC accomplishments over the last 150 years. In moving forward, the University created a multi-year framework to present UC's vision for California, including strategic goals through 2030.

UC's multi-year framework

At the November 2018 Board of Regents meeting, UC presented a multi-year framework with 2030 goals that included degree attainment and timely graduation rate goals (seen in the figure to the right). In particular, the University emphasized the importance to eliminate equity gaps for new generation students – gaps that have persisted over time. UC hoped to receive state support to scale up efforts to achieve these goals, in part because the state funded similar work for California State University's (CSU) Graduation Initiative 2025.



Each UC campus set aspirational goals and identified promising programs and strategies to scale up to help achieve those goals. At the September 2019 Regents meeting, UC presented campus proposed efforts to improve timely graduation and eliminate equity gaps.³³ The University also highlighted unique campus opportunities and challenges, including differing levels of academic preparation for qualified University of California students (see figure to the right).



While UC has not yet received state support for these goals, the University and UC campuses continued to emphasize this work, recognizing the importance to UC students, their families, and California.

Governor's proposed compact

Within his January budget introduction, Governor Newsom proposed a multi-year compact with UC that provides sustained funding increases, in exchange for commitments including furthering equity by making progress on UC 2030 goals, specifically:

- Improve systemwide undergraduate graduation rates, including an increase to 76 percent for four-year freshman graduation rates and 70 percent for two-year transfer graduation rate
- Eliminate equity gaps between overall four-year graduation rates and those of underrepresented students by 2030, with a goal of reducing the gap by half by the end of the 2025-26 academic year

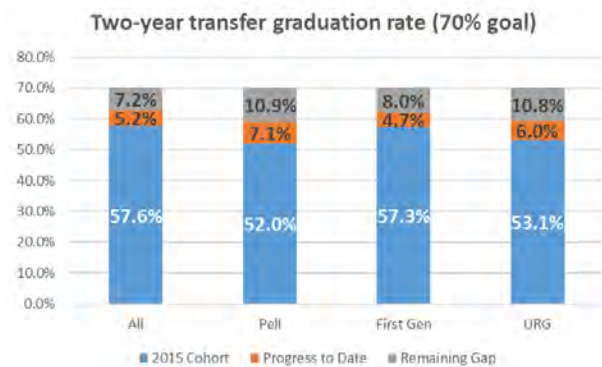
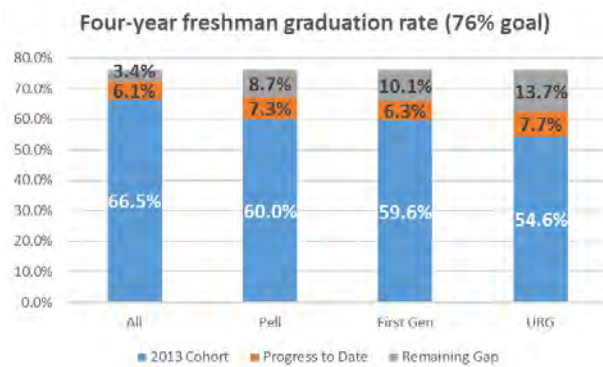
UC's latest four-year graduation rate is 72.6 for freshman (62.3 for underrepresented freshman) and its two-year rate is 62.8 for transfers. To make progress, UC would need the fall 2021 freshman cohort's four-year graduation rate to increase by 1.7 points to 74.3 percent for all entrants and by 6.8 points to 69.1 percent for underrepresented entrants. Put another way, UC would need to have an additional 1,085 underrepresented fall 2021 freshman entrants across the system graduate in four-years to reduce the existing equity gap in half.

- XX. **Timely graduation and eliminating equity gaps** – The baseline for UC 2030 goals is the fall 2013 freshman cohort and fall 2015 transfer cohort. Below is information detailing systemwide progress to date, along with initial information on how the pandemic is affecting students.

Progress to date

The figure below presents the baseline data (in blue), the progress to the goal over the last four years (in orange), and the remaining gap to the UC 2030 goals (in grey). See [Appendix for campus detail](#).

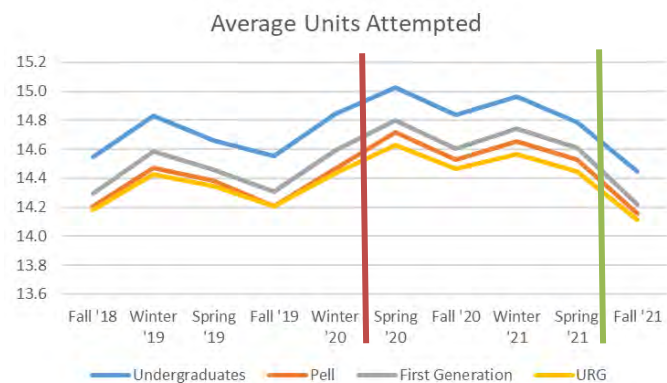
³³ Appendix item (<https://regents.universityofcalifornia.edu/regmeet/sept19/b2.pdf>)



Over the last four years, the four-year freshman graduation rate increased about 1.5 points annually, slightly higher for new generation students (i.e., 1.8 for Pell, 1.6 for first generation and 1.9 for URG students). The two-year transfer graduation rate increased about 1.3 points annually, slightly higher for Pell and underrepresented students at 1.8 and 1.5 points respectively but slightly lower for first generation students at 1.2 points.

If these annual increases continued, the University would meet the UC 2030 timely graduation rate goals for all freshman and transfer entrants and likely Pell grant recipients, but fall short for first generation and URG students. But some of this gain may be attributed to changes made at the start of the pandemic, including the initial shift to remote instruction, greater flexibility in grading options and/or practices, and an increased opportunity to take summer courses remotely.

In addition, when UC shifted to remote instruction in Spring 2020, there was an increase in average units completed for each term and for all undergraduates and new generation students. But now with the return or partial return to campus in Fall 2021, UC average units attempted have declined slightly below prepandemic levels (i.e., fall 2018 and 2019).



First-year retention rates

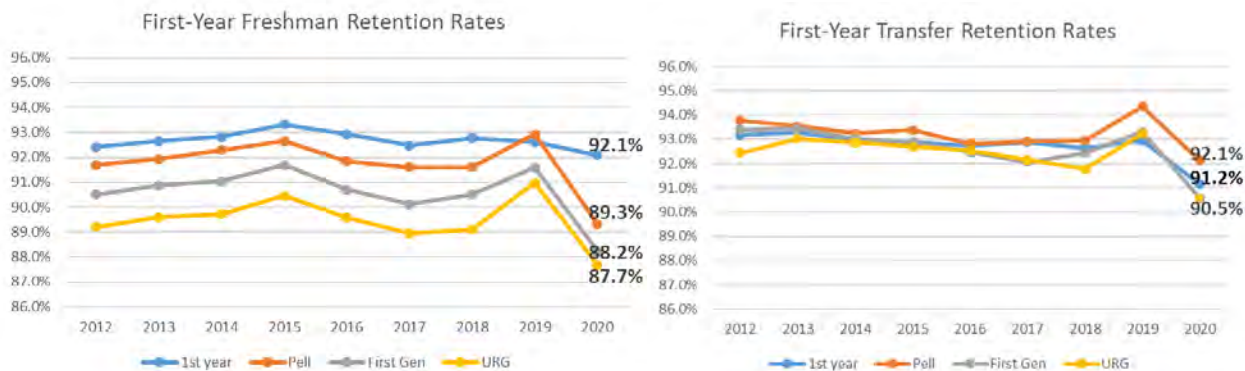
When assessing student outcomes, graduation rates are a lagging indicator. First-year retention rates can represent a ceiling for a cohort's overall graduation rate due to the difficulty in having students who stop out return to the campus.

As the figures below illustrate, the pandemic has had a differing effect on the last two entry cohorts ([see Appendix for campus detail](#)).

- Fall 2019 freshman and transfer entrants were at UC when the pandemic began and the University shifted to remote instruction. While some UC campuses saw a decline in retention rates for domestic non-resident students, retention rates increased for new generation students

who may have benefited from more flexibility grading practices and a greater opportunity to take summer courses online.

- Fall 2020 freshman and transfer entrants were in high school or community college when the pandemic began and spent their first year at UC fully remote. Campuses saw retention rates increase for domestic nonresident students with the return to in person instruction. But there has been a notable decrease in first-year retention rates for new generation students, possibly due to greater challenges with remote instruction (e.g., access to Wi-Fi and study spaces). It may also be the cumulative effect of two years in a pandemic, where new generation students, in particular, are facing greater challenges that require them to stop out to care for family members or to work.



Opportunities and challenges

The pandemic has been a challenge to everyone – students, faculty, and staff – resulting in some gaining a greater appreciation for one another’s situation. Faculty may have seen students participating in courses in a closet because it was the only quiet space at home or in a car because they needed to drive to a location that had better Wi-Fi. Students may have seen faculty members juggling their teaching responsibilities with caring for younger children or elderly parents while they provided remote instruction from their home.

Some campuses noted this collective experience has resulted in greater empathy and interest in examining additional ways to support students (e.g., alternate modes of instruction, support services, and other efforts to eliminate equity gaps). Some have framed this intentional focus as a way to advance social justice. At least two UC campuses have used WASC Senior College and University Commission (WSCUC) reaccreditation exercises to advance this work, with **UC San Diego** focused on improving time to degree and addressing opportunity gaps in retention and graduation rates³⁴ and **UC Santa Barbara** focused on instruction redesign – Designing for Access, Designing for Success³⁵ which is looking at the following questions:

1. As students enter the university and navigate majors/graduate programs, what does each data source identify as pathways and bottlenecks to successful access?
2. Near the time students are completing majors or Ph.D.s, what does each data source identify as pathways and bottlenecks associated with achieving successful degrees?
3. How have students found that their majors/degrees have been relevant for their commitments and goals?

³⁴ https://accreditation.ucsd.edu/_files/Campus%20Response%20to%20WSCUC%20Team%20Report.pdf

³⁵ <https://drive.google.com/file/d/1enHkfqsUFzmoy6ArXIsIV2PrJefG9h9F/view>

Some campuses have expressed concerns that UC 2030 goals set before the pandemic are unrealistic, particularly with insufficient state support for operational needs. They cite that a restoration of prior levels of support would be necessary before considering scaled up efforts to achieve UC 2030 goals, in addition to more recent learning gaps as a result of the pandemic. The latest decline in retention rates highlights these concerns about the challenge in achieving UC 2030 goals and the need to link achievement of these goals to receipt of adequate state support.

- XXI. Promising programs and strategies** - Campuses discussed promising programs and strategies to make further gains in timely graduation and elimination of equity gaps.

First-year success

Campuses emphasized the importance of students getting off to the right start and having a smooth transition from high school or community college and successful first year at UC. They highlighted programs and strategies that may be even more important due to missed or lost learning K-12 and community college students experienced during the pandemic. Many campuses strongly recommended prioritizing these efforts to stem off a drop in first-year retention rates.

Summer bridge programs support first generation, low-income and historically underrepresented students – many campus programs are focused on freshman entrants, with some also serving transfer entrants.

One example is **UCLA’s Academic Advancement Program** [Freshman and Transfer Summer program](#) where students earn up to 12 units; freshmen entrants enroll in a science intensive or writing intensive courses and transfer entrants take advanced composition, a research course, and another elective. Students are also paired with **Peer Learning Facilitator** (PLF) who are successful AAP undergraduates for each course and AAP **Peer Learning** is conducted in small groups and support group discussions, increasing confidence and a sense of belonging.

Another example is **UC Davis’s** [Special Transition Enrichment Program \(STEP\)](#) – an intensive summer boot camp for first-generation and low income students. The program “pays” the students to attend since this population would be lose their summer earnings. It is a residential program designed to give the participants familiarity with the campus before the regular term starts. It also allows students to get non-credit developmental courses out of the way. The program continues over the next two years with the freshman year focused on building academic and social skills as students integrate into the campus community and the sophomore year focused on personal growth and professional preparation.



Summer Edge provides students an early start, particularly with key courses that are critical for students to make timely progress to degree. **UC Merced** describes its [Summer Edge](#) as targeting the “middle 50” students (i.e., not super high achievers, but also not those struggling most). The goal is to help them acclimate to the campus before the fall term. Last summer, the focus was on math and writing courses. This summer, UC Merced will add computer science and engineering courses. UC Merced research has

found students participating in these summer programs had much higher retention rates than those who didn't (98 compared to 84 percent).³⁶

UC Berkeley provides [Freshman Edge](#) and [Transfer Edge](#) programs where students can get a head start on courses, learn about campus resources and build community with peers. The program also provides access to some courses online, including Letters & Science W1 – Exploring the Liberal Arts, Letters & Science C12 – The Berkeley Changemaker™: A Discovery Experience, and First-Year Connect (a one unit course where students are matched and mentored by a Berkeley graduate student and participate in small group programs with other peers).

Living/Learning Communities promote a sense of belonging and connection on campus. Over the last decade, **UC Riverside**'s four-year graduation rate has increased 20 points from 46 to 67 percent. The campus has attributed higher first-year retention rates³⁷ and some of the gain in timely graduation rates to its [living and learning communities](#) where students with common interests and/or identities to live together. These connections guide students through their academic and social transitions with some communities connected specifically to colleges and/or majors and others are designed for students with a shared background (see below).



UC Merced has also emphasized the importance of its living-learning communities, particular those that include curricular components. For example, the campus has conducted multiple studies showing its [Fiat Lux Scholars program](#) participants have higher first-year retention³⁸ rates than similar peers who are non-program participants (i.e., 92 to 84 percent).

³⁶ https://cie.ucmerced.edu/files/documents/irds/summer_retention_2021.pdf

³⁷ <https://assess.ucr.edu/sites/g/files/rcwecm2336/files/2019-02/fylc2011report.pdf>

³⁸ https://cie.ucmerced.edu/files/documents/irds/fiat_lux_analysis_-_2019_final.pdf

Curricular strategies

A number of UC campuses are prioritizing efforts to improve the curriculum as a way to promote student success. As UC Irvine representatives explained, successful courses that close equity gaps will improve student outcomes. There are a number of ways UC campuses are advancing these goals.

Several UC campuses have created “**Know Your Students**” dashboards which provide campus instructor better insight into who is enrolled in their courses and the resources to support them.

The **UC Davis dashboard** (seen to the right) provides information like course demographics (e.g., low-income, first generation, URG, international students); academic preparation or prior performance (e.g., number of course repeaters, academically distressed, related course grades and timing); entry status; and length of time on campus. In addition to receiving the data, instructors receive training and support on how to use this information.



UC Santa Cruz has a similar **Getting to Know Your Students Dashboard** that includes information on students enrolled in courses, along with a guide that has videos on how to navigate the dashboard and reflective questions on how an instructor may use this information (e.g., change the course and/or teaching practices with links to relevant resources, contacting instructors of significantly co-enrolled courses about scheduling of major assignments or exams).

GETTING TO KNOW YOUR STUDENTS DASHBOARD

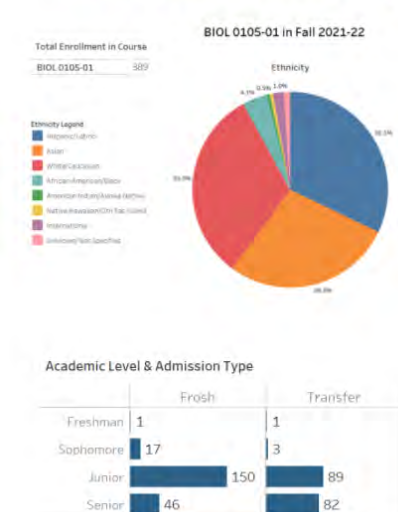
The "Getting to Know your Students" dashboard provides information about the students enrolled in your current or upcoming course, using IRAPS data. You will see:

- Aggregated student demographic information for your course;
- Information about how students, on aggregate, have performed in select prior UCSC courses; and
- The most common courses students are taking along with your course.

This information is available two weeks prior to the start of the quarter to help with planning. However, as pre-enrollment numbers may change once the quarter begins, we can also provide the enrollment data four weeks into the quarter.

This dashboard is intended to facilitate a deeper understanding of the students enrolled in your course to help you design and deliver your course to better support all of your students.

What can you do with this information?



Reflection questions:

- What do you notice about demographics of your class?
- Do these data prompt you to want to make changes to your course and/or teaching practices?

If so, consider...

- Highlighting specific UCSC resources such as:
 - [Ethnic resource centers](#)
 - [First Gen Initiatives / EOP](#)
 - [STARS](#)
- Amplifying the work of diverse academics in your field
- For more suggestions, click [here](#).

Another strategy campuses used includes providing **additional curricular support**. For example, **UC Davis** is creating "**co-courses**" that serve as an additional section (some but not all are credit-bearing) to an existing course where students get support in doing problem sets, worksheets, and the outside of class work associated with the regular class. It is a resource-intensive solution since these sections need to be small, but the up-front investment saves the resources of having the student re-take the course due to a D or an F.

Several campuses have created **course equity gap dashboards** for deans, department chairs, and instructors to have information on courses that have greater failing grades (e.g., D, F or W) for new generation students.

UC Irvine's Bottleneck Courses dashboard (seen to the right) identifies courses with the largest number of DFWs, along with student demographic and academic unit detail on students receiving those grades.

The campus is using a staged approach to disseminate this information, beginning by providing department chairs this detail so they can focus on relevant areas of improvement within their own units. Eventually, the plan will be to provide similar detail for instructors.



UC Irvine's Division of Teaching Excellence and Innovation is also providing guidance on [inclusive teaching for classroom equity](#), including a collection of inclusive teaching practices to help instructors make their classrooms more equitable and accessible for all students. These practices can include:

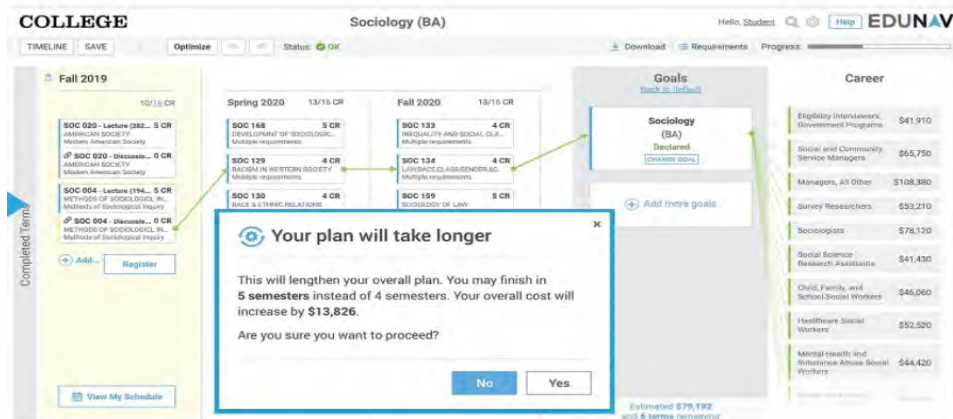
- When possible, use Open Education Resources to reduce financial burdens on students.
- Review course readings for cultural competency: Are diverse voices represented? Are topics considered through a multicultural lens? Where does bias or problematic language potentially occur in course materials?
- Be extra clear about due dates, penalties for academic dishonesty, and other course policies. Eliminating ambiguity helps reduce anxiety in students and consider using a grading rubric that is also shared with students.
- Create a syllabus that shares strategies for students to be successful in your course.
- Share links and information about campus resources, such as the Center for Excellence in Writing and Communication, Student Health Center, Counseling Center, and more.

Curricular complexity and degree mapping strategies are being used by a few UC campuses, particularly in examining at course requirements and the challenge for course repeaters or being unable to get classes. **UC San Diego** is using [Curricular Analytics](#) to identify stumbling blocks to students graduating

on time. This tool (see below) creates curricular maps for majors and calculates complexity and dependency scores for any course within the sequence. For example, there may be an important early course in a particular sequence, like Math, and if the student doesn't complete that course, you can see their degree plan for four years goes out the window (*technical IR term*).



UC Riverside is also using a curriculum-based intervention tool called [EduNAV](#) that helps students to see progress toward a degree. This program allows for a re-calculation of the student's path to degree if there are any obstacles along the way, such as not being able to enroll in a course at a particular quarter or not passing a course the first time. It also includes an estimate of how much the overall cost of a degree will be with each route. *Note: This tool is enabled for some majors but not all, yet.*



Customizes the route based on preferences and relevant information.

Warns the student if they try to go outside of their optimal pathway.

Students register directly from their EduNav generated plan.

Teaching and Learning Centers are a critical resource in instructional redesign efforts, providing guidance, training and research to support faculty complete this work. These centers were critical to a

successful shift to remote instruction and are key to promoting high quality online, hybrid and redesigned courses. Many of them are better able to support campuses in **changing pedagogy** as a result of more robust data on equity gaps. Within the past couple years, most classes at UC Santa Cruz have been redesigned. Campus representatives remarked that they have seen decreases in course DFW rates and increases in course completion and GPAs since the redesigns. Additional evaluation is needed to determine if increased informed pedagogy and course redesign efforts by faculty led to these outcomes. UC Davis, UC Irvine, UC Merced, and UC Santa Barbara have also seen positive effects on student outcomes, after curricula re-design efforts from faculty.

Advising approaches

Academic advisors are essential partners to supporting student success. But more often, a student's academic issues cannot be decoupled from other challenges they face (e.g., financial, mental health) requiring advisors to partner with other campus support services.

As UCLA described, they wanted to create a culture in academic advising that provided holistic, not transactional support to students. During the pandemic, the campus focused on being accessible and providing students multiple ways to talk with advisors, including having drop in sessions over zoom or creating a virtual advising hub. [UCLA's REACH](#) or **Remote Engagement and Advising in the College Hub** said the drop in zoom rooms became a one-stop-shop for getting connected to the students to other support services across the campus.

Remote Engagement and Advising in the College Hub (REACH)



An innovative and collaborative approach to support students in the College of Letters & Sciences

Welcome to the REACH! This virtual advising hub enables students in the College to access academic advising more easily by providing an alternative modality of connection and engagement in order to best serve the multiple and diverse needs of students as we return to campus. Academic advisors from the Academic Advancement Program and College Academic Counseling collaborate and work together as a community to support students in a single virtual space.

Come visit us at REACH!

[Berkeley Online Advising \(BOA\)](#) launched in August 2019 as a locally developed campus service supporting UC Berkeley's undergraduate advising staff in their role of promoting student success. BOA integrated student records from multiple campus sources including the Canvas learning management system, Oracle student information system, and siloed data that had not previously been available campus-wide. It then added value to this data by offering new tools to support advisors in their day-to-day work while simultaneously integrating data-driven alerts and real-time information about student academic progress. By expanding the community of learning analytics practitioners at UC Berkeley to include academic advisors, BOA broadened the impact of student data and learning analytics. BOA adoption at UC Berkeley has been significant, with more than 100,000 advising notes authored in the platform in under 18 months. BOA was a critical tool in supporting the transition to remote, decentralized advising resulting from the COVID-19 pandemic.

A number of campuses cited the growing challenges in providing **mental health support** to students. Many UC respondents in the degree non-completer survey cited mental health challenges as the reason they dropped out of school. The pandemic only exacerbates the issue. **UC Berkeley** is in the process of revamping the campus mental health model to align with [Stepped Care 2.0](#), an updated version of the original Canadian Stepped Health Care Model, which is more client-centric and prioritizes the

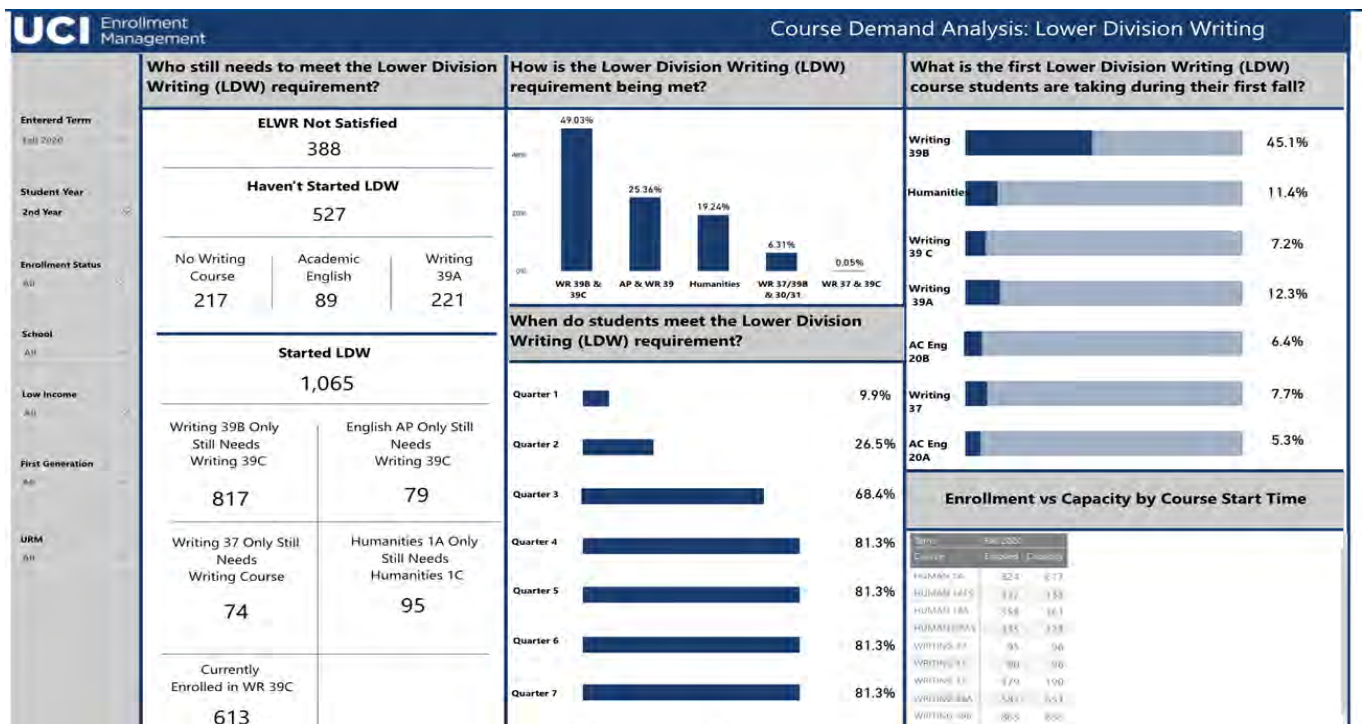
distribution of limited mental health resources to maximize effectiveness and best meet the needs of students.

UC Merced described student mental health as having chronic, systemic and long-term impacts and campus representatives said they can't buy their way out of this crisis by just adding more therapists. Campus researchers examining the impact of having Peer Health Advocates give a short training on what stress is, how it affects performance and well-being, and how to use campus mental health services just as students are getting ready to take midterms when anxiety is high. In addition, the campus is partnering with the [Jed Foundation](#) to do an ecosystem survey around mental health and well-being with the goal of creating a strategic plan in the spring.

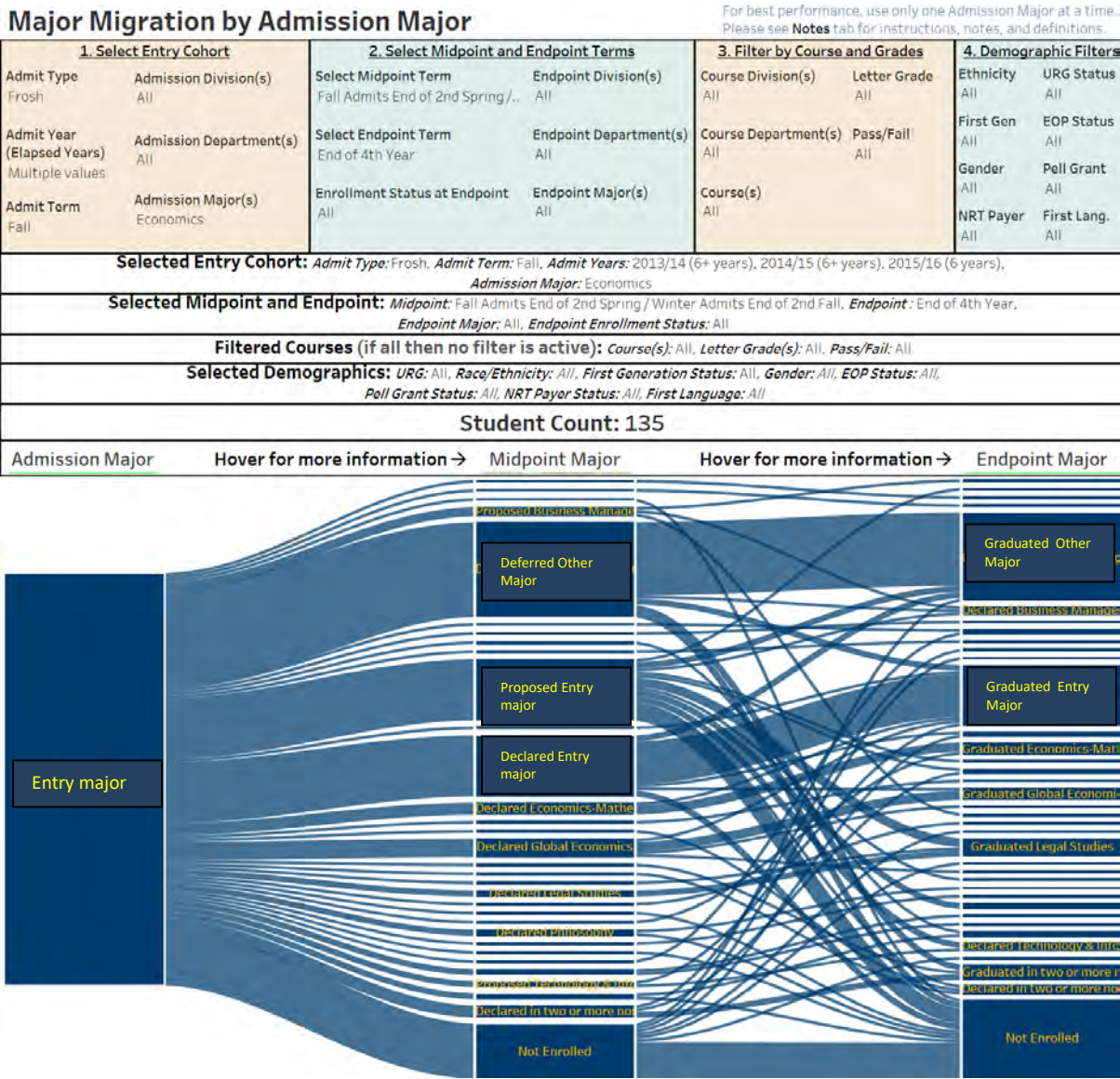
Actionable reporting and analyses

In addition to the dashboards highlighted earlier in this brief, there are other ways UC campuses are looking to provide data to prioritize efforts that improve student outcomes.

In addition to curricular maps, some campuses are examining the impact of campus requirements through **general education** dashboards. **UC Irvine's Lower Division Writing** requirement dashboard provides information on who still needs to meet the requirement, how and when students are satisfying the requirement, which courses they are taking, along with the enrollment capacity in these courses.

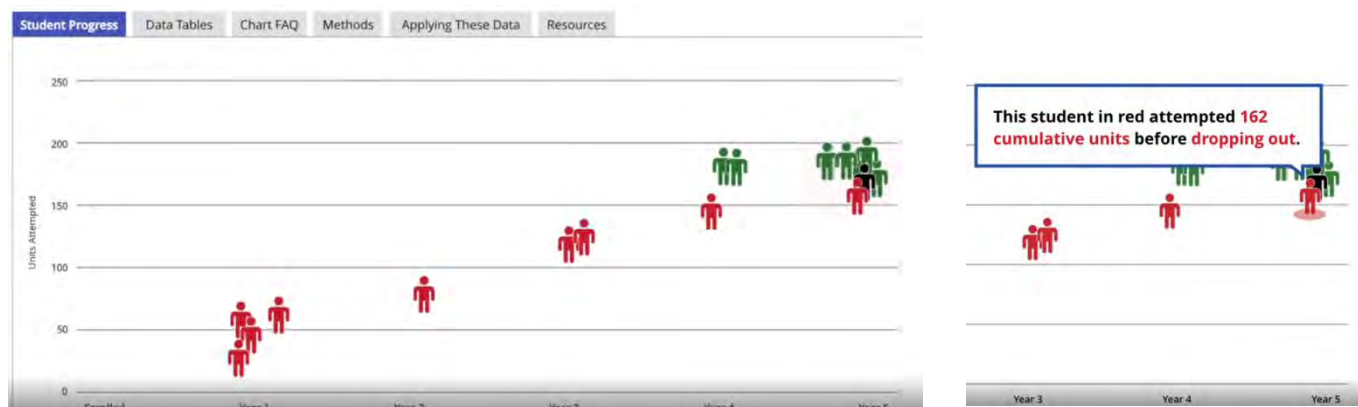
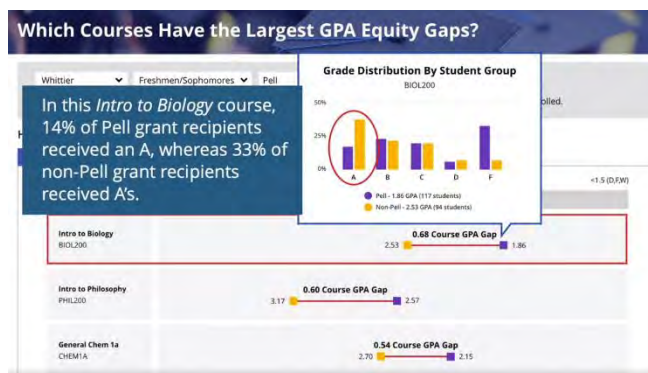


A number of campuses have created **major migration** dashboards that show how many and which students change majors, what impact it may have on time to degree or graduation, and which barriers or issues exist that may address those changes, such as the following **UC Santa Cruz** example on major migration by admissions major.



Much of this decision support is similar to what **CSU** is providing in its [Student Success Dashboard](#). As part of its **Graduation Initiative 2025**, CSU created a series of internal dashboards to reframe data to highlight opportunities to close equity gaps and improve graduation rates. CSU’s goal is to provide data-informed insights that help campuses rethink instruction, enhance course sequencing, support struggling students, design programs that address major barriers, and scale programs to meet more students.

For example, CSU is providing user-friendly ways to see overall equity gaps in graduation rates, along with answering questions like which courses have the largest GPA equity gaps for Pell, first generation, and underrepresented students. Another dashboard they produced provides illustrative data on student progress or lack of progress to degree, when students drop out or when they graduate from programs with additional information like the number of accumulated units.



Another CSU strategy is to reframe data that makes progress seem personal and possible. For example, they would report not only equity gaps by percentages, but also counts to illustrate the number of additional students needed to eliminate those gaps. [Appendix](#) provides UC campus estimates that quantify these gaps for freshmen and transfer retention rates and graduation rates.

The Governor's compact references UC collaborating with the CSU and CCCs to utilize the CSU Student Success Dashboard, or a similar tool, to identify equity data trends that can be used to address equity gaps. IRAP is working with UC campus institutional research offices to assess the level of duplication and/or additional benefits the CSU tool provides, its utility and whether additional information is better provided by IRAP or campus units.

XXII. Advancing educational equity

UC graduation rates, particularly timely graduation rates, have continued to increase for all freshman and transfer entrants, along with new generation students. But the equity gaps persist. The UC 2030 goals provided an intentional focus on both improving timely graduation rates and narrowing these gaps that would then lower costs and increase opportunities for new generation students.

The paper highlights a number of promising programs and strategies with an equity focus that are targeted to narrowing existing opportunity gaps for new generation students. For example, **UC Santa Cruz's Center for Innovation in Teaching and Learning** has an equity minded course redesign effort called [Project REAL \(Redesigning for Equity and Advanced Learning\)](#).



ABOUT THE PROGRAM

Developed by CITL in partnership with HSI, IRAPS, and selected faculty, Project REAL is designed to provide faculty with a research-based program to engage in comprehensive equity-minded course redesign to improve teaching and learning and contribute to equitable outcomes for students at UC Santa Cruz.

Facilitated and closely supported opportunity to redesign a course.

For key courses in the undergraduate curriculum—beginning with STEM “gateway” courses known to be barriers to student persistence in STEM majors.

Opportunity for individual faculty or for cohorts of faculty who participate as a team to make connections between sequential courses and/or address curricular coherence within and across major pathways.

Focuses on student pathways, hidden curriculum, and bridging equity gaps, as well as foundational course design elements, such as aligning learning outcomes, assessments, and teaching and learning activities.

At the end of the program, faculty will have a fully redesigned Canvas course that is ready to teach.

In addition, there may be other policies and practices campuses may consider. Some campuses are examining ways to **improve first-year retention**. For example, **UC Merced** found that students who went on academic probation in their first year were unlikely to come back, but those on academic probation in subsequent terms could recover. As a result, the campus will **no longer dismiss students on academic probation after their first semester**. Instead, the campus will reach out to those students with a goal to keep them enrolled and get them back on track to improve their academic performance.

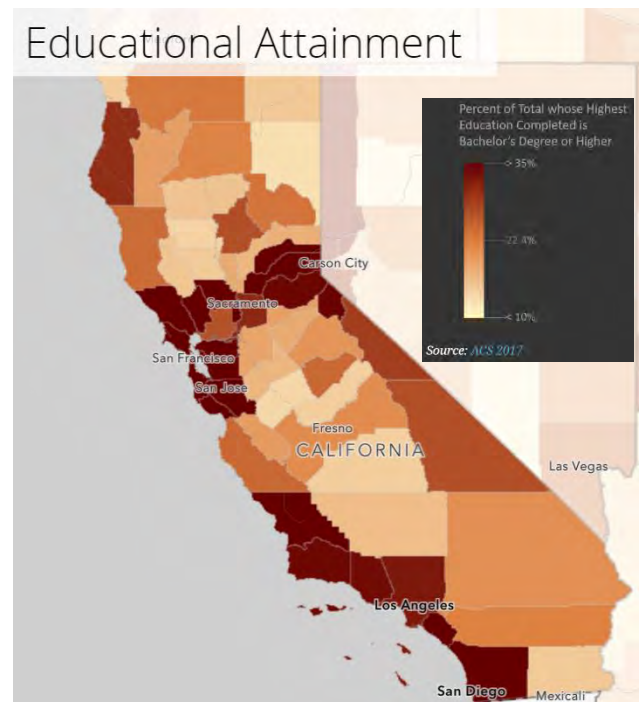
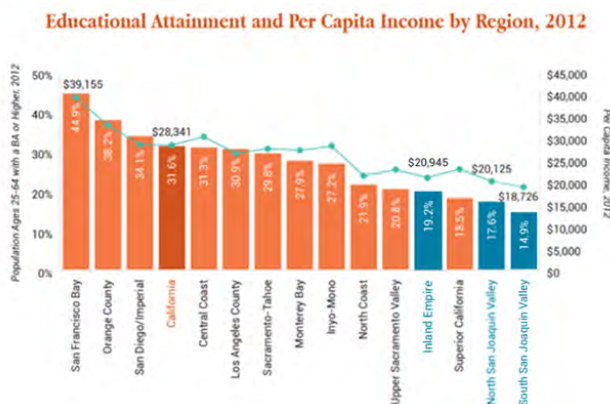
After almost two years of the pandemic, UC data now shows a drop in first year retention rates for Pell, first generation and underrepresented students that will likely increase the gap in four-year graduation rates in the future. As part of the capacity plan, UC can consider whether to revise the existing UC 2030 goals or recommit to them with an associated resource ask. This decision will send a message for the UC system that pledges to become a Hispanic-Serving and Minority-Serving system.

5. Expanding UC's Reach to Underserved Regions

XXIII. Introduction – Throughout the University's capacity discussions, there has been an intentional focus on how traditional and non-traditional growth can expand educational opportunity, inclusive access and success, and ensure UC students in 2030 better reflect California's diversity, both racial/ethnic and geographic. This summary focuses on ways to expand outreach to California's underserved regions, including regions with lower educational attainment levels, rural regions, and areas with higher concentration of underrepresented students. The focus of this summary is on transfer opportunities with low sending California Community Colleges (CCCs).

XXIV. Identifying California's Underserved Regions – The Governor's Office of Planning and Research's (OPR) Regions Rise Together initiative examines future economic opportunities and challenges within California. While OPR notes California is the fifth largest economy, it also points to growing disparities within the state.

As part of its work, OPR produced the graphic³⁹ to the right of the percent showing those 25 years or older with a bachelor degree or higher. The bar and line chart⁴⁰ below shows the relationship between educational attainment levels and wages, with the San Joaquin Valley, Superior California, and Inland Empire regions lower on both measures.



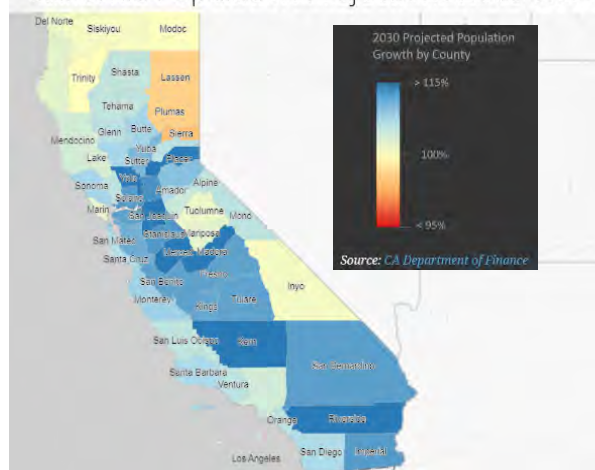
³⁹ <https://www.arcgis.com/apps/Cascade/index.html?appid=d056b93e3116413cbd1ad25cc4245221>

⁴⁰ <https://collegecampaign.org/portfolio/january-2014-the-state-of-higher-education-in-california-average-wont-do/>

The Department of Finance projects population growth through 2030 to be concentrated in the Inland Empire, San Joaquin Valley, and Sacramento regions.

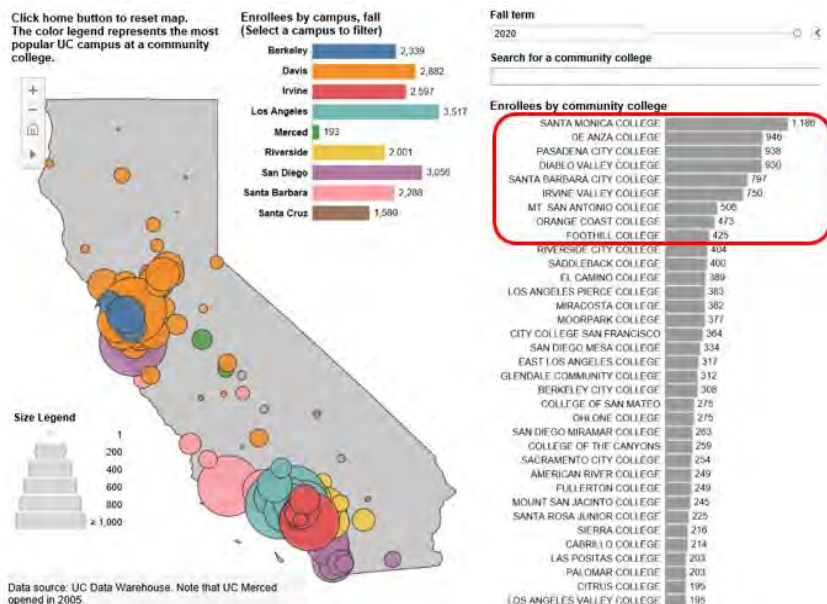
Growth in regions with lower wages will increase the need for California to expand its safety net programs that provide public health insurance, food assistance, and other support (e.g., Medi-Cal, CalFresh, CalWORKs). Another approach would be to invest in expanding educational attainment levels within these regions, which could result in higher wages and economic opportunities and reduce the need for spending in these areas.

California Population Projections 2019-2030



XXV. Expanding UC's Reach – UC California Community College (CCC) applicants, admits and enrollees come from a handful of these institutions. In fall 2020, nine of the 113 CCC institutions (or less than one tenth of CCCs) accounted for 34 percent of UC applicants and enrollments. These same CCCs were in the top slots a decade ago.

In addition, four of these institutions – Pasadena City College, Mt. San Antonio College, De Anza College, and Santa Monica College – are in the top ten of feeder institutions to the California State University (CSU) system.



These institutions are primarily located in the regions with higher educational attainment levels (e.g., Bay Area) and they often have less diversity than other CCCs. For example, in fall 2020, 23 percent of UC applicants from these nine CCCs were students from underrepresented groups (URG), 21 percent for admits, and 19 percent of enrollees. In comparison, 42 percent of UC applicants from the remaining CCCs were URG students, 40 percent of admits, and 38 percent of enrollees.

Growth strategies that expand UCs reach to a targeted set of the remaining CCCs could both increase educational opportunities to students from regions with lower educational attainment levels and increase UC's diversity, helping the University better reflect the state's racial/ethnic and geographic diversity.

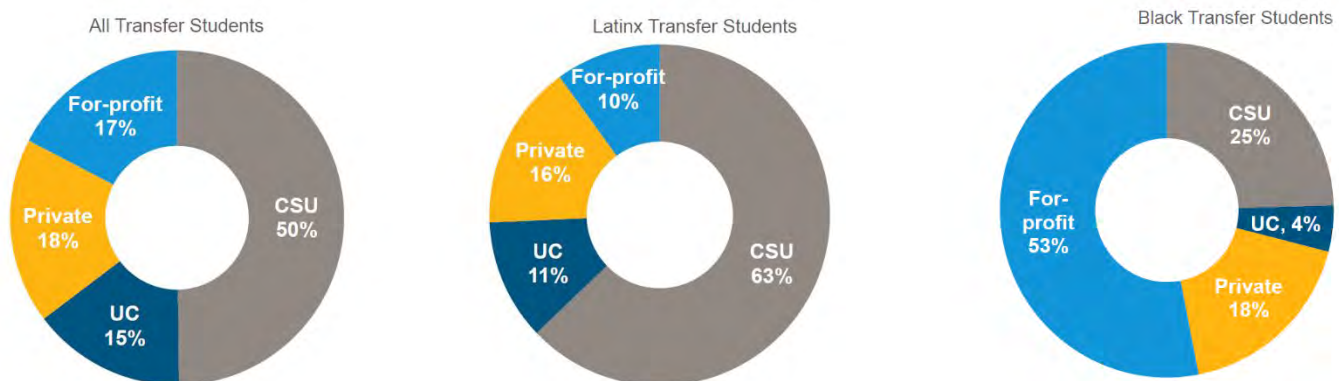
XXVI. Transfer Goals and Strategies for UC 2030

Graduate, Undergraduate, and Equity Affairs (GUEA) has established three goals to align with UC 2030 efforts to expand educational opportunity and success for new generation students (i.e., Pell, first generation, and underrepresented), including:

1. Increase (by a percentage concomitant with enrollment growth goals) and maintain the number of students in the annual CCC transfer applicant pool who are Pell Grant recipients, first generation, or members of an underrepresented group
2. Increase by 15 percentage points (from 40 to 55 percent) the number of students who are admitted with a UC transfer admission guarantee, with a focus on increasing admission guarantee participants from low-sending colleges
3. Strengthen the research and practice of transfer so that UC is a national leader on equitable student transfer

In advancing these goals, the hope is that a larger percentage of transfer-ready students progress along the CCC-UC transfer pipeline, with an intentional focus on ways to increase diversity and inclusion that is more reflective of new generation students. GUEA would propose to direct resources, outreach, and programs to prospective transfers at targeted CCCs, particularly those institutions with high numbers of transfer-intending students from historically underrepresented groups and low rates of transfer to UC.

Overall, 40 percent of CCC students transfer to four-year institutions, 32 percent of Latinx and 36 percent of Black students. UC takes 15 percent of all CCC transfer students, but only 11 percent of Latinx and four percent of Black CCC transfer. Latinx students are more likely to transfer to CSU (63 percent) and Black students are more likely to transfer to for-profit institutions (53 percent).

CCC Transfers by Institution Type

Source: Integrated Postsecondary Data System, National Center for Education Statistics, 2021

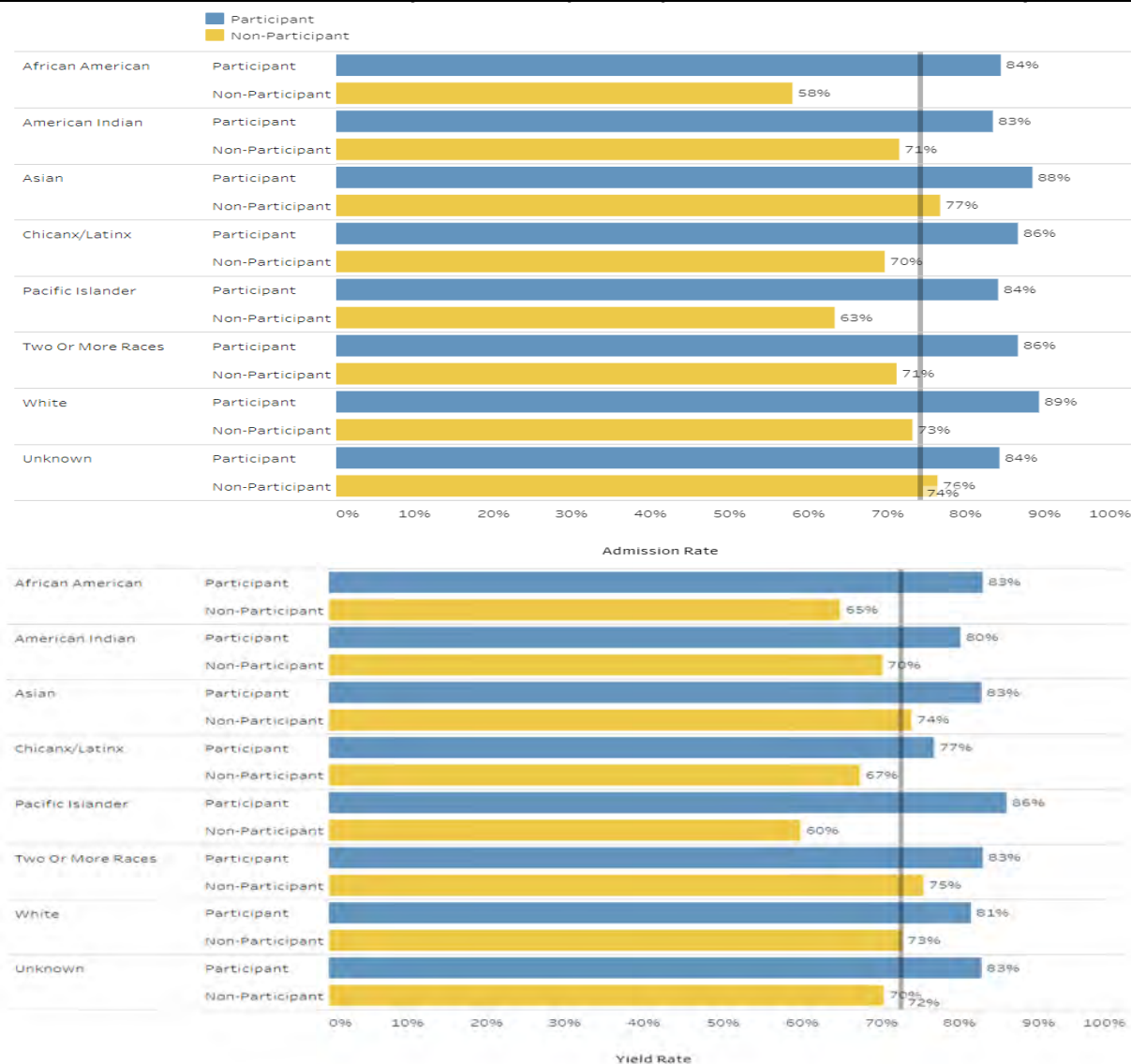
In addition to expanding access to UC, the University can demonstrate national leadership on equitable student transfer by also improving timely graduation rates and eliminating equity gaps for transfers. If students complete their studies sooner, that will also open up more spaces for additional transfers. Today, new generation students have slightly lower two-year graduation compared to the overall transfer population.

XXVII. Targeting Additional Permanent Support for Transfer Preparation Programs

Student Academic Preparation and Educational Partnership (SAPEP) Transfer Preparation (Transfer Prep) programs serve 112 of 113 CCCs. Transfer Prep program services include transfer admission advising, academic preparation programs, summer transfer experience and residential programs, peer mentor programming, and transfer support for prospective transfers to four-year colleges and universities.

In 2019-20, Transfer Prep served over 15,000 transfer intending CCC students. Around 46 percent of these participants were underrepresented, 38 percent Latinx, seven percent Black, and one percent American Indian. Transfer Prep participants have higher admission and yield rates, 26 and 18 points higher for African American and 16 and 10 points higher for Chicano/Latino Transfer Prep participants compared to similar non-participants.

UC Admission Rate and Yield Rate by Transfer Prep Participation Status and Race/Ethnicity (2018-19)



Source: CCC Outreach Dashboard (<https://www.universityofcalifornia.edu/about-us/information-center/california-community-college-outreach-programs>)

UC Transfer Prep participants are also more likely to transfer to UC institutions. Over the last four years where data is available (2015-16 to 2018-19), around 27,650 UC Transfer Prep participants transferred to four-year institutions. Of those, 65 percent went to the University of California, 25 percent to CSU and ten percent to other institutions.

Part of UC's success in admission and yield rates for African American Transfer Prep participants are key strategic partnerships. UC-Umoja Diversity Pipeline Partnership provides Umoja CCC students with a UC transfer pathway, and social and cultural support when they transition to a UC campus. Umoja reaches a community of about 4,500 mostly African American students at California community colleges.

This year, UC formed a new partnership with African American Male Education Network and Development (A²MEND) organization also expands UC transfer opportunities for more students. A²MEND is a nonprofit organization comprising African American male educators who utilize scholarly and professional expertise to foster institutional change within the community college system to increase the success of African American male students. A²MEND serves community college students throughout California with mentorship, scholarship and student charters.

	Number	Percent
UC Davis	3,859	14%
UC Berkeley	3,808	14%
UCLA	2,728	10%
UC San Diego	1,990	7%
UC Santa Barbara	1,678	6%
UC Santa Cruz	1,583	6%
UC Irvine	1,187	4%
UC Riverside	752	3%
UC Merced	306	1%
UC Total	17,891	65%
CSU Institutions	7,042	25%
Other Institutions	2,717	10%
Total Transfers	27,650	

Source: CCC Outreach Dashboard
<https://www.universityofcalifornia.edu/about-us/information-center/california-community-college-outreach-programs>

With additional permanent SAPEP support, the University could target resources to increase the number of Transfer Prep participants served at low sending institutions. GUEA has identified 43 CCCs for expanded Transfer Prep participants (TPP). These locations were selected based on the following criteria:

- Estimated UC transfer rate is below the UC systemwide average (around 15 percent) and CCCs have higher CSU transfer rates
- Percent URG is above the UC CCC transfer average (52 percent)
- Percent African American students is above the UC CCC transfer average (4 percent)

These CCCs are primarily located within regions that have lower educational attainment levels or higher projected growth by 2030. (See Appendix for CCC campus detail and a map of CCC locations).

	All CCCs	Top 9 Feeders	Expanded TPP
North San Joaquin Valley	7		7 100%
Upper Sacramento Valley	2		2 100%
Inland Empire	12		11 92%
South San Joaquin Valley	6		4 67%
Superior California	3		2 67%
Sacramento-Tahoe	8		4 50%
North Coast	2		1 50%
Central Coast	6	1	2 33%
Monterey Bay	3		1 33%
San Diego-Imperial	9		3 33%
Orange County	9	2	2 22%
Los Angeles	21	3	4 19%
San Francisco Bay Area	25	3	0%
Grand Total	113	9	43 38%

With additional permanent SAPEP funds strategically devoted to Transfer Prep, UC could significantly expand year-round and summer academic preparation programs for more community college students and counselors and expand advising services to high school students who will begin their undergraduate education at a CCC. These programs and services would include:

- Increased academic prep programs for community college students
- Expanded academic advising for high school students planning to attend CCCs
- Increased UC advising for prospective transfer students from community college with lower UC-bound rates
- More UC students serving as mentor, tutors and advisors to community college students

- More opportunities for prospective students to participate in UC transfer residential summer programs, especially from rural communities
- More community college students participating in specialized campus events to support their success
- Increased UC professional development for community college counselors
- Increased UC transfer pathways knowledge for transfer-intending high school students
- Increased programming with Umoja, A2Mend and other community college community partnerships

Expected outcomes from this funding would be:

- Increased UC transfer applications and admits from community colleges with lower UC send rates
- Increased family and community knowledge of UC transfer admissions and financial literacy
- Increased college-going culture and expectations

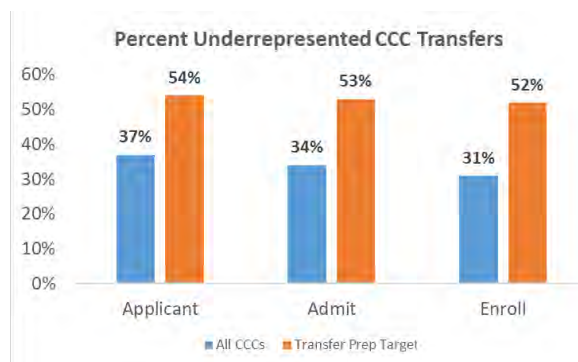
XXVIII. Targeting Path to Debt-Free UC Opportunities – Affordability concerns can also reduce the number of CCC prospective students applying to or selecting UC. Another proposal would be to target UC’s debt-free pathways to a subset of CCC institutions.

GUEA is working on a methodology to identify CCCs to target with debt-free pathways to UC. One measure under consideration is the proportion of the college’s students that received a California College Promise Grant (i.e., receives a waiver for CCC enrollment fees).

Expected outcomes from targeted path to debt-free UC would be:

- Increased UC transfer applications and admits from low-income community colleges
- Increased family and community knowledge of UC transfer admissions and financial literacy
- Increased college-going culture and expectations
- Reduced debt upon graduation for student with augmented financial aid packages

XXIX. Advancing Educational Equity - UC’s proposed approach is to allocate a portion of any increased permanent SAPEP support to expand the number of participants in Transfer Prep programs. Not only are the majority of these institutions located in regions with lower educational attainment levels and expected future growth, more than half of current applicants, admits and enrollees from these 43 targeted CCCs are underrepresented students – much higher than the current diversity of UC CCC students. The hope is that a targeted approach for a path to a debt-free UC would also increase applicants and enrollees to UC. The University is also examining the necessary support needed to achieve two-year graduation rate goals and efforts to eliminate equity gaps to help ensure these students succeed at UC.



6. Appendix

Campus and UCOP discussion participants

Organic growth and regional collaboration discussion participants

UC Berkeley

Cathy Koshland, Interim Executive Vice Chancellor and Provost
Olufemi “Femi” Ogundele, Admissions and Enrollment
Chris Stanich, Associate Vice Chancellor for Financial Planning & Analysis

UC Davis

Ari Kelman, Interim Dean of College of Letters and Sciences
Deborah Agee, Executive Director Financial Aid & Scholarships
Jason Stewart, Assistant Director Budget and Institutional Planning

UC Irvine

Hal Stern, Provost and Executive Vice Chancellor
Kate Brigman, Associate Provost and Chief of Staff
Michael Dennin, Dean of Undergraduate Education and Vice Provost of Teaching and Learning
Roxane Cohen Silver, Vice Provost for Academic Planning and Institutional Research

UCLA

Gregg Goldman, Vice Chancellor and Chief Financial Officer
Youlonda Copeland-Morgan, Vice Provost for Enrollment Management
Jeff Roth, Associate Vice Chancellor for Academic Planning and Budget
Adam Sugano, Executive Director of Chancellor's Office of Data Analytics

UC Merced

Kurt Schnier, Interim Vice Chancellor and Chief Financial Officer
Jill Orcutt, Associate Vice Chancellor for Enrollment Management, Dean of University Extension and Summer Session
Sarah Frey, Vice Provost and Dean of Undergraduate Education
Dustin Noji, Director of Admissions

UC Riverside

Elizabeth Watkins, Provost
Bryan Haynes, Vice Chancellor Student Affairs

UC San Diego

Elizabeth Simmons, Executive Vice Chancellor, Academic Affairs
James Soto Antony, Dean, Graduate Division
John Moore, Dean, Undergraduate Education
Debi Kammerer, Director, Admissions
Christine Hurley, Director, Institutional Research
Robert Clossin, Director, Campus Planning

UC San Francisco

Dan Lowenstein, Provost
Mary Lynch, Nursing
Catherine R. Lucey, Vice Dean for Education, Professor of Medicine

Elizabeth Silva, Interim Dean of the Graduate Division

UC Santa Barbara

David Marshall, Executive Vice Chancellor

Gene Lucas, former EVC and Chair of the Long-Range Planning Task Force on Enrollment

Chuck Haines, Associate Chancellor, Finance and Resource Management

Lisa Przekop, Director of Admission

UC Santa Cruz

Lori Kletzer, Campus Provost and Executive Vice Chancellor

Peter Biehl, Vice Provost and Dean of Graduate Studies

Richard Hughey, Vice Provost and Dean of Undergraduate Education

UCOP

Michael T. Brown, Provost and Executive Vice President

Pamela Brown, Vice President, Institutional Research and Academic Planning

Todd Greenspan, Director of Academic Planning, Institutional Research and Academic Planning

Brianna Moore-Trieu, Program Lead, Institutional Research and Academic Planning

Summer, University Extension, and degree completion discussion participants

UC Berkeley

Oliver O'Reilly, Interim Vice Provost for Undergraduate Education

Richard "Rick" Russo, Associate Vice chancellor of Undergraduate Education and of Extended Education

Jessica Bauer, Deputy Director of Summer Session

Frederick Wehrle, Academic Affairs Director for University Extension

UC Davis

Cynthia Carter Ching, Interim Vice Provost and Dean for Undergraduate Education

Robin Tapia, Interim Director Summer Session

Matthew Traxler, Associate Vice Provost for Academic Planning Summer Session

Susan Catron, Dean of UCD Continuing and Professional Education and Extension

UC Irvine

Tom Radmilovich, Assistant Dean and Director of Summer Session

Gary W. Matkin, Dean, Division of Continuing Education & Vice Provost of Career Pathways

UCLA

Adriana Galván, Dean for Undergraduate Education

Jisoo Kim, Executive Director of Summer Sessions

Eric A. Bullard, Dean of Continuing Education and UCLA Extension

Kelly Wahl, Director of Student Achievement and Special Projects Undergraduate Education

UC Merced

Sarah Frey, Vice Provost and Dean of Undergraduate Education

Tammy Johnson, Director of Summer Session

Jill Orcutt, Associate Vice Chancellor Enrollment Management, Dean of University Extension, and Dean of Summer Session

Michael Pierick, Dual Enrollment for Extension (Degree Completion)

UC Riverside

Jennifer Brown, Vice Provost and Dean of Undergraduate Education

Leonard Taylor, Administrative Director of Summer Session
Kevin J. Vaughn, Dean of Extension

UC San Diego

John Moore, Dean of Undergraduate Education
Becky Arce, Director of Summer Session
Hugo Villar, Dean of UC San Diego Extension
Edward Abeyta, Associate Dean of UC San Diego Extension for Education and Community Outreach

UC Santa Barbara

Michael Miller, Dean of Undergraduate Education
Rachel Johnston, Strategic Operations in Summer Sessions
Bob York, Dean of Professional and Continuing Education
Paolo Gardinali, Director of Operations and Professional and Continuing Education
Sheetal Gavankar, Director of Programs at Professional and Continuing Education
Anthony Schmid, University Registrar

UC Santa Cruz

Richard Hughey, Vice Provost and Dean of Undergraduate Education
Monica Parikh, Director of Summer Session
P.K. Agarwal, Dean of Extension/UCSC Silicon Valley Extension

UCOP

Pamela Brown, Vice President, Institutional Research and Academic Planning
Todd Greenspan, Director of Academic Planning, Institutional Research and Academic Planning
Ethan Savage, Academic Planning and Policy Analyst, Institutional Research and Academic Planning
Chris Procello, Academic Planning and Policy Analyst, Institutional Research and Academic Planning

Online and off-campus discussion participants

UC Berkeley

Oliver O'Reilly, Interim Vice Provost for Undergraduate Education
Jessica Bauer, Deputy Director of Summer Session
Frederick Wehrle, Academic Affairs Director for University Extension
Colette Plum, Deputy Director, Study Abroad
Darin Menlove, Vice Dean of Summer Session and Study Abroad

UC Davis

Cynthia Carter Ching, Interim Vice Provost and Dean of Undergraduate Education
Marcie Kirk Holland, Executive Director, UC Davis Internship and Career Center
Emily Nahem, UCCS campus representative
Susan Catron, Dean, UCD Continuing and Professional Education
Stephen J. Cavanagh, Dean, School of Nursing
H. Rao Unnava, Dean, Grad School of Management
John Marx, Faculty Advisor to the Provost
Nancy Erbstein, AVP Global Education
Zachary Frieders, ED of Global Learning Hub

UC Irvine

Gillian Hayes, Vice Provost for Graduate Education and Dean of the Graduate Division

Suzanne Helbig, Associate Vice Provost, Division of Career Pathways
Victoria Jones, Chief Global Affairs Officer
Patty Morales, Associate Vice Chancellor for Enrollment Management
Michelle Mallen, UCCS campus representative
Matt Beckmann, UCDC faculty representative
Ryan Cherland, Institutional Research Director

UCLA

Adriana Galván, Dean for Undergraduate Education
Eric Bullard, Dean of Continuing Education and UCLA Extension
Shalom Staub, Director, Center for Community Engagement

UC Merced

Sarah Frey, VPDUE Vice Provost and Dean for Undergraduate Education
Brian O'Bruba, Executive Director of Leadership, Service and Career
Jill Orcutt, Dean of Continuing and UCM Extension
Miriam Chavez, UCCS and UCDC campus representative

UC Riverside

Richard Edwards, Director for the Center for Teaching & Learning (XCITE)
Tom Dickson, Assistant Vice Provost of Undergraduate Education
Jennifer Kavetsky, UCCS and UCDC campus representative
Marko Princevac, Interim Vice Provost, International Affairs
Sean Gil, Director, Career Center
Leonard Taylor, Administrative Director of Summer Session

UC San Diego

John Moore, Dean of Undergraduate Education
Tricia Taylor-Oliviera, Director of Academic Internships
Jennifer Homrich, Coordinator of UCDC and UC Sacramento
Kelly O'Sullivan Sommer Director, Study Abroad
David Artis, Dean of Undergraduate Research Advancement
Carlos Jensen, Associate Vice Chancellor of Educational Innovation
Christine Hurley, Director of Institutional Research

UC Santa Barbara

Michael Miller, Dean and Assistant Vice Chancellor for Enrollment
Emily Tom-Atzberger, Assoc Director of Ed Abroad and UCDC and UC Sac Center
Elizabeth Vasquez, UCCS campus representative

UC Santa Cruz

Herbie Lee (Vice Provost for Academic Affairs)
Helen Shapiro (UCSC faculty member and Director, UCDC)
Richard Hughey (Vice Provost and Dean of Undergraduate Education)
Alice Michel (Global Learning Director)
Becky George (Assistant Vice Provost of Global Engagement)
Michael Tassio (Director of Online education)
Jody Greene (Associate Vice Provost for Teaching and Learning)
Leah Taddonio (Undergraduate Internship Coordinator)

UC Education Abroad Program

Vivian-Lee Nyitray, Associate Vice-Provost and Executive Director

UC Sacramento Center

Richard L. Kravitz, UCCS Director

UCDC

Helen Shapiro, UCDC Director

UC Online

Ellen Osmundson, UC Online Program Director

Mary-Ellen Kreher, UC Online, Director, Course Design & Technical Development

UCOP

Pamela Brown, Vice President, Institutional Research & Academic Planning

Chris Furguele, Director Institutional Research & Academic Planning

Todd Greenspan, Director Academic Planning

Clarence Wheeler Jr, Institutional Research Analyst, Institutional Research & Academic Planning

Chris Procello, Academic Planning Analyst

Update on timely graduation and eliminating equity goals discussion participants

UC Berkeley

Oliver O'Reilly, Interim Vice Provost for Undergraduate Education

Sereeta Alexander, Director of Office of Planning and Analysis

Cindy Bumgarner, Assistant Vice Chancellor and Chief of Staff

Olufemi Ogundele, Associate Vice Chancellor of Enrollment Management and Dean of Undergraduate Admissions

UC Davis

Ari Kelman, Faculty Advisor to the Chancellor and Provost

Cynthia Carter Ching, Interim Vice Provost and Dean for Undergraduate Education

Kristen Lagattuta, Faculty Advisor, Closing Student Opportunity Gaps

Pablo Reguerin, Vice Chancellor for Student Affairs

Jason Stewart, Assistant Director, Institutional Analysis

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Ryan Cherland, Associate Vice Provost for Institutional Research and Decision Support

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Adriana Galván, Dean for Undergraduate Education

Frank Wada, Registrar

Corey Hollis, UG Academic Support and ED for Center of Academic Advising

Adam Sugano, Executive Director of Chancellor's Office of Data Analytics

UC Merced

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Gary Lowe, Director of Institutional Research & Decision Support
James Zimmerman, Associate Vice Provost for Teaching & Learning
Alejandro Delgadillo, Associate Director of Bright Success Center

UC Riverside

Jennifer Brown, Vice Provost and Dean of Undergraduate Education
Scott Heil, Assistant Vice Chancellor of Institutional Research

UC San Diego

John Moore, Dean of Undergraduate Education
Christine Hurley, Director of Institutional Research
Carlos Jensen, Associate Vice Chancellor for Educational Innovation
Betty Huff, Interim Associate Vice Chancellor for Enrollment Management
David Ruitter, Faculty Director of Teaching and Learning Commons

UC Santa Barbara

Michael Miller, Vice Provost and Dean for Undergraduate Education
Steve Velasco, Director of Institutional Research, Planning & Assessment

UC Santa Cruz

Richard Hughey, Vice Provost and Dean of Undergraduate Education, Interim Vice Provost of Global Engagement
Julian Fernald, Director of Institutional Research, Assessment and Policy Studies
Jody Greene, Associate Vice Provost for Teaching and Learning and Special Advisor to the CP/EVC for Educational Equity and Academic Success

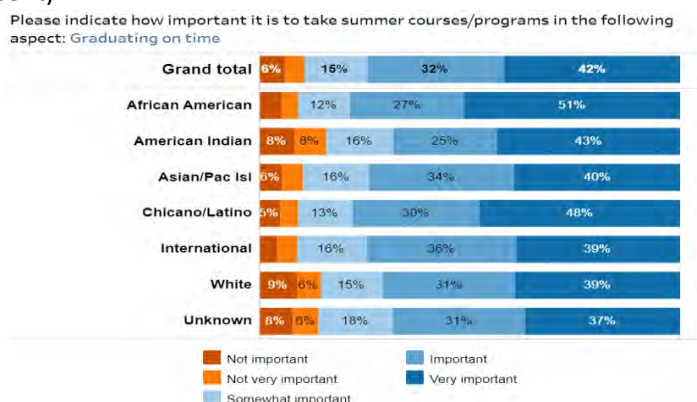
UCOP

Pamela Brown, Vice President, Institutional Research & Academic Planning
Todd Greenspan, Director of Academic Planning, Institutional Research and Academic Planning
Brianna Moore-Trieu, Project Lead, Institutional Research and Academic Planning
Courtney Sanders, Institutional Research Analyst, Institutional Research & Academic Planning

UCUES Summer Session Survey results (Spring 2020)

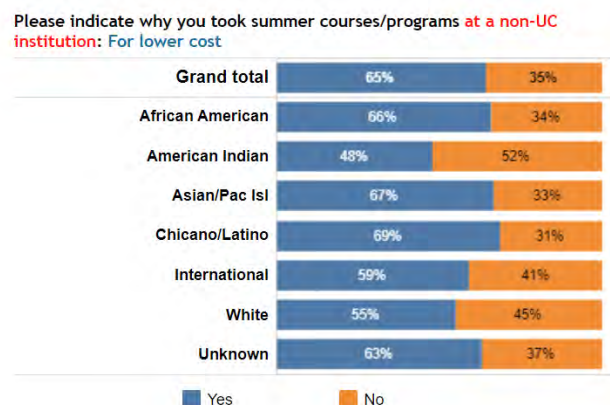
The Spring 2020 UC Undergraduate Experience Survey (UCUES) included summer sessions questions⁴¹ which highlighted the following:

- 32 percent of respondents (around 20,400 students) enrolled in courses during summer 2019
 - 80 percent at their home UC campus, 3 percent at another UC, and 17 percent at a California Community College
 - Top reasons respondents indicated they enrolled at another summer institution was because it was more affordable (65 percent), convenience of location (45 percent), and availability of online courses (26 percent)
 - 90 percent indicated taking summer enrollment was important (somewhat to very) to help graduate on time, with 46 percent of Pell, 47 percent of first generation, 48 percent of Chicano/Latino and 51 percent of African Americans saying it was “very important” compared to only 39-40 percent white and Asian students saying the same.
- 68 percent (42,760 respondents) chose not to enroll in summer for the following top reasons:
 - Did not need to take summer courses (56 percent)
 - Spent time with family (30 percent)
 - Worked a summer job (26 percent)
 - Wasn’t affordable to me (24 percent overall, but 30 percent for Pell and African American respondents, 32 percent for first generation students, and 33 percent for Chicano/Latino students)



Some students took summer courses, but not at a UC. For those who did, lower cost was the top reason for taking summer courses at a non-UC institution.

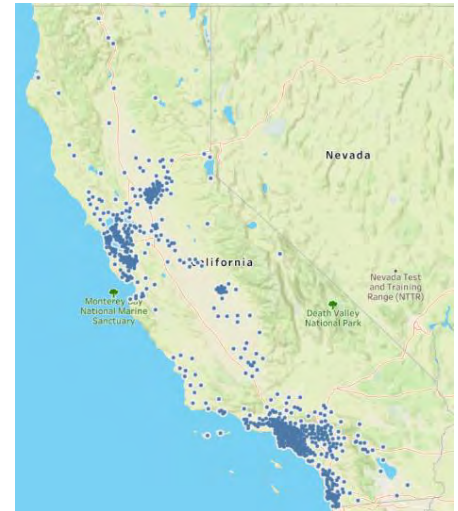
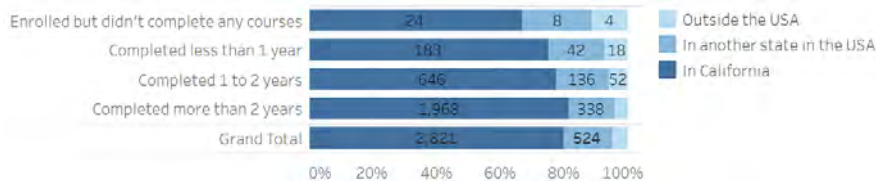
- 65 percent said lower cost was a reason for taking summer courses at a non-UC institution. Slightly higher proportions of African American, Asian American and Chicano/Latino students cited lower cost as a reason compared to white students.
- 69 percent of first generation students said lower cost was a factor and 64 percent of Pell Grant recipients.



⁴¹ UCUES summer sessions survey results (<https://www.universityofcalifornia.edu/infocenter/summer-enrollment>)

IRAP survey of UC non-degree population (fall 2021)

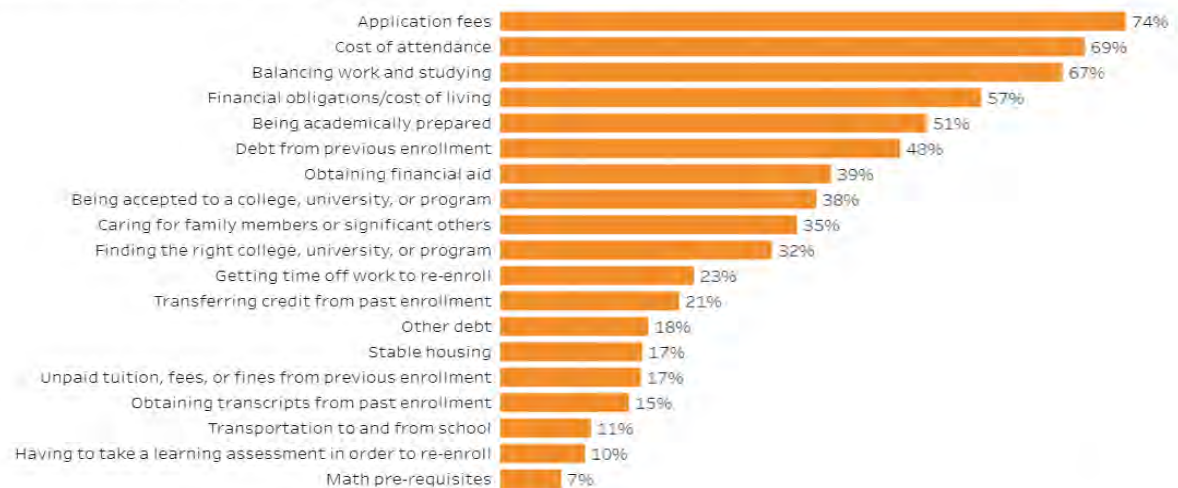
IRAP conducted a survey of UC recipients who started but did not complete a degree and received over 3,500 responses.⁴² UC received responses for every campus, ranging from around 175 for UCM to around 425 for UCD. The majority of respondents completed more than two years and still live in California (see display for location of respondents across the state).



Some of the key findings from this survey include:

- Almost 90 percent of respondents were interested (somewhat to very) in finishing their degree or certificate – 52 percent were very interested
 - 92 percent of those reporting interest said they wanted to get a bachelor's degree
 - 62 percent indicated they would be willing to get a General/Liberal Studies degree
- More than half had personal reasons to want to complete a degree (36 percent to achieve a personal goal, 15 percent for personal satisfaction and 4 percent to be a role model to others) and more than 40 percent for career reasons (21 percent to increase earning potential, 12 percent to get a better job and 7 percent to change a career)
- 64 percent are working full-time, 13 percent part time and 12 percent unemployed
- Half wanted online learning (27 percent completely and 24 percent mostly), 25 percent wanted half online and half in-person, and 24 percent wanted in-person (14 percent mostly in person)
- Financial reasons were many of the top obstacles to finishing a degree (see bar chart below)

What obstacles do you face in returning to finish your degree or earn a certificate?



⁴² UC degree non-completion survey results (<https://www.universityofcalifornia.edu/infocenter/degreecompletion>)

Accelerated courses topped the list on what would make it easier to return to finish a degree, followed by financial aid, flexible courses and then advising/guidance support.

Responses to “what would make it easier for you to return to finish your degree?”



Education Advisory Board report on non-degree population

Education Advisory Board (EAB) surveyed over 1,000 prospective degree completers⁴³ and found similar results to the UC survey and provided recommendations to support outreach, reduce barriers and support degree completion. The survey found:

- 49 percent seek an opportunity to better themselves and 41 percent to better their family
- 56 percent see increased earnings as a top benefit to degree completion, 40 percent a better life
- 48 percent have got a lot of things to figure out before going back to schools, compared to 34 percent that are excited about returning
- 67 percent are concerned about being able to afford it, 47 percent about having enough time, and 43 percent both concerned about the return on investment and/or being able to finish
- 67 percent want to know the program is designed for degree completers, 61 percent want help to customize a plan and 61 percent want college credit for prior experience

EAB believes an effective recruitment strategy proactively addresses degree completers' concerns about time to completion and cost, along with showcasing students with similar experiences. It is critical to audit program admission requirements to avoid unnecessary hurdles for degree completers, benchmark costs against local and regional competitors, and meet student/employer demand. A prior EAB report⁴⁴ provided a path to persistence which included the following set of strategic interventions for adult and online learners:

- Monitor stop-out risk including financial (e.g., financial hold reconciliation, self-service financial aid counseling), academic and engagement risk
- Encourage re-enrollment (e.g., registration reminders to the next course in programs)
- Facilitate adult degree completion (e.g., expedited re-admit procedures, second opportunity financial incentives and statewide completion one-stop shop)

Undergraduate course drop rates by instruction modality and campus (2019-2020)

⁴³ Understanding and Recruiting Adult Degree Completers (EAB 2020 report)

⁴⁴ Charting a Path to Persistence – Strategic Interventions for Adult and Online Learners (2015 report)

		Lower Division		Upper Division				Lower Division		Upper Division	
		Summer	Fall	Summer	Fall			Summer	Fall	Summer	Fall
Berkeley	In-Person	All students	3%	3%	3%	Riverside	In-Person	All students	0%	2%	0%
		Pell recipients	3%	3%	3%			Pell recipients	0%	2%	1%
		First generation	3%	3%	3%			First generation	0%	2%	0%
		Underrepresented groups	3%	3%	3%			Underrepresented groups	0%	2%	0%
	Online	All students	3%	7%	7%		Online	All students	1%	2%	0%
		Pell recipients	4%	7%	7%			Pell recipients	0%	3%	0%
		First generation	3%	9%	9%			First generation	0%	2%	0%
		Underrepresented groups	7%	11%	11%			Underrepresented groups	1%	3%	0%
Davis	In-Person	All students	5%	2%	3%	San Diego	In-Person	All students	0%	4%	0%
		Pell recipients	6%	2%	4%			Pell recipients	0%	4%	0%
		First generation	5%	2%	3%			First generation	0%	4%	0%
		Underrepresented groups	6%	2%	4%			Underrepresented groups	0%	4%	0%
	Online	All students	3%	4%	3%		Online	All students	5%	0%	3%
		Pell recipients	2%	3%	5%			Pell recipients	11%	0%	6%
		First generation	2%	4%	4%			First generation	10%	0%	4%
		Underrepresented groups	3%	5%	6%			Underrepresented groups	0%	0%	4%
Irvine	In-Person	All students	3%	2%	2%	Santa Barbara	In-Person	All students	0%	3%	0%
		Pell recipients	3%	2%	2%			Pell recipients	0%	3%	0%
		First generation	3%	2%	2%			First generation	0%	3%	0%
		Underrepresented groups	3%	3%	2%			Underrepresented groups	0%	3%	0%
	Online	All students	3%	3%	3%		Online	All students	1%	4%	0%
		Pell recipients	3%	4%	2%			Pell recipients	1%	6%	1%
		First generation	2%	3%	2%			First generation	1%	5%	0%
		Underrepresented groups	3%	4%	3%			Underrepresented groups	1%	6%	0%
Los Angeles	In-Person	All students	3%	3%	2%	Santa Cruz	In-Person	All students	0%	2%	0%
		Pell recipients	3%	4%	2%			Pell recipients	0%	2%	0%
		First generation	3%	4%	2%			First generation	0%	2%	0%
		Underrepresented groups	2%	3%	2%			Underrepresented groups	1%	2%	0%
	Online	All students	5%	3%	4%		Online	All students	0%	4%	0%
		Pell recipients	5%	6%	6%			Pell recipients	1%	6%	0%
		First generation	5%	5%	5%			First generation	1%	4%	0%
		Underrepresented groups	6%	5%	5%			Underrepresented groups	0%	5%	1%
Merced	In-Person	All students	2%	4%	1%			All students	0%	4%	0%
		Pell recipients	2%	4%	1%			Pell recipients	1%	6%	0%
		First generation	2%	5%	1%			First generation	1%	4%	0%
		Underrepresented groups	3%	5%	1%			Underrepresented groups	0%	5%	1%
	Online	All students	2%	0%	7%			All students	0%	4%	0%
		Pell recipients	3%	0%	6%			Pell recipients	1%	6%	0%
		First generation	3%	0%	8%			First generation	1%	4%	0%
		Underrepresented groups	3%	0%	11%			Underrepresented groups	0%	5%	1%

Campus plans for online versus in-person instruction for summer sessions 2022**Background:**

The extent to which campus Academic Senates are allowing remote and online courses in Summer 2022 varies. Some campuses are reporting that the campus Senate divisions are relaxing the rules on online and/or remote approval for Summer 2022, while others noted either a return to pre-pandemic course approvals or a more burdensome process than during the pandemic. Below the status by campus as of December 7, 2021.

Campus plans

Berkeley - Pre-pandemic online course approval process has been simplified and departments are encouraged to obtain approval for flexible scheduling in both online and in-person (see here for further information: <https://academic-senate.berkeley.edu/coci-handbook/2.5>)

Davis - Pre-pandemic online course approval process. There is resistance from leadership/senate. Returning to in person only for 2022 with the exception of online courses that were approved pre-pandemic courses. Any future online courses need to go through the COCI, which takes approximately 18 months for approval.

Irvine - Pre-pandemic online course approval process. Simple one-page supplemental form.

Los Angeles - Undergraduate Council temporarily authorized the expedited process of approval for fully remote undergraduate courses

Merced – The Academic Senate has put a temporary hold on any permanent approvals for online course modalities. They are accepting one-time temporary approvals for online courses for Summer 2022. Administrators are working with the deans and chairs to make as many online courses available as possible.

Riverside - In person. No exceptions. However, there are discussions currently slated for January 2022 with the senate so any support from UCOP or other UCs would be helpful.

San Diego - In person. Current process to get remote modality approved is burdensome for faculty and departments. Campus leadership is meeting with the Academic Senate in December requesting more flexibility during summer for remote and/or online courses.

Santa Barbara - In person and approved online. Currently planning for all in-person except for approved fully online courses. However, the Senate is being asked to offer some flexibility, particularly for bottleneck or high enrollment courses. The discussions so far have been very positive.

Santa Cruz - Senate delegated authority to course sponsoring units to determine in person or remote instructional mode.

Impact of online instruction in calculus courses on subsequent course performance at UC Santa Cruz**Impact of Online Instruction in Calculus Courses on Subsequent Course Performance at UC Santa Cruz**

The purpose of this study was to investigate the impact of the mode of instruction (online vs. face-to-face) of the campus' calculus courses that have an online option (Math 19A, Math 19B, Math 23A) on student learning, taking into account students' differing levels of academic preparation. This analysis was undertaken in consultation with one of the online calculus course developers, the Chair of CEP, and representatives of the Division of Physical and Biological Sciences.

Method:

The extent to which students successfully learned the course material was measured by the grades students earned in a subsequent, or "downstream" course that relied significantly on the material taught in one of the courses under investigation, and that did not have another prerequisite as a filter. Because grading practices can vary both by instructor and by variations in student performance between sections, only course pairs in which individual sections of downstream courses included both students who took the "upstream" calculus course online and others who took it face-to-face were considered.

Five course pairs in which the downstream course depends on the material taught in the upstream course, does not have another similar prerequisite as a filter, and that simultaneously enrolled students who took the upstream course face-to-face and online were identified:

- Math 19B → Math 22
- Math 19B → AMS 20
- Math 19B → EART 111
- Math 19A → EART 110A
- Math 23A → CMPE 107

Analyses were restricted to people in the downstream course who:

- only took the upstream course once;
- took the upstream class at UCSC before the downstream class;
- took the downstream class within three years of taking the upstream class;
- were taking the downstream course for the first time; and
- did not take the upstream course in the summer.

Results

Restricting the analyses to these conditions resulted in the need to eliminate the two course pairs involving Earth Science courses from the study because of insufficient cell sizes. The counts of enrollments meeting the criteria for the study as a subset of total enrollment by course pair and section are presented in Table 1.

Table 1

Counts of Students who met Study Criteria by Course Pair and Term

Course Pair/ Term	Criteria		
	Enrolled in Downstream Course	Enrolled for 1 st Time	Took Upstream Course at UCSC in FWS, only once, less than 3 years prior
Math 19B/Math 22			
Spring 2015	255	230	54
Winter 2016	205	177	49
Winter 2017	219	200	37
All Math 19B/22	679	607	140
Math 19B/AMS 20			
Winter 2016	135	125	91
Spring 2016	114	94	60
Winter 2017	137	125	82
Spring 2017	102	100	61
All Math 19B/AMS 20	488	444	294
Math 23A/CMPE 107			
Spring 2016	206	204	129
Winter 2017	280	266	153
Spring 2017	363	346	240
All Math 23A/CMPE 107	849	816	522

Mean grade points, DFW (including C- and NP) rates, and B or above rates for each of the individual sections, as well as the combined sections in each of the identified course pairs are presented in the Tables 2 through 4 below. T-tests were conducted to compare mean grade points in downstream courses by mode of instruction (online vs. face-to-face) in upstream courses. Chi square analyses were used to test for differences in DFW rates, and B or above rates. Statistically significant differences are marked with asterisks.

Table 2

Math 22 Grades by Math 19B Mode of Instruction

		Mode of Instruction						
		Face-to-Face			Online			
Term	n	Mean Grade Points*	DFW Rate	B or Above Rate	n	Mean Grade Points*	DFW Rate	B or Above Rate
Spring 2015	34	2.53	12%	53%	20	2.31	15%	35%
Winter 2016	10	2.30	31%	38%	39	2.55	21%	46%
Winter 2017	19	2.21	21%	42%	18	2.59	6%	44%
All	63	2.40	16%	48%	77	2.50	16%	43%

*Based only on grades used to determine GPA. Grades of P, NP, I, and U excluded from calculation.

In individual sections of Math 22, differences in mean grade points between students who took Math 19B online or face-to-face were in an inconsistent direction (in two sections the online students had a higher average grade point than the face-to-face students, and in one case the face-to-face students earned a higher average

GPA), and none of the small differences were statistically significant. Small cell sizes may have contributed to relatively low power to detect significant differences, but even when collapsed across sections, there was not a significant difference in the mean grade points in Math 22 based on the mode of instruction in Math 19B. Neither was there a significant difference in DFW rates or B or above rates in any of the individual sections or across all of the sections combined.

Table 3

AMS 20 Grades by Math 19B Mode of Instruction

		Mode of Instruction						
		Face-to-Face			Online			
Term	n	Mean Grade Points*	DFW Rate	B or Above Rate	n	Mean Grade Points*	DFW Rate	B or Above Rate
Winter 2016	38	2.47	21%	37%	53	2.62	15%	60%
Spring 2016	21	2.76	14%	67%	39	2.98	10%	77%
Winter 2017	36	3.00	6%	67%	46	3.11	6%	70%
Spring 2017	25	3.02	0%	70%	36	2.98	6%	74%
All	120	2.79	11%	58%	174	2.90	10%	69%

*Based only on grades used to determine GPA. Grades of P, NP, I, and U excluded from calculation.

In AMS 20, grades, whether measured by mean grade points, DFW Rates or B or above rates, were marginally better among students who had taken Math 19B online than face-to-face in three of the four sections, while the reverse was true in one section. As was the case in the Math 19B/Math 22 pair, none of the small observed differences, in either direction or in how grades were measure were statistically significant. There were also no significant differences in mean grade points, DFW rates or B or above rates when collapsed across all of the sections.

Table 4

CMPE 107 Grades by Math 23A Mode of Instruction

		Mode of Instruction						
		Face-to-Face			Online			
		Mean		B or		Mean		B or
		Grade	DFW	Above		Grade	DFW	Above
Term	<i>n</i>	Points*	Rate	Rate	<i>n</i>	Points*	Rate	Rate
Spring 2016	104	2.88	16%	64%	25	2.71	32%	52%
Winter 2017	95	3.47	4%	86%	58	3.46	3%	90%
Spring 2017	88	2.81**	9%	65%	152	3.03**	5%	76%
All	287	3.08	10%	72%	235	3.13	7%	78%

*Based only on grades used to determine GPA. Grades of P, NP, I, and U excluded from calculation.

** $p < .05$

In one of the three sections of CMPE that were analyzed, the section offered in Spring 2017, there was a statistically significant difference in mean grade points. Students who took Math 23A online had a higher average grade point than students who took Math 23A face-to-face, $p < .05$. None of the other differences in mean grade

points, DFW rates, or B or above rates in any of the other sections or when all of the sections were combined reached statistical significance.

In addition to directly comparing students' performance in downstream classes based on the mode of instruction in their upstream calculus courses, the potential impact of individual differences in students' level of preparation was considered. To control for the effects of academic preparation, regression analyses on grade points in downstream courses were conducted using mode of instruction in the upstream calculus course as the predictor and SAT Math scores and upstream course grades as covariates. Because sample sizes were too small to use individual sections of course offerings, data were collapsed across sections within a course pair. Results of the hierarchical regression analyses are presented in Table 5.

Table 4

Significance of Predictors on Downstream Course Grades by Course Pairs

Course Pair	Covariates		
	SAT Math Score	Upstream Course Grade	Upstream Course Mode
Math 19B/Math 22	n.s	$p < .001$	n.s
Math 19B/AMS 20	n.s	$p < .001$	n.s
Math 23A/CMPE 107	$p < .001$	$p < .05$	n.s

As expected, given the previous results, whether students took an upstream calculus course online or face-to-face did not predict their grades in the any of the downstream courses. In CMPE 107, SAT Math scores significantly predicted course grades, $p < .001$. SAT Math scores were not significant predictors of either Math 22 or AMS 20 grades.

In all three of the course pairs, students' grades in the upstream calculus courses, regardless of how they were taught, were significant predictors of downstream course grades. This should not be surprising if indeed the downstream course depended on material covered in the upstream course. Although grading practices may differ from section to section and instructor to instructor, course grades are always a relative ranked indicator of students' mastery of the course material.

Discussion:

Based on this approach to inferring the impact of online vs. face-to-face instruction on student learning there appears to be no effect. The grade differences in individual sections of downstream course grades based on mode of instruction in the upstream classes were statistically insignificant except in a single instance. When pooled across sections there were no significant differences.

By contrast, students with higher grades in an upstream calculus courses consistently had higher grades in the downstream course. This is encouraging in

that it suggests that students' relative performance in a class, regardless of how it is taught, is by far the best indicator of how they will do in subsequent classes.

These findings should be interpreted cautiously. In most sections cell sizes were small, resulting in low power to detect differences. Furthermore, there were a number of potential pairings that could not be analyzed using these criteria since all or most students in the potential downstream classes took the upstream version of calculus course in only one mode or the other.

This study also did not take into account any potential differences in students' choice of mode of instruction. Some students may have intentionally chosen to take a specific calculus course either online or face-to-face, while other students may have felt based on the timing of course offerings that they did not have a choice. There was no way to make that distinction in these analyses, and that may be a contributing factor in how well students learn the course material.

An additional confounding factor is that using grades in subsequent courses to those under investigation introduces a selection bias. Students who performed poorly in the upstream courses would have either repeated the course or would not have gone on to the next course in the sequence and would thus have been eliminated from these analyses. Those differences may not have been equally distributed across the two modes of instruction of the class.

Finally, grades are an indirect indicator of student learning at best. An alternative approach to evaluating the effectiveness of online instruction in calculus courses would be to use an equivalent student product, such as an exam or assignment, designed to measure (an) agreed upon learning outcome(s) to evaluate learning in the actual classes under investigation.

Campus profiles on key metrics

The following campus profiles provide data on four- and two-year graduation rates, first-year retention, average units attempted, and UC students who started but did not receive a degree from UC or any other four-year institution. In most cases, data has been disaggregated by freshman and transfer entrants and also provides data on gaps by percentages and counts, which can vary based on cohort size. The table below provides an example for one UC campus that shows a greater percent gap between Pell and URG students, but the difference is much smaller in terms of count because there are fewer URG than Pell students in this cohort. By reframing the data this way, it may highlight opportunities, target support or prioritize areas where campuses want to focus efforts to eliminate gaps.

	Cohort	Percent Gap	Calculating Gap	Count
Pell	2,787	9.2%	2,787x.092	256
Underrepresented	1,894	15.3%	1,894x.153	289

Retention and graduation rate data can be found in the [Undergraduate graduation rate dashboard](#) and it can provide an ability to do a deeper dive to determine if there are greater opportunities or need for students that overlap multiple demographic categories (i.e., Pell and first generation and URG).

IRAP calculated the average units attempted from campus-provided census enrollment data files. Within the sparklines, the green bar highlights the high point in average units taken and the red bar is the low point.

Degree non-completer data comes the [Undergraduate degree non-completion dashboard](#) which provides additional data on number of years attending UC, average GPA and degree completion at other institutions (e.g., other UC campus, CSU, or another four-year institution). In addition, IRAP conducted a survey of students who started but did not complete a degree and received sufficient responses to provide data by campus. Those survey responses can be found in the [Degree non-completion dashboard](#).

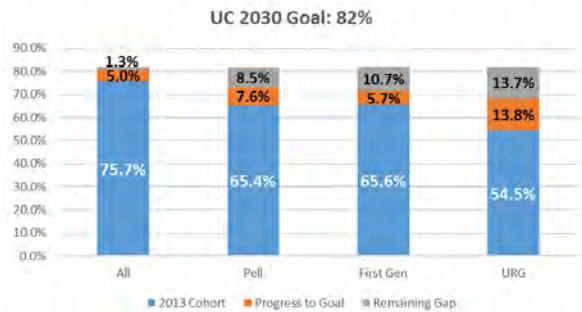
The goal in producing these campus profiles is that it may help identify where to prioritize support, including

- Identifying areas where there are greater equity gaps or programmatic support to prioritize (e.g., freshman or transfer entrants, Pell, first generation or underrepresented students)
- Understanding how fall 2020 first-year retention translate into the number of students that stopped out compared to fall 2019 first-year retention rates (e.g., determining if there are particular groups to target with re-entry support)
- Examining whether there is a change in average units taken and if a decline may further result in a drop in timely graduation rates
- Understanding which students and in which program are more likely to leave without a degree
- Determining if there are particular populations to target with re-entry or degree completion programs
- Examining data for other UC campuses and whether there are opportunities to learn more from one another

IRAP is available to discuss this data and respond to any questions. In addition, we would appreciate any feedback on whether this kind of information is useful or if there is alternate information we could provide to support campus efforts to achieve UC 2030 goals and/or increase capacity.

UC Berkeley

Four-year freshman graduation rates



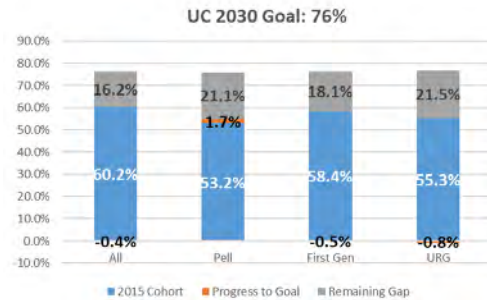
For the fall 2017 cohort, 131 more Pell grant recipients, 142 first generation, and 154 URG freshman entrants would need to graduate in four years to eliminate gaps.

First-year freshman retention

	2016	2017	2018	2019	2020	Trend
All Freshmen	97.2%	96.7%	96.8%	96.1%	95.9%	■ ■ ■ ■ ■
Pell	95.9%	96.8%	96.1%	97.0%	93.7%	■ ■ ■ ■ ■
First Gen	95.0%	95.6%	95.0%	95.6%	92.9%	■ ■ ■ ■ ■
URG	94.8%	95.2%	93.8%	96.5%	93.1%	■ ■ ■ ■ ■

For the fall 2020 cohort, 53 more Pell grant recipients, 48 first generation, and 53 URG freshman entrants would need to return to fall 2019 retention rate.

Two-year transfer graduation rates



For the fall 2019 cohort, 253 more Pell grant recipients, 208 first generation, and 144 URG transfer entrants would need to graduate in two years to eliminate gaps.

First-year freshman retention

	2016	2017	2018	2019	2020	Trend
All Transfers	93.4%	94.5%	95.3%	92.3%	92.4%	■ ■ ■ ■ ■
Pell	94.4%	94.4%	96.1%	96.0%	93.4%	■ ■ ■ ■ ■
First Gen	94.3%	94.6%	95.8%	94.4%	92.9%	■ ■ ■ ■ ■
URG	94.7%	94.4%	94.7%	94.1%	92.3%	■ ■ ■ ■ ■

For the fall 2020 cohort, 26 more Pell grant recipients, 17 first generation, and 12 URG freshman entrants would need to return to fall 2019 retention rate.

Average Units Attempted

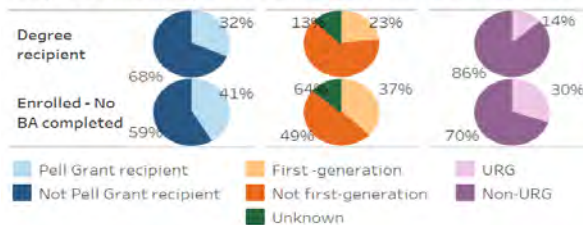
	Fall 2019	Fall 2020	Fall 2021	Trend
All UGs	14.7	14.8	14.5	■ ■ ■ ■
First Gen	14.1	14.2	13.9	■ ■ ■ ■

	Fall 2019	Fall 2020	Fall 2021	Trend
Pell	14.0	14.1	13.9	■ ■ ■ ■
URG	14.0	14.0	13.8	■ ■ ■ ■

Degree non-completers

4,000 freshman entrants left without a degree, either from UC or another institution, over the last 16 years.

They are more likely to be from underserved populations.



They are most likely to not have declared a major.

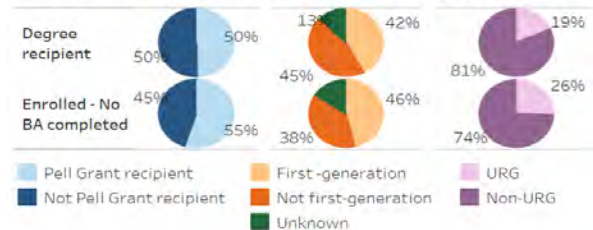
UC major as of final term enrolled and quarter units completed

Major	Under 15	15 to 50	50 to 100	Over 100	All
Undeclared	79%	78%	52%	9%	50%
Social Sciences	1%	10%	19%	9%	9%
Arts & Humanities		2%	12%	26%	12%
Biological Sci	2%	2%	3%	6%	3%
Engnr & CS	13%	10%	10%	11%	11%
Phys Sci/Math	3%	3%	4%	9%	5%
Business			0%	1%	0%

Degree non-completers

1,800 CCC transfer entrants left without a degree, either from UC or another institution, over the last 16 years.

They are more likely to be from underserved populations.



They are most likely to not have declared a major.

UC major as of final term enrolled and quarter units completed

Major	Under 15	15 to 50	50 to 100	Over 100	All
Undeclared	62%	27%	34%	5%	28%
Social Sciences	7%	17%	17%	26%	18%
Arts & Humanities	8%	23%	21%	35%	24%
Biological Sci	1%	5%	2%	4%	3%
Engnr & CS	9%	7%	7%	6%	7%
Phys Sci/Math	5%	7%	5%	10%	7%
Business	1%	1%	1%	1%	1%

UC Davis

Four-year freshman graduation rates

UC 2030 Goal: 77% (75% for URG)



For the fall 2017 cohort, 349 more Pell grant recipients, 411 first generation, and 333 URG freshman entrants would need to graduate in four years to eliminate gaps.

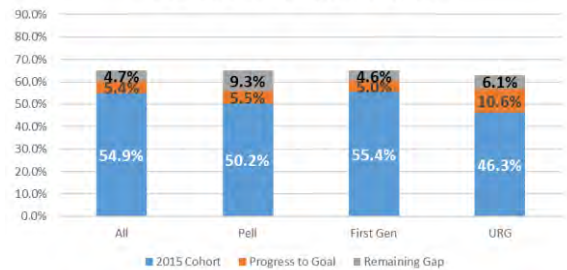
First-year freshman retention

	2016	2017	2018	2019	2020	Trend
All Freshmen	92.6%	91.8%	92.1%	92.8%	90.4%	■ ■ ■
Pell	90.9%	90.2%	90.5%	92.0%	86.4%	■ ■ ■
First Gen	89.9%	89.1%	89.5%	91.3%	85.6%	■ ■ ■
URG	89.0%	88.6%	88.8%	90.6%	86.1%	■ ■ ■

For the fall 2020 cohort, 112 more Pell grant recipients, 129 first generation, and 76 URG freshman entrants would need to return to fall 2019 retention rate.

Two-year transfer graduation rates

UC 2030 Goal: 65% (63% for URG)



For the fall 2019 cohort, 150 more Pell grant recipients, 86 first generation, and 79 URG transfer entrants would need to graduate in two years to eliminate gaps.

First-year freshman retention

	2016	2017	2018	2019	2020	Trend
All Transfers	90.8%	91.4%	92.0%	92.7%	90.7%	■ ■ ■
Pell	90.8%	91.0%	92.8%	92.9%	90.6%	■ ■ ■
First Gen	90.4%	90.0%	92.2%	93.1%	89.3%	■ ■ ■
URG	90.8%	90.7%	91.8%	92.4%	90.3%	■ ■ ■

For the fall 2020 cohort, 38 more Pell grant recipients, 57 first generation, and 17 URG freshman entrants would need to return to fall 2019 retention rate.

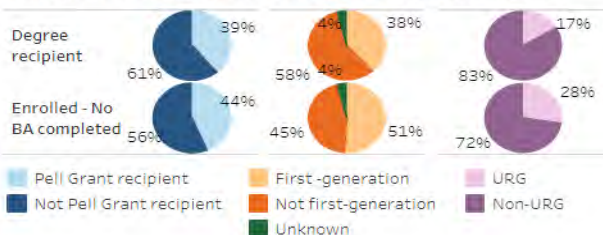
Average Units Attempted

	Fall 2019	Fall 2020	Fall 2021	Trend
All UGs	14.2	14.5	14.1	■ ■ ■
Pell	13.8	14.0	13.8	■ ■ ■
First Gen	13.9	14.2	13.9	■ ■ ■
URG	13.7	14.0	13.7	■ ■ ■

Degree non-completers

7,300 freshman entrants left without a degree, either from UC or another institution, over the last 16 years.

They are more likely to be from underserved populations.



These students were spread across disciplines.

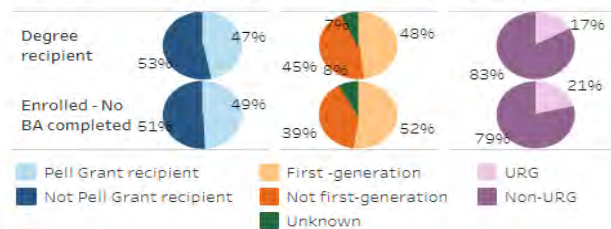
UC major as of final term enrolled and quarter units completed

Major	Under 15	15 to 50	50 to 100	Over 100	All
Undeclared	30%	22%	17%	5%	16%
Social Sciences	14%	13%	14%	19%	15%
Arts & Humanities	8%	8%	13%	19%	13%
Biological Sci	15%	17%	17%	17%	17%
Engnr & CS	17%	20%	19%	18%	19%
Phys Sci/Math	5%	5%	6%	5%	5%
Business	0%	0%	1%	2%	1%

Degree non-completers

2,600 CCC transfer entrants left without a degree, either from UC or another institution, over the last 16 years.

They are more likely to be from underserved populations.



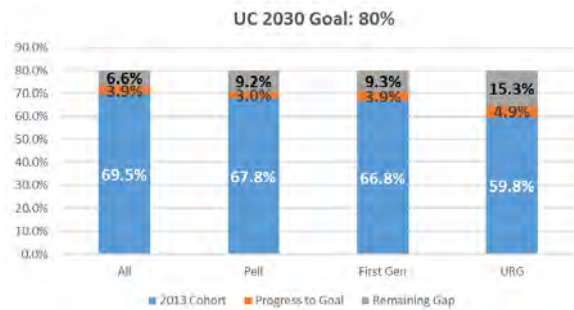
Almost a third majored in in Social Science fields.

UC major as of final term enrolled and quarter units completed

Major	Under 15	15 to 50	50 to 100	Over 100	All
Undeclared	1%	1%	1%	0%	0%
Social Sciences	32%	25%	33%	31%	31%
Arts & Humanities	19%	17%	17%	17%	17%
Biological Sci	17%	19%	15%	14%	15%
Engnr & CS	7%	6%	6%	7%	7%
Phys Sci/Math	7%	6%	7%	9%	8%
Business	0%	0%	0%	3%	2%

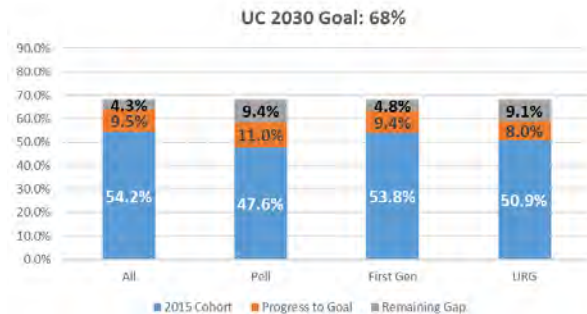
UC Irvine

Four-year freshman graduation rates



For the fall 2017 cohort, 256 more Pell grant recipients, 284 first generation, and 289 URG freshman entrants would need to graduate in four years to eliminate gaps.

Two-year transfer graduation rates



For the fall 2019 cohort, 138 more Pell grant recipients, 73 first generation, and 75 URG transfer entrants would need to graduate in two years to eliminate gaps.

First-year freshman retention

	2016	2017	2018	2019	2020	Trend
All Freshmen	93.9%	92.9%	93.9%	94.3%	93.4%	
Pell	93.8%	93.1%	93.0%	94.2%	94.0%	
First Gen	93.1%	92.0%	92.9%	93.3%	93.2%	
URG	90.9%	89.7%	90.7%	91.9%	91.2%	

For the fall 2020 cohort, 11 more Pell grant recipients, 4 first generation, and 9 URG freshman entrants would need to return to fall 2019 retention rate.

First-year freshman retention

	2016	2017	2018	2019	2020	Trend
All Transfers	93.3%	93.2%	93.6%	94.6%	93.4%	
Pell	94.0%	93.3%	93.2%	95.4%	94.5%	
First Gen	92.6%	93.2%	92.8%	94.8%	94.2%	
URG	93.4%	93.7%	92.3%	94.8%	92.5%	

For the fall 2020 cohort, 15 more Pell grant recipients, 9 first generation, and 18 URG freshman entrants would need to return to fall 2019 retention rate.

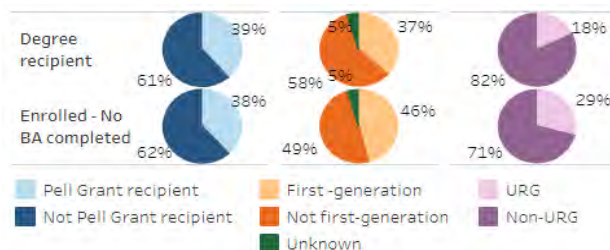
Average Units Attempted

	Fall 2019	Fall 2020	Fall 2021	Trend
All UGs	14.7	14.9	14.6	
Pell	14.3	14.6	14.2	
First Gen	14.4	14.7	14.4	
URG	14.3	14.5	14.1	

Degree non-completers

6,700 freshman entrants left without a degree, either from UC or another institution, over the last 16 years.

They are more likely first-generation and URG.



Over a third were in Social Science and Engineering/CS fields.

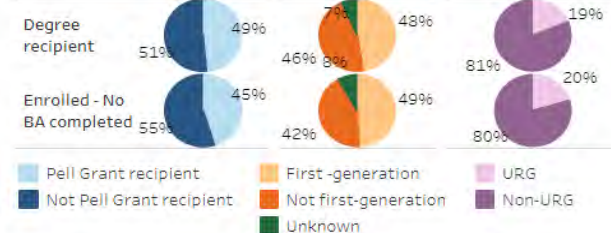
UC major as of final term enrolled and quarter units completed

Major	Under 15	15 to 50	50 to 100	Over 100	All
Undeclared	39%	26%	16%	3%	16%
Social Sciences	12%	12%	16%	29%	19%
Arts & Humanities	7%	8%	13%	16%	12%
Biological Sci	17%	19%	14%	9%	14%
Engnr & CS	16%	19%	16%	17%	17%
Phys Sci/Math	2%	4%	4%	5%	4%
Business	3%	3%	3%	4%	3%

Degree non-completers

2,000 CCC transfer entrants left without a degree, either from UC or another institution, over the last 16 years.

They closely mirror degree recipients and are less likely Pell.



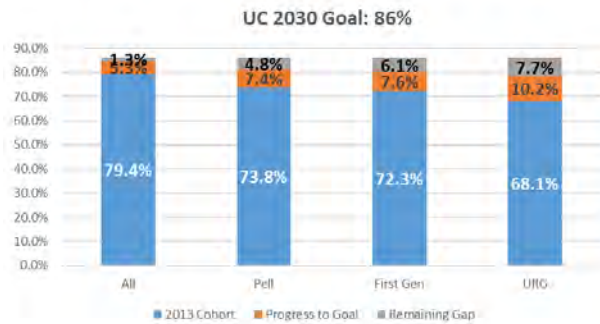
Four of ten majored in in the Social Sciences.

UC major as of final term enrolled and quarter units completed

Major	Under 15	15 to 50	50 to 100	Over 100	All
Undeclared	0%	1%	1%	0%	0%
Social Sciences	37%	40%	47%	35%	38%
Arts & Humanities	29%	26%	23%	19%	22%
Biological Sci	7%	8%	9%	8%	8%
Engnr & CS	10%	9%	8%	16%	13%
Phys Sci/Math	5%	8%	5%	6%	6%
Business			1%	3%	2%

UCLA

Four-year freshman graduation rates



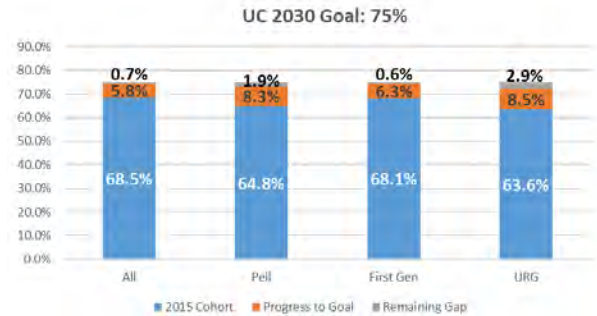
For the fall 2017 cohort, 95 more Pell grant recipients, 109 first generation, and 129 URG freshman entrants would need to graduate in four years to eliminate gaps.

First-year freshman retention

	2016	2017	2018	2019	2020	Trend
All Freshmen	96.5%	96.9%	96.4%	95.5%	96.9%	
Pell	96.4%	96.4%	95.4%	96.2%	95.9%	
First Gen	95.7%	95.7%	95.4%	95.7%	95.7%	
URG	95.8%	95.5%	95.0%	95.4%	96.0%	

For the fall 2020 cohort, 8 more Pell grant recipients would need to return to fall 2019 retention rate.

Two-year transfer graduation rates



For the fall 2019 cohort, 28 more Pell grant recipients, 10 first generation, and 26 URG transfer entrants would need to graduate in two years to eliminate gaps.

First-year transfer retention

	2016	2017	2018	2019	2020	Trend
All Transfers	95.4%	95.1%	95.2%	93.8%	94.7%	
Pell	95.7%	95.9%	95.6%	95.1%	96.6%	
First Gen	95.1%	94.5%	95.2%	94.5%	94.9%	
URG	94.9%	95.2%	95.3%	94.5%	95.5%	

Fall 2020 cohort retention rate was higher than the Fall 2019 cohort.

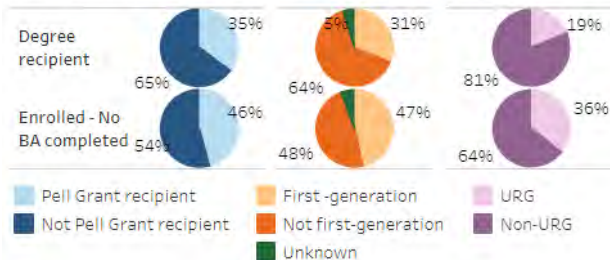
Average Units Attempted

	Fall 2019	Fall 2020	Fall 2021	Trend
All UGs	14.5	15.1	14.7	
Pell	14.2	14.7	14.4	
First Gen	14.3	14.7	14.3	
URG	14.3	14.7	14.4	

Degree non-completers

4,200 freshman entrants left without a degree, either from UC or another institution, over the last 16 years.

They are more likely to be from underserved populations.



One quarter majored in Arts & Humanities fields.

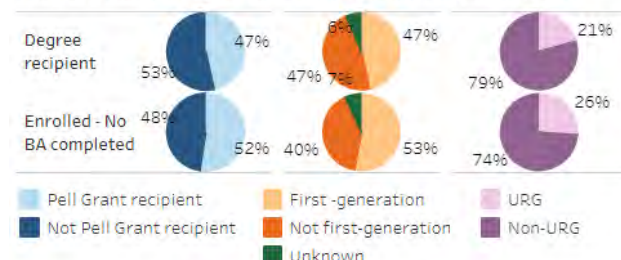
UC major as of final term enrolled and quarter units completed

Major	Under 15	15 to 50	50 to 100	Over 100	All
Undeclared	31%	28%	25%	9%	18%
Social Sciences	14%	14%	16%	25%	20%
Arts & Humanities	17%	16%	19%	32%	25%
Biological Sci	16%	16%	15%	13%	14%
Engnr & CS	8%	8%	9%	11%	9%
Phys Sci/Math	7%	7%	7%	7%	7%
Business	4%	8%	7%	1%	4%

Degree non-completers

2,600 CCC transfer entrants left without a degree, either from UC or another institution, over the last 16 years.

They are more likely to be from underserved populations.



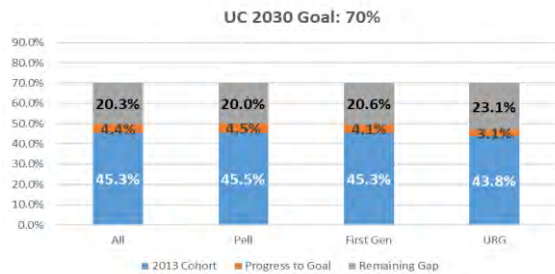
Four of ten majored in Arts & Humanities fields.

UC major as of final term enrolled and quarter units completed

Major	Under 15	15 to 50	50 to 100	Over 100	All
Undeclared	1%	3%	1%	3%	2%
Social Sciences	36%	32%	33%	29%	31%
Arts & Humanities	38%	31%	43%	40%	39%
Biological Sci	10%	15%	10%	7%	9%
Engnr & CS	5%	6%	3%	5%	5%
Phys Sci/Math	6%	7%	5%	12%	9%
Business	2%	1%	3%	1%	2%

UC Merced

Four-year freshman graduation rates



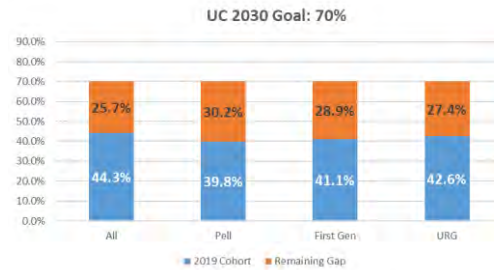
For the fall 2017 cohort, 326 more Pell grant recipients, 356 first generation, and 336 URG freshman entrants would need to graduate in four years to eliminate gaps.

First-year freshman retention

	2016	2017	2018	2019	2020	Trend
All Freshmen	80.3%	81.3%	84.5%	86.2%	78.4%	—
Pell	82.0%	82.1%	85.2%	86.2%	77.5%	—
First Gen	79.0%	80.6%	84.7%	85.7%	78.0%	—
URG	78.6%	79.4%	82.8%	85.0%	77.0%	—

For the fall 2020 cohort, 113 more Pell grant recipients, 113 first generation, and 108 URG freshman entrants would need to return to fall 2019 retention rate.

Two-year transfer graduation rates



For the fall 2019 cohort, 36 more Pell grant recipients, 37 first generation, and 26 URG transfer entrants would need to graduate in two years to eliminate gaps.

First-year transfer retention

	2016	2017	2018	2019	2020	Trend
All Transfers	93.6%	92.3%	85.3%	88.5%	80.3%	—
Pell	92.7%	91.7%	83.1%	89.4%	81.4%	—
First Gen	92.4%	93.0%	82.4%	86.0%	78.8%	—
URG	92.9%	94.8%	80.2%	86.2%	80.6%	—

For the fall 2020 cohort, 11 more Pell grant recipients, 12 first generation, and 7 URG freshman entrants would need to return to fall 2019 retention rate.

Average Units Attempted

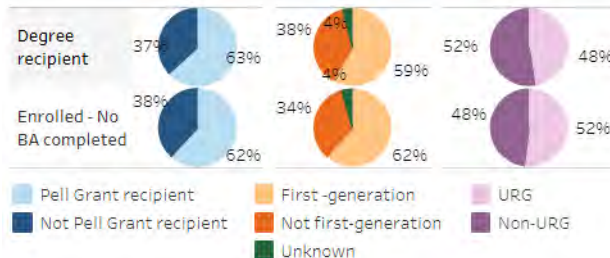
	Fall 2019	Fall 2020	Fall 2021	Trend
All UGs	14.9	15.3	15.1	—
First Gen	14.9	15.3	15.1	—

	Fall 2019	Fall 2020	Fall 2021	Trend
Pell	14.9	15.3	15.1	—
URG	15.0	15.3	15.1	—

Degree non-completers

2,800 freshman entrants left without a degree, either from UC or another institution, over the last 10 years.

They closely mirror degree recipients.



They are most likely to not have declared a major.

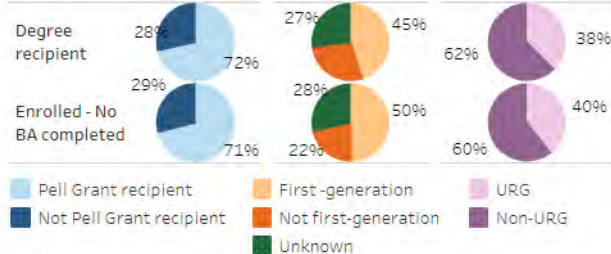
UC major as of final term enrolled and quarter units completed

Major	Under 15	15 to 50	50 to 100	Over 100	All
Undeclared	35%	45%	20%	5%	32%
Social Sciences	12%	12%	20%	18%	15%
Arts & Humanities	3%	2%	5%	5%	3%
Biological Sci	22%	15%	17%	28%	18%
Engnr & CS	19%	16%	20%	20%	18%
Phys Sci/Math	6%	5%	9%	13%	7%
Business	2%	4%	6%	8%	5%

Degree non-completers

200 CCC transfer entrants left without a degree, either from UC or another institution, over the last 10 years.

They mirror degree recipients, but more likely were first gen.

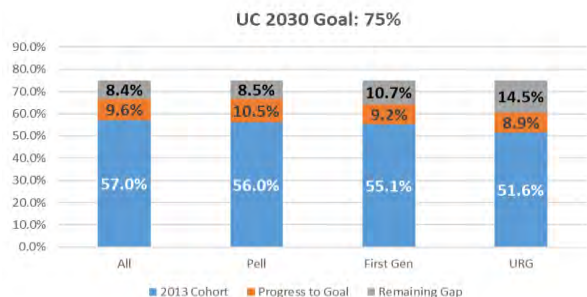


Almost a third were Social Science majors.

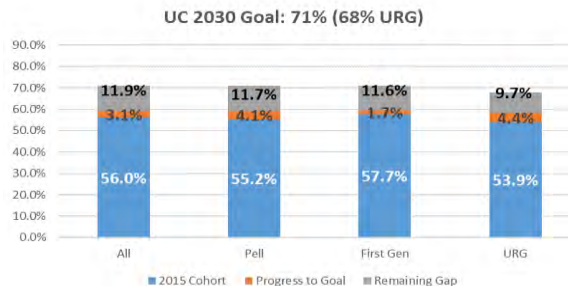
UC major as of final term enrolled and quarter units completed

Major	Under 15	15 to 50	50 to 100	Over 100	All
Undeclared	14%	11%	21%	7%	14%
Social Sciences	23%	21%	32%	35%	31%
Arts & Humanities		11%	2%	7%	5%
Biological Sci	32%	29%	13%	11%	16%
Engnr & CS	23%	21%	12%	14%	15%
Phys Sci/Math	9%	4%	7%	10%	8%
Business		4%	6%	6%	5%

Two-year transfer graduation rates







For the fall 2017 cohort, 222 more Pell grant recipients, 265 first generation, and 300 URG freshman entrants would need to graduate in four years to eliminate gaps.



For the fall 2019 cohort, 135 more Pell grant recipients, 144 first generation, and 128 URG transfer entrants would need to graduate in two years to eliminate gaps.

First-year freshman retention

	2016	2017	2018	2019	2020	Trend
All Freshmen	88.8%	89.0%	89.6%	90.9%	87.6%	
Pell	89.1%	89.9%	90.4%	91.6%	86.8%	
First Gen	88.4%	87.9%	88.1%	90.7%	84.8%	
URG	87.0%	87.0%	87.0%	89.5%	84.2%	

For the fall 2020 cohort, 124 more Pell grant recipients, 156 first generation, and 119 URG freshman entrants would need to return to fall 2019 retention rate.

First-year freshman retention

	2016	2017	2018	2019	2020	Trend
All Transfers	90.0%	87.6%	89.1%	92.0%	87.6%	
Pell	90.7%	88.0%	90.5%	92.9%	88.0%	
First Gen	89.8%	86.1%	88.4%	92.3%	86.5%	
URG	89.8%	86.4%	89.1%	93.2%	87.4%	

For the fall 2020 cohort, 61 more Pell grant recipients, 80 first generation, and 63 URG freshman entrants would need to return to fall 2019 retention rate.

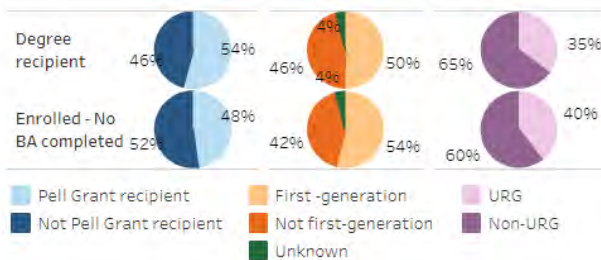
Average Units Attempted

	Fall 2019	Fall 2020	Fall 2021	Trend		Fall 2019	Fall 2020	Fall 2021	Trend
All UGs	14.3	14.5	14.0	<div><div></div><div></div><div></div></div>	Pell	14.2	14.4	14.0	<div><div></div><div></div><div></div></div>
First Gen	14.2	14.4	13.9	<div><div></div><div></div><div></div></div>	URG	14.2	14.3	13.9	<div><div></div><div></div><div></div></div>

Degree non-completers

11,600 freshman entrants left without a degree, either from UC or another institution, over the last 16 years.

They are less likely Pell, but more likely first gen and URG.



They are most likely to not have declared a major.

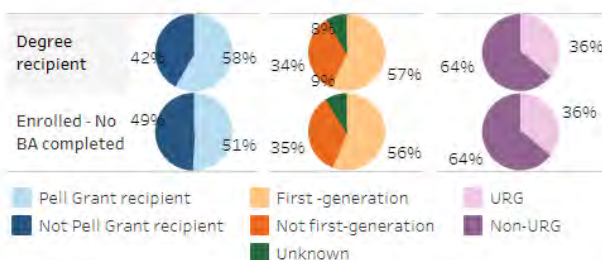
UC major as of final term enrolled and quarter units completed

Major	Under 15	15 to 50	50 to 100	Over 100	All
Undeclared	29%	32%	29%	9%	24%
Social Sciences	14%	14%	17%	27%	18%
Arts & Humanities	11%	11%	16%	23%	16%
Biological Sci	14%	13%	9%	10%	11%
Engnr & CS	13%	16%	15%	12%	14%
Phys Sci/Math	3%	3%	3%	4%	3%
Business	14%	10%	10%	10%	11%

Degree non-completers

1,900 CCC transfer entrants left without a degree, either from UC or another institution, over the last 16 years.

They are less likely Pell and mirror first gen and URG.



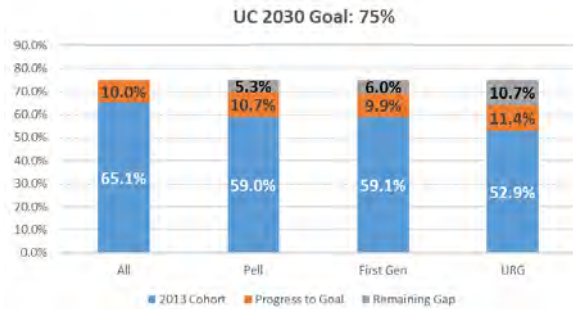
Almost a third were Social Science majors.

UC major as of final term enrolled and quarter units completed

Major	Under 15	15 to 50	50 to 100	Over 100	All
Undeclared	9%	10%	9%	4%	7%
Social Sciences	28%	26%	26%	34%	31%
Arts & Humanities	27%	26%	29%	24%	26%
Biological Sci	6%	5%	2%	7%	6%
Engnr & CS	11%	14%	4%	7%	8%
Phys Sci/Math	3%	3%	4%	5%	4%
Business	15%	15%	22%	13%	15%

UC San Diego

Four-year freshman graduation rates



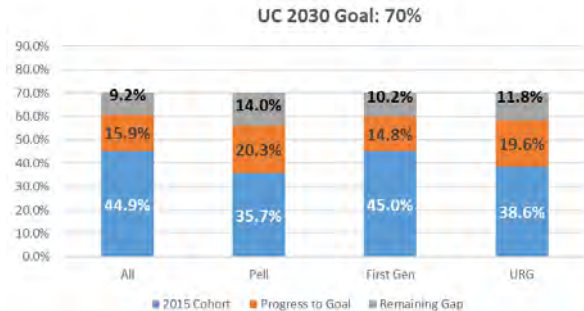
For the fall 2017 cohort, 125 more Pell grant recipients, 130 first generation, and 150 URG freshman entrants would need to graduate in four years to eliminate gaps.

First-year freshman retention

	2016	2017	2018	2019	2020	Trend
All Freshmen	94.2%	94.0%	93.4%	94.1%	94.9%	— — — — —
Pell	93.3%	92.9%	92.2%	94.0%	94.0%	— — — — —
First Gen	92.6%	92.5%	92.3%	94.1%	92.2%	— — — — —
URG	91.0%	90.4%	90.5%	93.0%	92.2%	— — — — —

For the fall 2020 cohort, 7 more Pell grant recipients, 33 first generation, and 11 URG freshman entrants would need to return to fall 2019 retention rate.

Two-year transfer graduation rates



For the fall 2019 cohort, 193 more Pell grant recipients, 143 first generation, and 90 URG transfer entrants would need to graduate in two years to eliminate gaps.

First-year transfer retention

	2016	2017	2018	2019	2020	Trend
All Transfers	92.6%	94.2%	93.3%	94.6%	91.5%	— — — — —
Pell	91.9%	95.2%	94.2%	95.1%	94.4%	— — — — —
First Gen	92.1%	93.9%	93.6%	95.1%	91.5%	— — — — —
URG	93.5%	93.6%	92.9%	95.9%	92.7%	— — — — —

For the fall 2020 cohort, 14 more Pell grant recipients, 56 first generation, and 25 URG freshman entrants would need to return to fall 2019 retention rate.

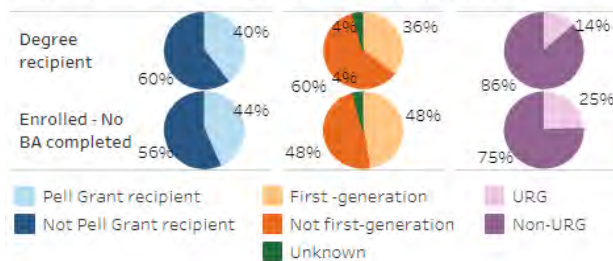
Average Units Attempted

	Fall 2019	Fall 2020	Fall 2021	Trend
All UGs	14.8	15.3	14.7	— — — — —
Pell	14.3	14.9	14.3	— — — — —
First Gen	14.4	15.0	14.4	— — — — —
URG	14.2	14.8	14.2	— — — — —

Degree non-completers

5,100 freshman entrants left without a degree, either from UC or another institution, over the last 16 years.

They are more likely to be from underserved populations.



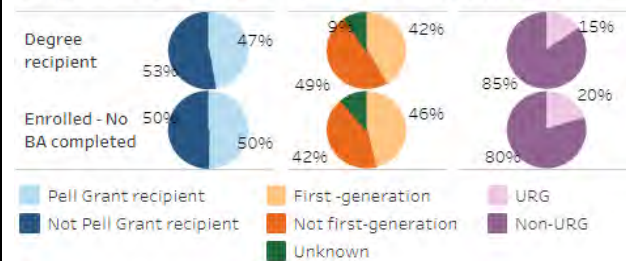
Four of ten were in Social Science and Engineering/CS fields. UC major as of final term enrolled and quarter units completed

Major	Under 15	15 to 50	50 to 100	Over 100	All
Undeclared	33%	23%	10%	0%	10%
Social Sciences	16%	19%	22%	22%	21%
Arts & Humanities	8%	8%	10%	12%	10%
Biological Sci	15%	15%	14%	17%	15%
Engnr & CS	14%	16%	18%	19%	18%
Phys Sci/Math	7%	10%	9%	11%	10%
Business	1%	2%	4%	3%	3%

Degree non-completers

2,500 CCC transfer entrants left without a degree, either from UC or another institution, over the last 16 years.

They are more likely to be from underserved populations.

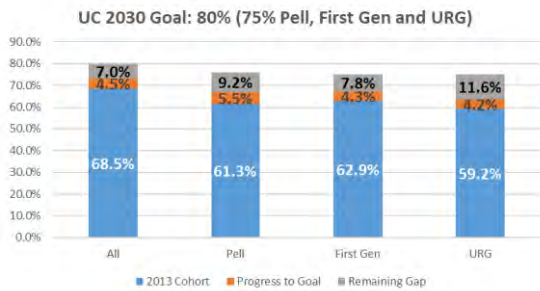


Almost one-third majored in Social Science fields. UC major as of final term enrolled and quarter units completed

Major	Under 15	15 to 50	50 to 100	Over 100	All
Undeclared	2%	1%	0%	0%	0%
Social Sciences	30%	32%	33%	30%	31%
Arts & Humanities	13%	11%	14%	12%	12%
Biological Sci	13%	15%	14%	15%	15%
Engnr & CS	18%	16%	16%	19%	18%
Phys Sci/Math	7%	12%	8%	10%	9%
Business	3%	3%	4%	2%	3%

UC Santa Barbara

Four-year freshman graduation rates



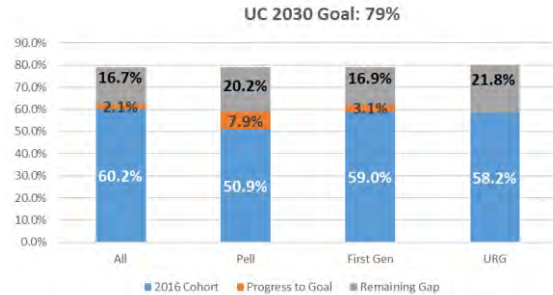
For the fall 2017 cohort, 154 more Pell grant recipients, 136 first generation, and 159 URG freshman entrants would need to graduate in four years to eliminate gaps.

First-year freshman retention

	2016	2017	2018	2019	2020	Trend
All Freshmen	92.4%	92.3%	91.8%	90.7%	90.8%	
Pell	92.3%	92.8%	90.7%	91.3%	88.1%	
First Gen	91.7%	91.2%	90.1%	89.4%	86.4%	
URG	90.9%	90.4%	88.1%	89.8%	86.5%	

For the fall 2020 cohort, 47 more Pell grant recipients, 48 first generation, and 42 URG freshman entrants would need to return to fall 2019 retention rate.

Two-year transfer graduation rates



For the fall 2019 cohort, 168 more Pell grant recipients, 147 first generation, and 133 URG transfer entrants would need to graduate in two years to eliminate gaps.

First-year freshman retention

	2016	2017	2018	2019	2020	Trend
All Transfers	91.8%	91.0%	90.9%	91.0%	87.8%	
Pell	91.6%	91.3%	90.9%	91.5%	89.9%	
First Gen	92.1%	89.3%	90.8%	90.7%	86.8%	
URG	91.0%	89.4%	90.6%	91.7%	87.3%	

For the fall 2020 cohort, 20 more Pell grant recipients, 39 first generation, and 31 URG freshman entrants would need to return to fall 2019 retention rate.

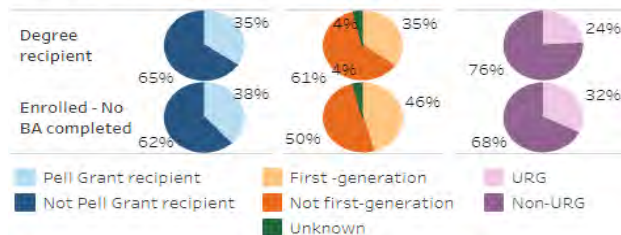
Average Units Attempted

	Fall 2019	Fall 2020	Fall 2021	Trend
All UGs	14.2	14.2	13.7	
Pell	13.8	14.0	13.4	
First Gen	14.0	14.1	13.6	
URG	13.8	13.8	13.4	

Degree non-completers

7,300 freshman entrants left without a degree, either from UC or another institution, over the last 16 years.

They are more likely to be from underserved populations.



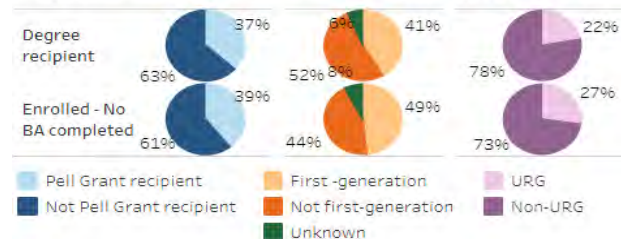
Four of ten were in Social Science, Arts & Humanities fields. UC major as of final term enrolled and quarter units completed

Major	Under 15	15 to 50	50 to 100	Over 100	All
Undeclared	29%	26%	20%	4%	17%
Social Sciences	15%	16%	19%	24%	20%
Arts & Humanities	13%	13%	20%	27%	20%
Biological Sci	16%	14%	12%	12%	13%
Engnr & CS	9%	10%	7%	7%	8%
Phys Sci/Math	4%	7%	8%	11%	8%
Business	8%	7%	5%	4%	5%

Degree non-completers

2,000 CCC transfer entrants left without a degree, either from UC or another institution, over the last 16 years.

They are more likely to be from underserved populations.

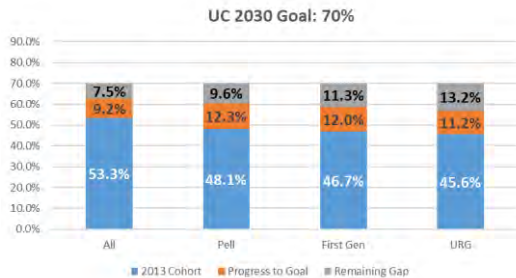


The majority were in Social Science, Arts & Humanities fields. UC major as of final term enrolled and quarter units completed

Major	Under 15	15 to 50	50 to 100	Over 100	All
Undeclared	0%	2%	2%	1%	1%
Social Sciences	25%	27%	29%	35%	31%
Arts & Humanities	29%	29%	30%	24%	26%
Biological Sci	4%	5%	4%	6%	5%
Engnr & CS	3%	3%	2%	2%	2%
Phys Sci/Math	6%	7%	5%	11%	9%
Business	13%	17%	12%	9%	12%

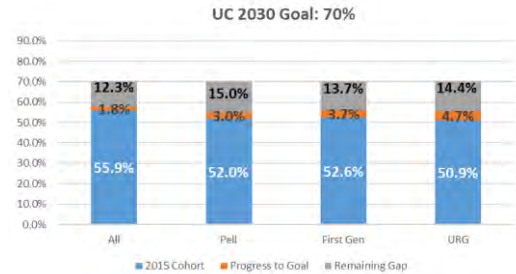
UC Santa Cruz

Four-year freshman graduation rates



For the fall 2017 cohort, 138 more Pell grant recipients, 156 first generation, and 164 URG freshman entrants would need to graduate in four years to eliminate gaps.

Two-year transfer graduation rates



For the fall 2019 cohort, 109 more Pell grant recipients, 92 first generation, and 76 URG transfer entrants would need to graduate in two years to eliminate gaps.

First-year freshman retention

	2016	2017	2018	2019	2020	Trend
All Freshmen	90.1%	87.7%	88.4%	84.8%	88.6%	■ ■ ■ ■ ■
Pell	92.0%	87.2%	87.1%	87.6%	84.7%	■ ■ ■ ■ ■
First Gen	89.9%	85.8%	85.2%	86.2%	82.4%	■ ■ ■ ■ ■
URG	88.4%	84.9%	84.4%	85.4%	83.4%	■ ■ ■ ■ ■

For the fall 2017 cohort, 52 more Pell grant recipients, 53 first generation, and 28 URG freshman entrants would need to return to prior year retention rate.

First-year freshman retention

	2016	2017	2018	2019	2020	Trend
All Transfers	92.9%	93.1%	89.6%	89.2%	88.2%	■ ■ ■ ■ ■
Pell	93.0%	93.6%	90.1%	90.4%	87.7%	■ ■ ■ ■ ■
First Gen	93.1%	92.4%	89.9%	88.2%	86.6%	■ ■ ■ ■ ■
URG	92.0%	93.6%	89.2%	87.9%	86.7%	■ ■ ■ ■ ■

For the fall 2019 cohort, 23 more Pell grant recipients, 12 first generation, and 7 URG freshman entrants would need to return to prior year retention rate.

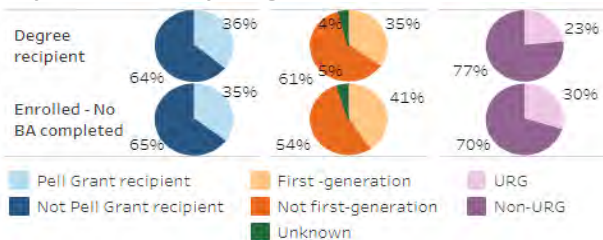
Average Units Attempted

	Fall 2019	Fall 2020	Fall 2021	Trend
All UGs	15.1	15.3	15.1	■ ■ ■ ■ ■
Pell	14.9	15.2	15.0	■ ■ ■ ■ ■
First Gen	15.0	15.2	14.9	■ ■ ■ ■ ■
URG	14.9	15.1	14.9	■ ■ ■ ■ ■

Degree non-completers

8,800 freshman entrants left without a degree, either from UC or another institution, over the last 16 years.

They were more likely first generation and URG students.



They are most likely to not have declared a major.

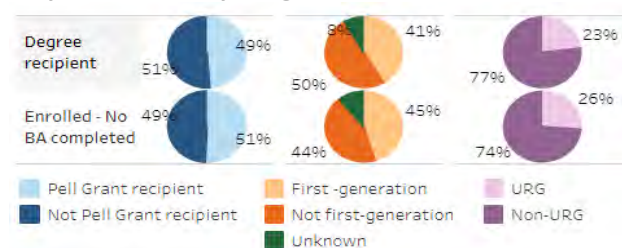
UC major as of final term enrolled and quarter units completed

Major	Under 15	15 to 50	50 to 100	Over 100	All
Undeclared	96%	93%	69%	16%	60%
Social Sciences	1%	2%	7%	19%	9%
Arts & Humanities	1%	3%	13%	26%	14%
Biological Sci		0%	3%	13%	5%
Engnr & CS	1%	1%	2%	7%	3%
Phys Sci/Math	0%	0%	1%	7%	3%
Business			3%	5%	2%

Degree non-completers

1,600 CCC transfer entrants left without a degree, either from UC or another institution, over the last 16 years.

They were more likely first generation and URG students.



They are most likely to not have declared a major.

UC major as of final term enrolled and quarter units completed

Major	Under 15	15 to 50	50 to 100	Over 100	All
Undeclared	79%	39%	38%	22%	29%
Social Sciences	6%	19%	20%	21%	19%
Arts & Humanities	3%	19%	21%	22%	21%
Biological Sci	1%	4%	6%	12%	10%
Engnr & CS		4%	5%	7%	6%
Phys Sci/Math	4%	7%	6%	10%	9%
Business	3%	4%	1%	3%	3%

Targeted CCCs for Expanded TPP Support

(sorted by UC Transfer Rates and shaded blue for regions with lower educational attainment levels or expected population growth)

CCC	Region	CCC Transfer Rate (5-yr avg.)	Approx. UC Transfer Rate (5-yr avg.)	%Pell	% African American	% Native American	% Latinx	% URG
CCC Syatemwide		39%	14%	53%	4%	0.3%	47%	52%
REEDLEY COLLEGE	North San Joaquin Valley	43%	1%	55%	2%	0.3%	59%	62%
PALO VERDE COLLEGE	Inland Empire	14%	1%	50%	5%	1.4%	58%	65%
LASSEN COLLEGE	Superior California	24%	1%	45%	12%	1.1%	19%	32%
FEATHER RIVER COLLEGE	Upper Sacramento Valley	37%	1%	31%	15%	1.4%	26%	42%
WEST HILLS COLLEGE COALINGA	North San Joaquin Valley	35%	2%	67%	6%	0.3%	76%	83%
WEST HILLS COLLEGE LEMOORE	South San Joaquin Valley	34%	2%	63%	3%	0.2%	61%	64%
COLLEGE OF THE SISKIYOU	Superior California	33%	2%	66%	6%	1.6%	11%	19%
PORTERVILLE COLLEGE	South San Joaquin Valley	33%	2%	81%	1%	0.2%	76%	78%
FRESNO CITY COLLEGE	North San Joaquin Valley	37%	3%	70%	4%	0.2%	58%	62%
COLLEGE OF THE REDWOODS	North Coast	29%	3%	61%	2%	5.5%	18%	26%
COLLEGE OF THE SEQUOIAS	South San Joaquin Valley	35%	3%	65%	2%	0.4%	63%	66%
BUTTE COLLEGE	Upper Sacramento Valley	37%	4%	60%	2%	2.1%	22%	27%
COPPER MOUNTAIN COLLEGE	Inland Empire	24%	4%	76%	2%	0.5%	27%	29%
ANTELOPE VALLEY COLLEGE	Los Angeles	31%	5%	67%	11%	0.3%	58%	69%
COLUMBIA COLLEGE	North San Joaquin Valley	27%	5%	54%	1%	1.3%	17%	19%
SOUTHWESTERN COLLEGE	San Diego-Imperial	27%	5%	60%	4%	1.8%	57%	63%
MODESTO JUNIOR COLLEGE	North San Joaquin Valley	32%	5%	61%	3%	0.4%	48%	51%
IMPERIAL VALLEY COLLEGE	San Diego-Imperial	36%	6%	77%	0%	0.0%	91%	91%
BARSTOW COLLEGE	Inland Empire	33%	6%	73%	6%	1.3%	46%	54%
CERRITOS COLLEGE	Los Angeles	29%	6%	73%	6%	0.1%	75%	81%
SAN BERNARDINO VALLEY COLLEGE	Inland Empire	31%	6%	66%	7%	0.2%	76%	82%
CERRO COSO COMMUNITY COLLEGE	South San Joaquin Valley	33%	7%	40%	1%	0.4%	39%	40%
MERCED COLLEGE	North San Joaquin Valley	33%	7%	72%	2%	0.1%	61%	63%
LOS ANGELES SOUTHWEST COLLEGE	Los Angeles	25%	7%	76%	52%	0.0%	42%	95%
OXNARD COLLEGE	Central Coast	29%	7%	68%	2%	0.0%	83%	85%
HARTNELL COLLEGE	Monterey Bay	33%	7%	63%	1%	0.2%	84%	85%
GROSSMONT CMTY COLLEGE	San Diego-Imperial	37%	8%	48%	5%	0.3%	35%	40%
CHAFFEY COLLEGE	Inland Empire	33%	8%	62%	7%	0.0%	67%	74%
CYPRESS COLLEGE	Orange County	40%	8%	55%	3%	0.1%	45%	48%
LONG BEACH CITY COLLEGE	Los Angeles	30%	8%	69%	7%	0.2%	64%	71%
COASTLINE COMMUNITY COLLEGE	Orange County	28%	8%	32%	10%	0.6%	34%	45%
CRAFTON HILLS COLLEGE	Inland Empire	34%	8%	42%	3%	0.3%	47%	50%
COLLEGE OF THE DESERT	Inland Empire	29%	8%	72%	3%	0.3%	74%	77%
VENTURA COLLEGE	Central Coast	41%	10%	46%	2%	0.1%	61%	63%
AMERICAN RIVER COLLEGE	Sacramento-Tahoe	34%	10%	60%	7%	0.5%	23%	31%
MORENO VALLEY COLLEGE	Inland Empire	32%	11%	58%	9%	0.1%	68%	77%
COSUMNES RIVER COLLEGE	Sacramento-Tahoe	37%	11%	54%	7%	0.3%	26%	34%
FOLSOM LAKE COLLEGE	Sacramento-Tahoe	42%	13%	35%	2%	0.2%	18%	20%
MOUNT SAN JACINTO COLLEGE	Inland Empire	33%	13%	61%	5%	0.7%	51%	57%
NORCO COLLEGE	Inland Empire	39%	14%	47%	4%	0.3%	59%	63%
SACRAMENTO CITY COLLEGE	Sacramento-Tahoe	39%	16%	57%	8%	0.3%	34%	42%
RIVERSIDE CITY COLLEGE	Inland Empire	37%	18%	59%	6%	0.2%	64%	70%
CLOVIS COMMUNITY COLLEGE	North San Joaquin Valley	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CCC transfer rate is based on the number of students transferring to a four-year institution by 6-years after entering the CCC with a behavioral intent to transfer.								
5-yr average based on entering 2009-2013 cohorts at CCC and the entering 2017 to 2021 cohorts at UC								
Demographics percentages are based on the most recent year of data available, entering cohort of 2013-14 at the CCCs								
Note: Clovis Community College data was not available, but is a part of the target area.								

Map of CCCs – Targeted (Expansion Opportunity CCCs) and Untargeted CCCs

