

**Office of the President**

**TO THE REGENTS OF THE UNIVERSITY OF CALIFORNIA:**

**DISCUSSION ITEM**

*For Meeting of November 15, 2018*

**PRELIMINARY PLANNING FOR A MULTI-YEAR FRAMEWORK**

**EXECUTIVE SUMMARY**

For 150 years, the University of California has expanded the horizons of knowledge. The ten UC campuses and five medical centers are ranked among the best in the world, but UC's reach extends beyond campus borders. A formidable job and industry creator, driver of innovation and new discoveries, and engine of economic mobility, the University has helped California become the fifth largest economy in the world. UC is widely regarded as the best public research university system in the world and has helped the state address challenges in the past and present. In looking ahead at how UC can continue to fulfill the future needs of California and the world, it embarks on a multi-year planning framework.

This item builds on prior discussions before the full Board in July and the Finance and Capital Strategies Committee in September. This discussion will share UC's vision to reignite the California Dream with a three-point plan that will:

- Produce over 200,000 more UC degrees by 2030
- Ensure the California Dream is available to everyone by eliminating graduation gaps
- Invest in the next generation of faculty and research

This framework will also include an initial discussion about necessary financial investments and a communications plan for informing stakeholders of the University's vision and plan for the next four years and beyond.

**BACKGROUND**

The California Dream symbolizes opportunity, good fortune, and wealth. People came to California for a better life and a new start. Californians benefited from economic growth and emerging industries with employment, increased earnings, and home ownership. And education delivered on the prospect of a better future for students and their families, along with the state.

As California grew, so did its investment in public education and expansion of higher education institutions. By the 1950s, the baby boomers — children born during the population boom that

followed World War II —were reaching college age. Institutions of higher learning projected huge increases in enrollment demand and were scrambling to figure out how to accommodate it.

At the same time, public higher education systems were competing with one another, resulting in ongoing battles for State funding, program direction, and enrollment goals. The State Legislature faced an onslaught of bills attempting to designate new campuses and organize California's higher education system.

### *The California Master Plan for Higher Education*

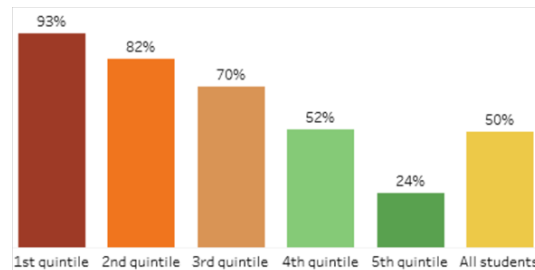
In response, the Master Plan – considered the “blueprint for the California dream” – was established to balance the "competing demands of fostering excellence and guaranteeing educational access for all." Key features of the Master Plan differentiated functions and eligibility across segments to manage State resources by:

- Focusing state research within UC with faculty who had responsibility for doctoral education and setting freshman eligibility to graduating seniors in the top 12.5 percent of their public high school graduation class
- Setting freshman eligibility at California State University (CSU) to graduating seniors in the top 33.3 percent
- Providing open access to the California Community Colleges (CCC) and prioritizing transfer opportunities for CCC students who want to get a four-year degree to enroll in UC or CSU

Today, UC has over two million living alumni, having educated generations of Californians. At the undergraduate level, the University has provided unprecedented access to low-income, first-generation students and **UC continues to enable the California Dream with the majority of students going on to earn more than their parents, with rates over 90 percent for UC's lowest income students.**

Figure 1

Percent of UC alumni with incomes higher than parents



Source: Equality of Opportunity Project; IRS tax records for 1999-2008 UC entry cohorts

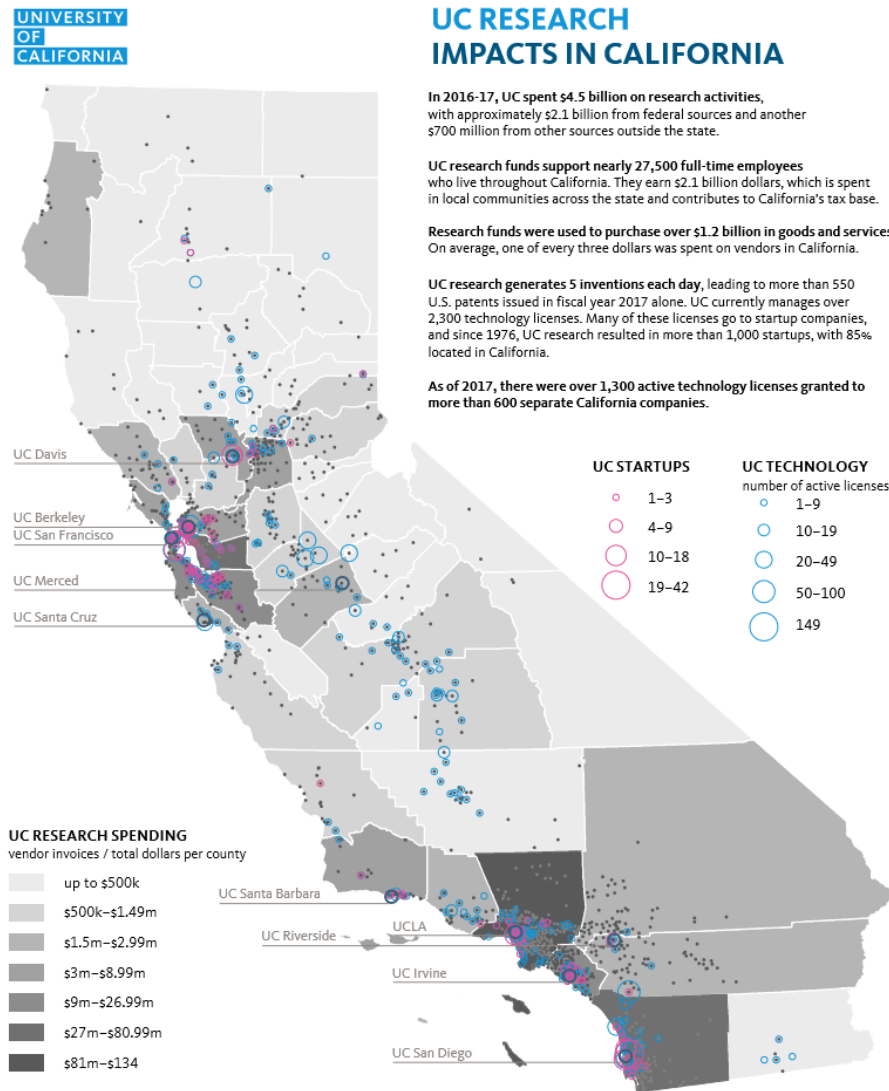
At the graduate level, UC has exclusive authority within California's public higher education partners to grant doctoral degrees (with a few exceptions) and to offer instruction in law, medicine, dentistry, and veterinary medicine. Half of UC's Ph.D. and academic master's degree graduates are ultimately employed in higher education. **Twenty-five percent of UC tenured and tenure-track faculty, and 21 percent of current California State University tenured and tenure-track faculty earned their doctorate from UC.** Under UC faculty supervision, graduate students in academic programs create an average of almost 600 new inventions a year. Every two weeks, a startup is formed based on an invention created by a UC graduate student.

*UC Research Contributions to California*

By concentrating research faculty and doctoral education within UC, the State restricted the most expensive educational and research activities to one segment. This approach did not dilute resources and **UC research provided a significant return on investment, creating internationally recognized research universities that attracted top talent and dollars into California and producing five inventions every day.** UC research also has supported economic development within communities surrounding campuses and across the state through startups, job creation, and purchases of goods and services in local communities.

As important, UC research in the Humanities and Social Sciences touches everyday lives and shapes attitudes towards moral and ethical issues—from solving complex transportation problems, to understanding and addressing homelessness, to expanding knowledge about the values of different cultures, how history is made, and why art matters.

Figure 2



Furthermore, UC research created and advanced critical industries for the state. UC research removed the salts from alkaline soils in the Central Valley to produce the world’s most productive farming region, moving it from 27th in state agricultural production with less than \$50 million to a leader in agriculture and wine, with yearly production valued at \$45 billion. UC research and scholarly activities launched the internet; spurred the information technology, biotech, and entertainment industries; has contributed knowledge and understanding of the world and its cultures; and produced discoveries to treat critical healthcare needs. When the federal government ignored the AIDS crisis, UC researchers sought solutions that eventually transformed AIDS from a death sentence to a survivable condition.

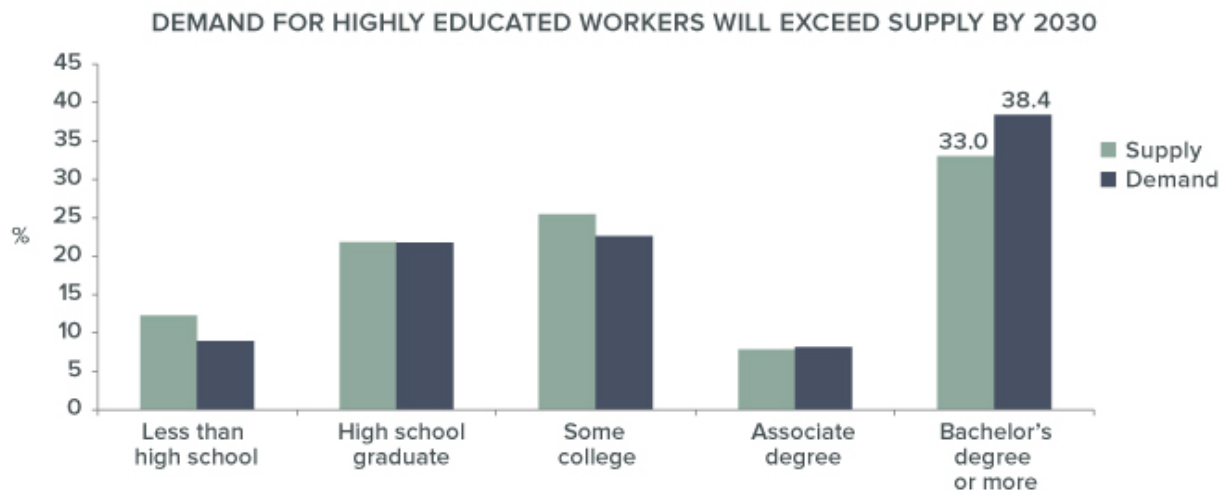
**Current Challenges Facing California**

Today, California is at a crossroads – the state is the fifth largest economy in the world and a creative place where innovation and opportunity thrive. But too many Californians are struggling

with diminished economic opportunity, a high cost of living and the lack of affordable housing. In addition, California faces significant threats from the growing damage created by a series of unprecedented wildfires; external competition, and internal challenges affecting key industries in the state, like drought and pests affecting agriculture; and looming concerns about the next global pandemic and costs associated with health care.

According to the Public Policy Institute of California (PPIC), “economic projections to 2030, show that about two in five jobs will require at least a bachelor’s degree, while demographic projections suggest only about one in three Californians will have at least a bachelor’s degree. This shortfall equates to 1.1 million workers.”

Figure 3



Source: PPIC projections.  
From: PPIC Blog, November, 2017.

PPIC

The retirement of the baby boom generation will mark the first time in California’s history that such a large and well-educated group will exit the labor force. In addition, there will be greater demand for college, particularly with increasing high school graduation and A-G completion rates for the growing Hispanic/Latino(a) student population. External groups estimate a significant gap in jobs that will require at least a college degree and the college-educated workforce. PPIC projects a shortfall of 1.1 million workers with at least a bachelor’s degree between 2014 and 2030<sup>1</sup>.

Graduate education is also critical to meet the state’s workforce needs. Future economic projections also show growth in critical industries that will require graduate degrees, including health care and STEM (science, technology, engineering and mathematics) fields.

<sup>1</sup> “Will California Run Out of College Graduates?” Public Policy Institute of California (PPIC), October 2015 (<http://www.ppic.org/publication/will-california-run-out-of-college-graduates/>)

*Opportunities for the University of California*

The University is committed – for future generations and California – to help solve the grand challenges of the state. Campus strategies will not all be the same, but instead vary depending on local opportunities and challenges.

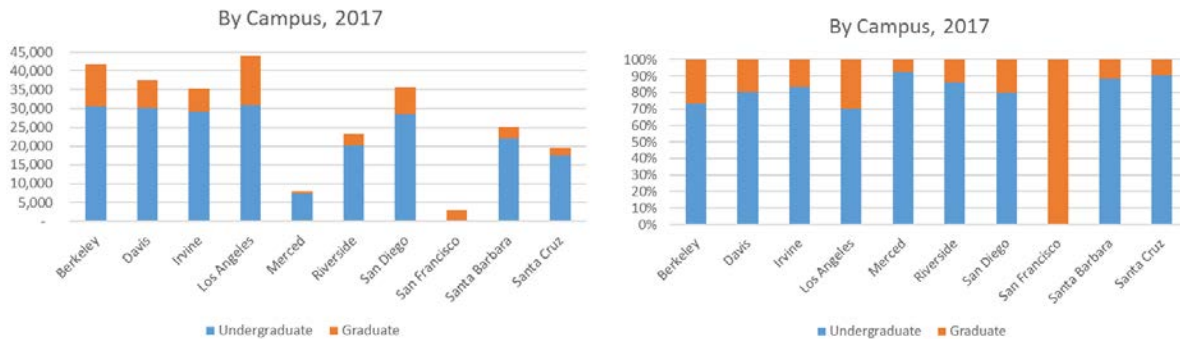
200,000 More UC Degrees by 2030: Increasing Degree Attainment

Over the last four years, UC campuses have grown by 26,600 undergraduate students (14,500 California residents) and 6,800 graduate academic and professional students. Future opportunities for growth will be influenced by overall campus size and desired mix of students – undergraduate, graduate, resident, domestic nonresident, and international – to advance academic and operational goals. The University will continue to meet The Master Plan goals surrounding freshman eligibility, transfer goals (i.e., enrolling two California resident freshmen for each California resident transfer), and graduate education.

For example, Berkeley and UCLA each have between 40,000 and 45,000 full-time equivalent (FTE) students enrolled – nearing their on-campus capacity. Both campuses have over 25 percent graduate students, comparable to many Association of American University (AAU) peers. In contrast, Davis, San Diego, and Irvine currently have each enrolled closer to 35,000 students, with 20 percent graduate students. Santa Barbara, Santa Cruz, and Riverside each enroll between 20,000 to 25,000, and UC Merced is approaching 10,000, all with much lower percentages of graduate students.

Figure 4

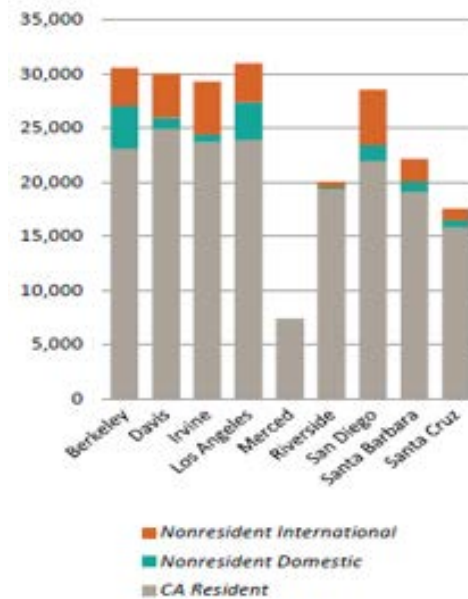
Fall 2017 Enrollment by Campus and Student Level



UC campuses will comply with a nonresident cap for undergraduate students, restricting the proportion of nonresident students set at Fall 2107 levels for Berkeley, Los Angeles, and San Diego and at 18 percent for all other UC campuses. Any future growth will be focused at campuses below the current cap.

Figure 5

Undergraduate Enrollment by Residency and Campus, Fall 2017



Campus efforts to manage enrollment growth include additional curricular offerings, student services, and housing. Additional academic infrastructure – classrooms, laboratories, and offices – provides further opportunities for expansion, particularly with Merced and Riverside in the growing Central Valley and Inland Empire.

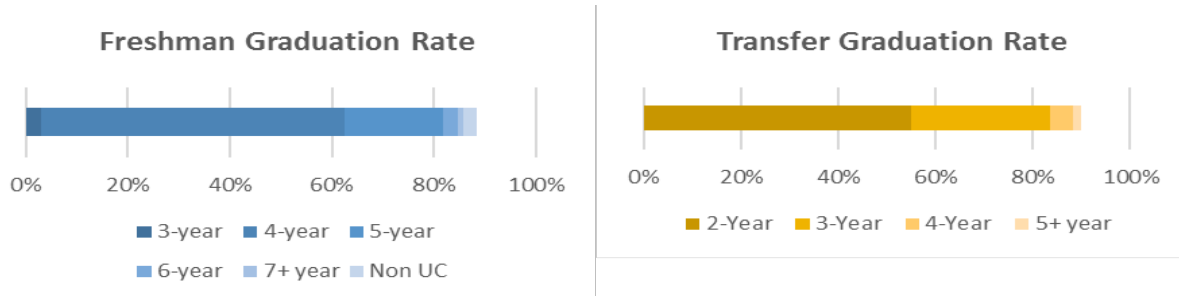
Ensuring the California Dream Is for Everyone: Promoting Upward Mobility

While increasing access to enrollment at UC is important, graduation is an essential area of focus as UC looks to produce more degrees. Data from the Equality of Opportunity project shows **UC bachelor degree recipients earn \$260,000 more over the first ten years after graduation than UC undergraduates who leave with no degree.** Approximately ten percent of undergraduates leave with no degree, emphasizing the importance of ensuring that current and future students graduate and considering opportunities, like bachelor's degree completion programs, to bring former undergraduates back to complete their degrees.

In addition, while UC freshman and transfer graduation rates approach 90 percent, there is much room for improvement with four-year graduation rates for freshmen and two-year graduation rates for transfers. The President has established a 70 percent goal for four-year freshman graduation rates by 2030. Further improvements in that goal and in two-year graduation rates for transfers would not only increase degree production, but would also lower the overall costs of education for students and families.

Figure 6

Freshman and Transfer Graduation Rates

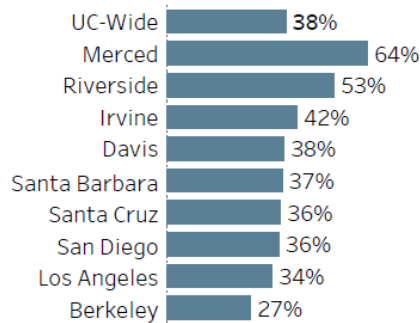


Note: Non-UC references graduation from non-UC institutions.

In particular, gains in timely graduation will be critical for UC’s Pell Grant recipients, who represent a significant proportion of undergraduates across the system and particularly at Merced, Riverside, and Irvine. While UC’s strong financial aid program, including support from the State Cal Grant program, covers much of the cost of attendance, these students from low-income families still struggle with basic needs. Getting these students into the workforce sooner will help them better contribute to their families, lower debt, and contribute to greater lifetime earnings. Expansion of eligibility for summer Cal Grants will help these students take summer courses (where costs and the necessity of work now prevent them from enrolling) and help shorten their time to degree.

Figure 7

Pell undergraduate share, fall '17



To achieve these systemwide goals, campuses have different areas of focus, such as eliminating graduation gaps for low-income, first-generation or underrepresented student groups; focusing on strategies to move overall graduation rates closer to the system average; and increasing the proportion of students that graduate in three years. Other strategies to increase degree production could include online degree programs and innovative use of UC Extension and Summer Session.

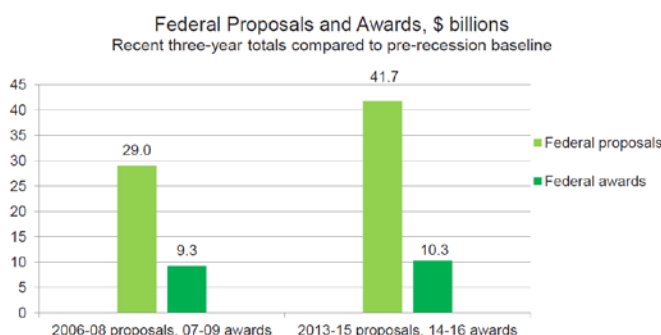


Investing in the Next Generation of UC Faculty and Research

UC faculty research can address challenges facing California, including support for existing industries, creation of new ones, and fast-tracking research to tackle emerging threats like fire management control and cyber security. **While much of the funding that supports UC research activity comes from the federal government, the primary way California supports UC research activity is through state support for faculty.** California’s investment in UC faculty provides a significant return, especially when the funding that is brought into California through research grants is considered. But UC faculty are facing increasing competition for these funds.

To date, UC has successfully maintained its position as the largest single academic recipient of federal R&D funds, and continues to perform nearly one-tenth of the nation’s academic research. But obtaining federal grant funds has become increasingly competitive. Compared to a decade ago, university researchers must submit more proposals, for larger amounts, simply to maintain the same level of research activity.

Figure 8



While federal award dollar totals to UC have increased significantly over the last decade, after taking inflation into account, federal funding is at essentially the same level as before the recession, and substantially below the peak years of 2009 through 2011, when Recovery Act funds added over \$1 billion to UC’s federal award total.

Table 1

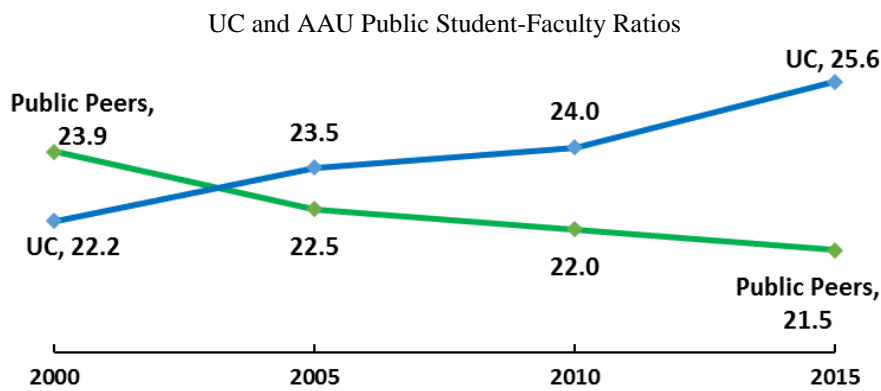
<i>Federal FY</i>	<b>2007</b>	<b>2008</b>	<b>2009</b>		<b>2014</b>	<b>2015</b>	<b>2016</b>
Awards, \$M	2,795	3,011	3,456		3,450	3,394	3,431
<i>Inflated award \$M.</i>	3,322	3,466	3,836		3,547	3,432	3,431

These comparisons point to a process for obtaining federal contracts and grants that has become increasingly demanding and labor-intensive. Simply maintaining the same level of federal research activity from year to year has required a substantial increase in the number of proposals submitted. This, in turn, has necessitated an ever-increasing level of effort in drafting, reviewing, processing, submitting, and tracking an ever-larger number of proposals. The growing

administrative effort required to secure federal grants is one of the less visible indirect costs of conducting research — costs that are never fully recovered from UC’s federal agency sponsors.

In addition, an increasing student-faculty ratio negatively impacts research activity, as well as mentorship and teaching at a research university. Over the last 15 years, UC’s student-faculty ratio has continued to grow, while it has declined for non-UC AAU public institutions. Enrollment at UC and AAU public institutions continued to grow, but much more at the undergraduate level for UC and at the graduate level for AAU publics. While UC faculty growth lagged its growth in enrollment, AAU public institutions grew faculty at a higher rate than their enrollment. UC’s increasing student-faculty ratio also has deleterious impacts on the student experience while at the University.

Figure 9



Source: Integrated Postsecondary Education Data System (IPEDS)

UC needs to grow and diversify its faculty to create the “next generation” professoriate that better reflects the state’s diversity and keeps the teaching and research missions relevant. The September Academic and Student Affairs Committee discussion on faculty diversity highlighted the importance of ramping up efforts to hire underrepresented and female faculty. Otherwise, UC ladder-rank equivalent faculty will not mirror current national availability pools for decades to come. Therefore, as UC faculty grow, attention and accountability are needed to ensure faculty diversity increases at the same time.

Key to Acronyms

AAU	Association of American Universities
CCC	California Community College
CSU	California State University
UC	University of California
UCOP	UC Office of the President