



Annual  
Accountability  
Report

2014

UNIVERSITY  
OF  
CALIFORNIA



# University of California Accountability Framework

As a public entity, the University is accountable to the people of California and it must and it shall remain accountable to them for its actions, past and present, and for its future developmental trajectories. Accountability will be demonstrated in a variety of ways:

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



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

**Accountability Website:**

[www.universityofcalifornia.edu/accountability](http://www.universityofcalifornia.edu/accountability)

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Interactive maps are available on the web at <http://arcgis.cisr.ucsc.edu/ucop/>.

# Executive Summary

## The University of California – Power of Public

### ACCOUNTABILITY REPORT

As part of its transparency efforts, the University of California (UC) annually produces the Accountability Report to provide greater awareness of University operations. The report is written as a management tool for UC leadership, faculty and staff. It also is intended to be a public document, written for a broad range of stakeholders with an interest in understanding how well UC is performing, including strengths and areas for improvement.

The 2014 Accountability Report illustrates the power of the University of California as a public institution by describing its role in:

- educating undergraduates, graduate students and health sciences students, including doctors, nurses and allied health professionals;
- conducting research that benefits the state, the nation and the world;
- serving as one of California's largest employers;
- operating five teaching hospitals where Californians receive first-class medical care and future health sciences professionals learn their craft; and
- leading sustainability efforts to achieve carbon neutrality, energy efficiency and water savings.

### UC'S IMPACT ON THE STATE OF CALIFORNIA

Student enrollment at UC has quadrupled over the last 50 years. Today, UC enrolls over 244,000 students at our ten campuses. The University awards more than 30 percent of the state's bachelor degrees with significant contributions to STEM (science, technology, engineering and math) fields, more than 60 percent of its academic doctoral (Ph.D.) degrees, and more than 60 percent of its medical professional practice degrees. UC has more than 1.6 million alumni, with 1.2 million living in California.

Beyond our impact on students and their families, UC is one of the largest employers in the state, with

*"The University of California is preeminent in educating the state's young people, in enhancing research and scholarship in every discipline, in fostering economic growth, medicine, the arts, its athletic and other programs. Simply put, UC is the gold standard. Together, we must ensure that this standard is upheld."*

President Janet Napolitano

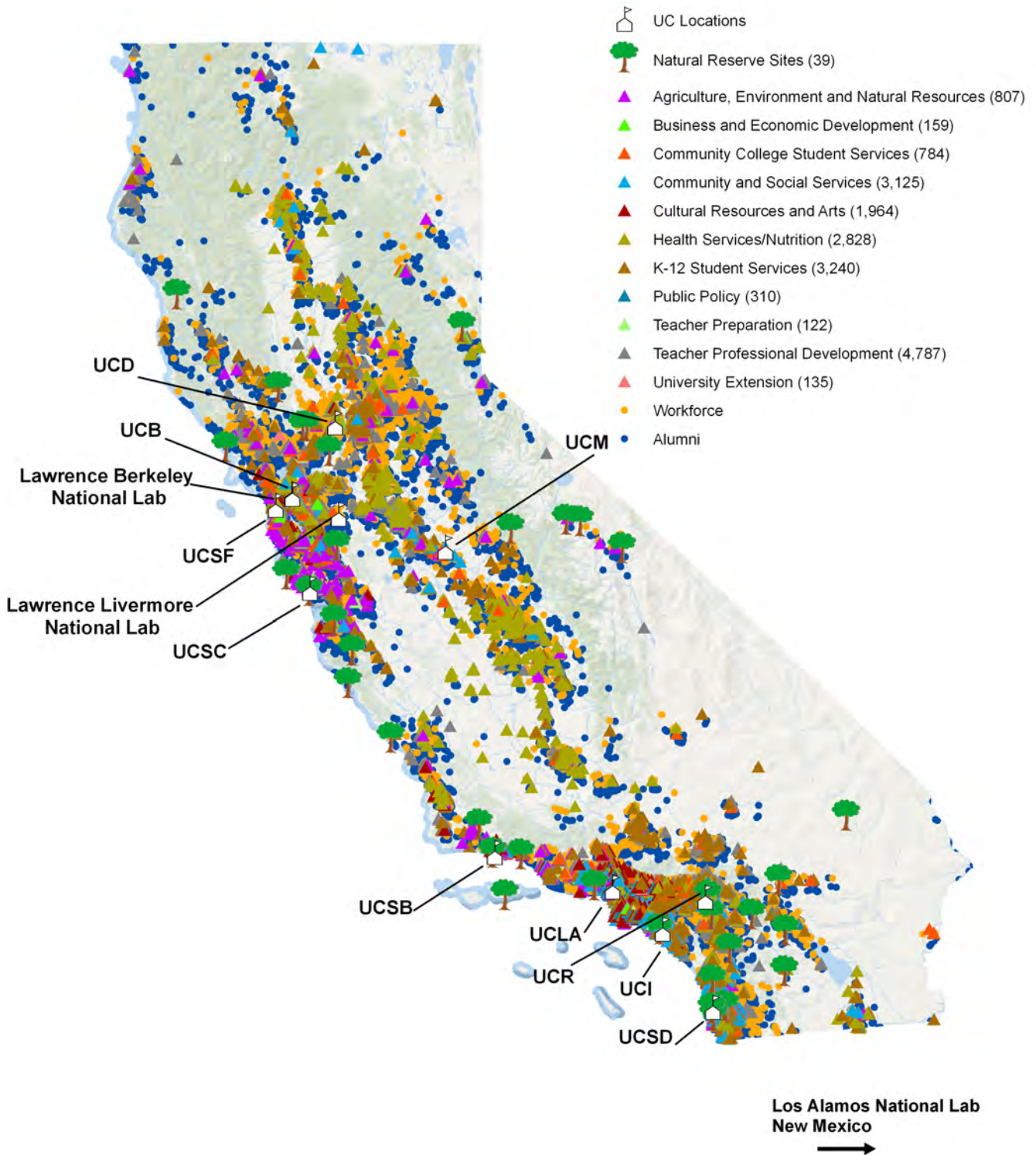
Each chapter of the Accountability Report starts with an introductory essay that describes UC operations in that subject area. Where possible, the report quantifies resources, activities and outcomes, and provides data visualizations to illustrate trends, provide comparisons and set context. Each chapter offers links to additional information sources and references the data sources. The glossary defines frequently used terms, and the data glossary lists the resources employed. Data and visualizations can be downloaded from the online version of this report at <http://accountability.ucop.edu/>.

This executive summary highlights key findings, including UC initiatives to support operational goals.

138,000 faculty and staff and more than 61,000 retirees, about 45,000 of whom live throughout California.

The broader UC community includes many more people. Numerous farmers and agriculturalists work with UC Cooperative Extension agents; entrepreneurs and employees in industry use findings from UC's research; and many others throughout the state participate in a wide variety of UC programs. The following map illustrates UC's impact across the state. Clearly, UC's reach goes far beyond its ten campuses to affect all Californians.

# UC'S STATEWIDE PRESENCE



Source: UC campuses and UC Corporate Personnel System.  
Interactive maps are available on the web at: <http://arcgis.cisr.ucsc.edu/ucop/>

# TEACH FOR CALIFORNIA, RESEARCH FOR THE WORLD

## ACCESS, AFFORDABILITY AND OUTCOMES FOR UNDERGRADUATES

UC maintains its commitment to the California *Master Plan for Higher Education* by offering freshman admission to every state resident who meets our requirements and applies for admission.

Over the past two decades, freshman applications have grown almost 10 percent a year, nearly tripling since 1994. With this growing number of applicants, admit rates have declined at some UC campuses as they become more selective. Despite these trends, all qualified freshman applicants either are admitted to a campus of their choice or receive an offer of admission to another UC campus through UC’s referral process.

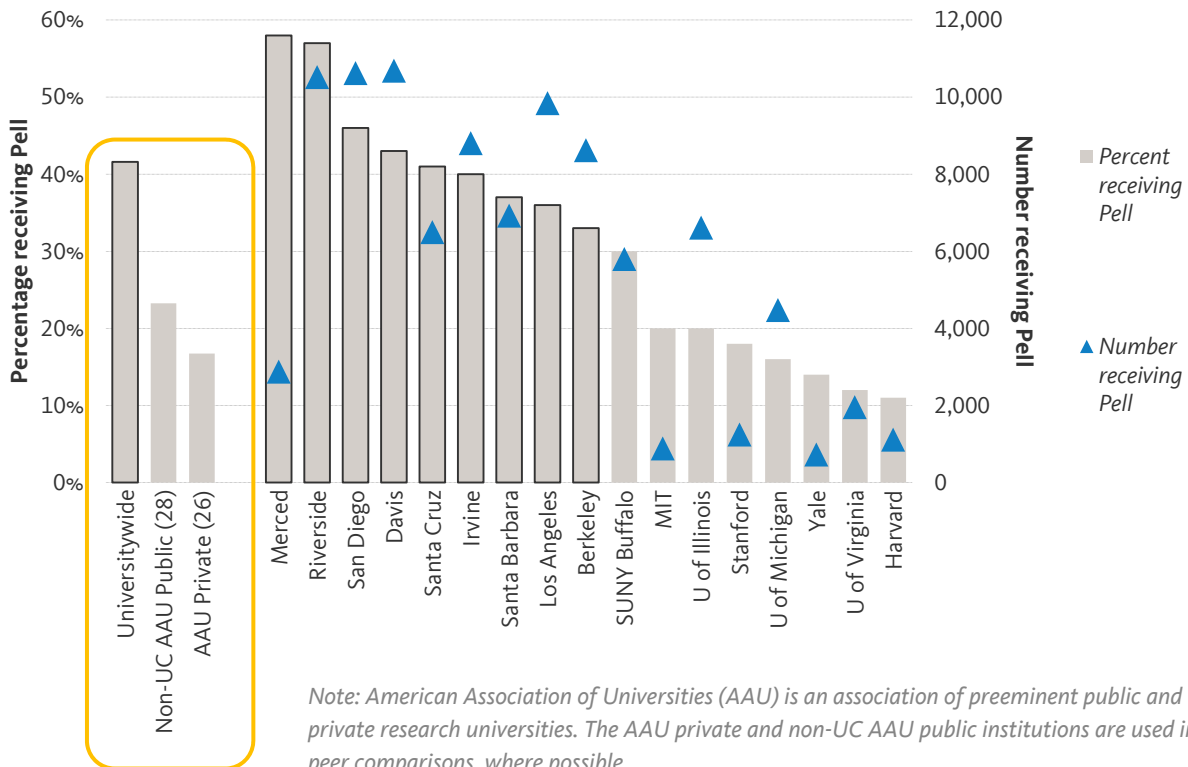
In addition, roughly 30 percent of UC’s incoming undergraduates are California Community College (CCC) transfers. While transfer applicants have almost doubled over the last 20 years, the number

of applicants dropped in 2011 and slightly rebounded in 2012. This drop is likely due to significant CCC financial and enrollment cutbacks. UC is committed to maintaining or enhancing its transfer function and streamlining its transfer pathways.

Affordability is one of UC’s high priorities. The University is able to provide access to students across the socio-economic spectrum, including a significant percentage who receive assistance through the federal Pell Grant program, which provides need-based grants to low-income undergraduates. UC’s financial aid program takes into consideration how much parents can afford; federal, state and University grant aid (like the Blue & Gold program); and a manageable student “self-help” contribution from work and/or borrowing.

### UC enrolls a higher percent of Pell Grant recipients than any other top research university in the country.

**Pell Grant recipients, 2011–12**



Source: IPEDS

## TEACH FOR CALIFORNIA, RESEARCH FOR THE WORLD

About 45 percent of the most recent graduating class left UC with no debt at all. For those leaving with debt, the average amount is just over \$20,200. This debt load is significantly less than the average debt incurred at other public four-year institutions, and dramatically lower than the average debt for graduates of private nonprofit and for-profit institutions.

### Average cumulative loan debt, freshman entrants

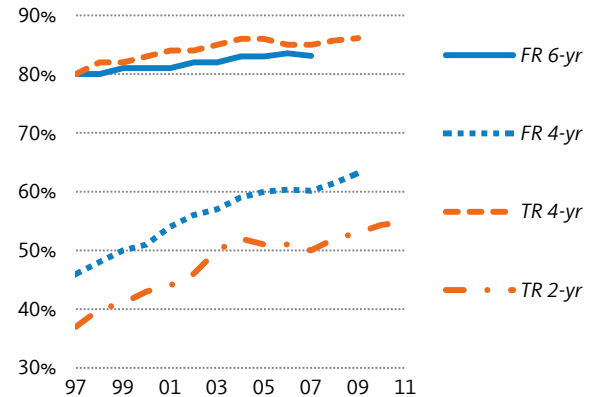
Riverside	\$21,087	Private for-profit	\$37,840
San Diego	\$20,944	Private nonprofit 4-year	\$30,737
Los Angeles	\$20,878	Public 4-year	\$25,704
Santa Cruz	\$20,826		
Irvine	\$20,284		
<b>UC AVERAGE</b>	<b>\$20,205</b>		
Santa Barbara	\$19,769		
Davis	\$19,728		
Merced	\$19,218		
Berkeley	\$18,377		

2011–12 graduates. Source: UC Corporate Student System and National Postsecondary Student Aid Study

UC's four-year graduation rate for freshmen has risen significantly over the past 12 years — from 46 percent for the 1997 entering cohort to 63 percent for the 2009 cohort. The most recent six-year graduation rate is 83 percent. Transfer entrants demonstrate similar gains with the two-year graduation rate increasing from 37 percent for the 1997 entering cohort to 54 percent for the 2010 cohort. The most recent four-year graduation rate is 86 percent.

### Freshman and transfer graduation rates are high and improving.

#### Graduation rates, entering cohorts of 1997 to 2011



A UC degree supports social mobility and the state's economic goals. For example, more than 50 percent of Pell Grant recipients within five years of graduating from UC have higher earnings as an individual than their pre-UC family income. In addition, UC bachelor degree recipients work across California industries, particularly health care, education, engineering and manufacturing.

## VALUE OF GRADUATE PROGRAMS AND DOCTORAL RESEARCH

The California Master Plan charges UC with the responsibility for preparing graduate academic and professional degree students to help meet the state's and the nation's workforce needs.

Graduate education at UC is ranked at the highest levels among the country's leading universities. One of the keys to a successful graduate academic and graduate professional program is recruitment of outstanding students. These students support the academic and research enterprise by serving as graduate student instructors and graduate student researchers. The quality of our Ph.D. and master's

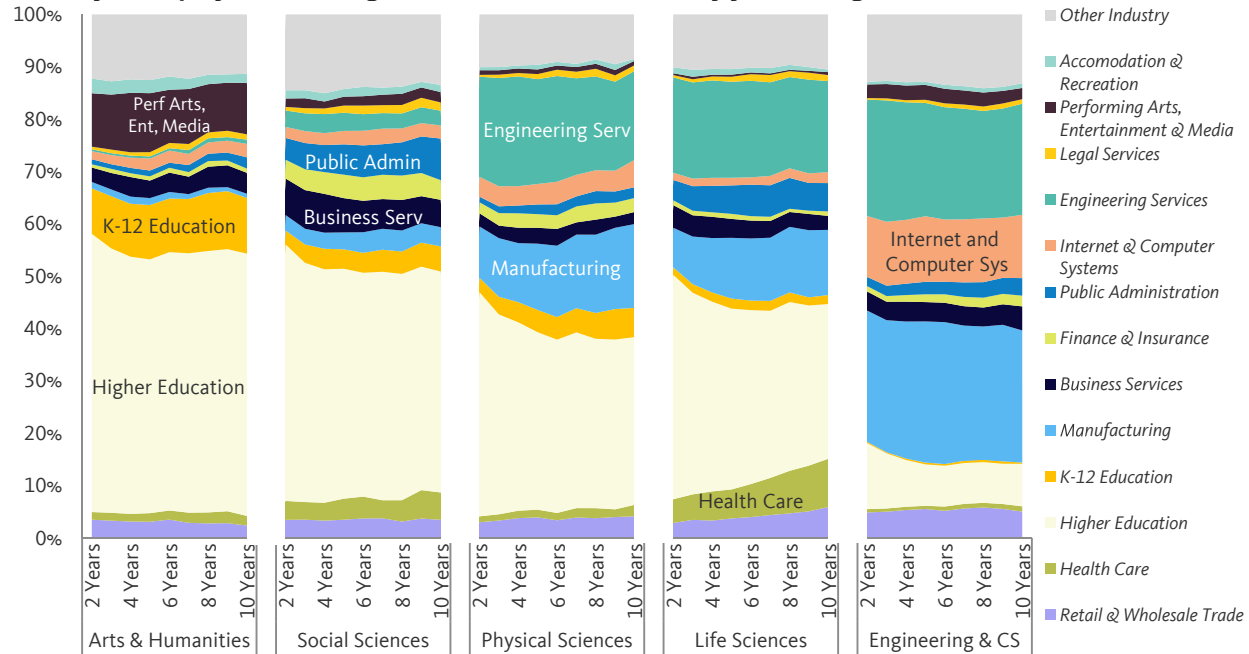
students also is a critical factor in supporting faculty retention.

As illustrated in the graphics on the next page, half of UC's academic Ph.D. and master's graduates in arts and humanities and social sciences work in higher education, with STEM graduates focused in engineering services and manufacturing. UC's professional programs prepare their graduates for careers that closely tie to their field of study.

# TEACH FOR CALIFORNIA, RESEARCH FOR THE WORLD

UC's academic graduate students find careers in a diverse range of industries.

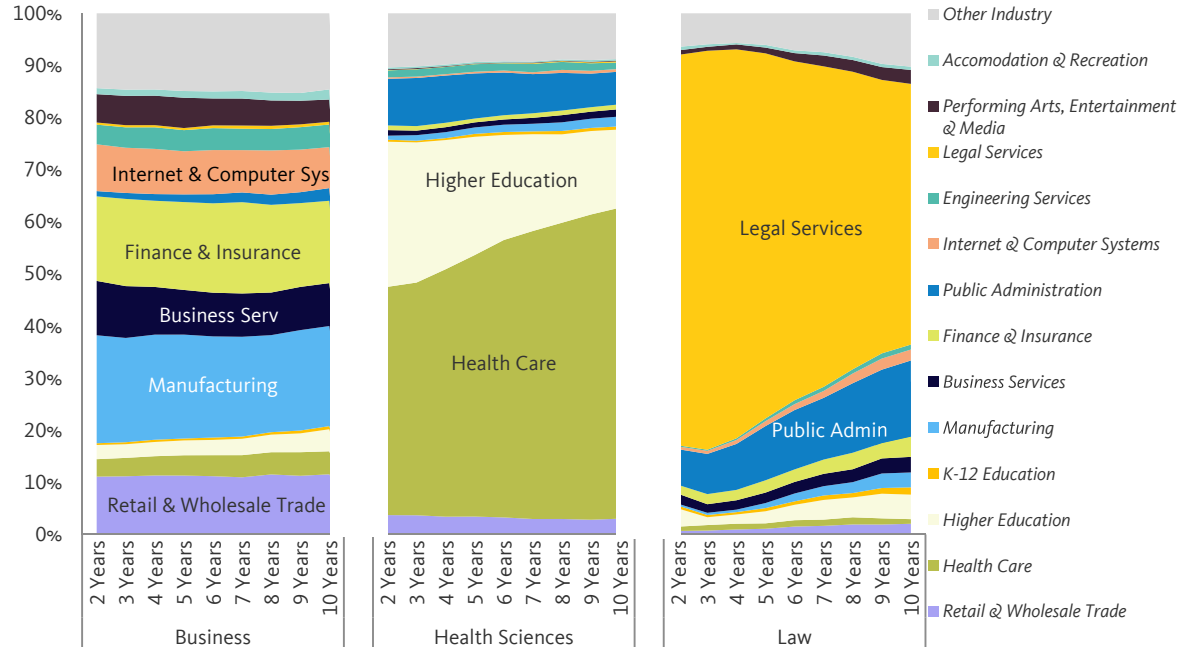
Industry of employment of UC graduate academic students by year after graduation, 2000 to 2012



Source: California Employment Development Department and UC Decision Support System

UC's professional graduate students find careers more directly related to their field of study.

Industry of employment of UC graduate professional students by year after graduation, 2000 to 2012



Source: California Employment Development Department and UC Decision Support System



# TEACH FOR CALIFORNIA, RESEARCH FOR THE WORLD

## TEACHING AND LEARNING

At UC, individual academic departments are responsible for defining learning objectives and for assessing students' progress toward meeting them. These objectives and assessments are subject to scrutiny by external reviewers during program reviews conducted at set intervals, e.g., every five years. In recent years, academic objectives and assessments have become a major focus of accreditation reviews conducted by the Western Association of Schools and Colleges (WASC), as well as by many other professional accrediting and related bodies.

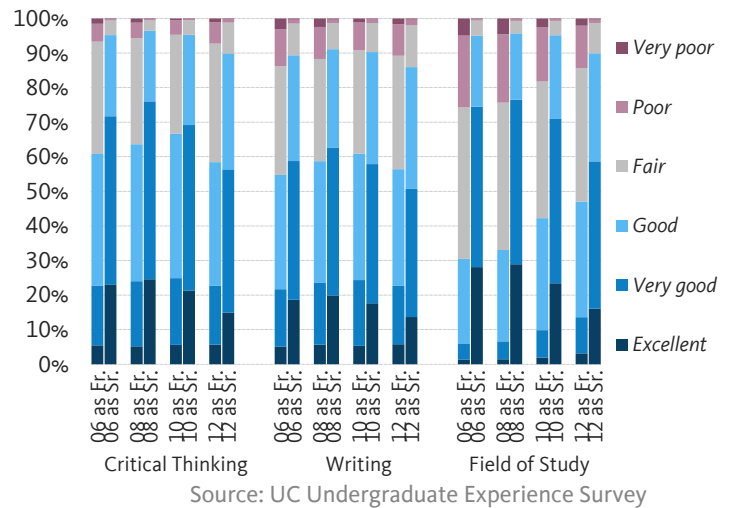
At a systemwide level, the UC Undergraduate Experience Survey (UCUES) provides self-reported skill assessment comparing freshman and senior years. This data show significant gains in critical thinking, writing and understanding a specific field of study. In addition, the proportion of undergraduates reporting having a research experience in their senior year has grown over the past six years, from just over 40 percent to almost 55 percent.

UC's interest in and enthusiasm for online learning have grown steadily over the past several years. Across the system, there is recognition that technology and innovation have a role in helping each campus achieve its goal of providing a quality and engaging education for all UC students. Today, all ten campuses offer online learning opportunities and UC continues its commitment to enrich the student experience, improve teaching and learning, and provide for greater access to the courses students need to graduate.

In 2012–13, UC offered approximately 2,600 online courses totaling over 90,000 student enrollments. The majority of those courses and enrollments were part of certificate or other extension programs not typically designed for or offered to UC students. With support from the Governor and State Legislature, \$10 million was provided to UC in the 2013 state budget for online education. UC is utilizing those funds to develop new online and hybrid undergraduate courses and to expand the

### UC undergraduates report significant gains in skill development between freshman and senior years.

Self-reported skill levels, freshman and senior years, classes of '06, '08, '10, and '12



number of online courses offered to undergraduate UC students during the academic year. Additionally, the university developed a new cross-campus enrollment platform that allows UC students to easily find and enroll in online courses offered at any UC campus. Launched in 2013–14 with 25 courses, the university expects the cross-campus enrollment system to offer approximately 60 courses in 2014–15.

UC is embracing online education as one of many learning opportunities available to UC students; our strategy utilizes technology in concert with UC faculty knowledge and expertise to expand student access to courses and to strengthen teaching and learning across the system.



# TEACH FOR CALIFORNIA, RESEARCH FOR THE WORLD

## IMPORTANCE OF RESEARCH ACTIVITIES

The California Master Plan designates UC as the primary state-supported agency for research, and UC research contributes to the state and nation through discoveries to improve health, technology, welfare and the quality of life. The University has more than 800 research centers, institutes, laboratories and programs and spans ten campuses, five medical centers, three national energy laboratories<sup>1</sup>, 39 natural reserve sites and numerous specialized research facilities.

Participation in research is a critical element in graduate education, and graduate students make up a significant portion of the research workforce. In FY 2012–13, of UC’s 50,000 graduate students, more than 14,000 were employed as paid research assistants, providing income as well as on-the-job education. UC provides postdoctoral training to more than 6,100 scholars, who make significant contributions to the research enterprise.

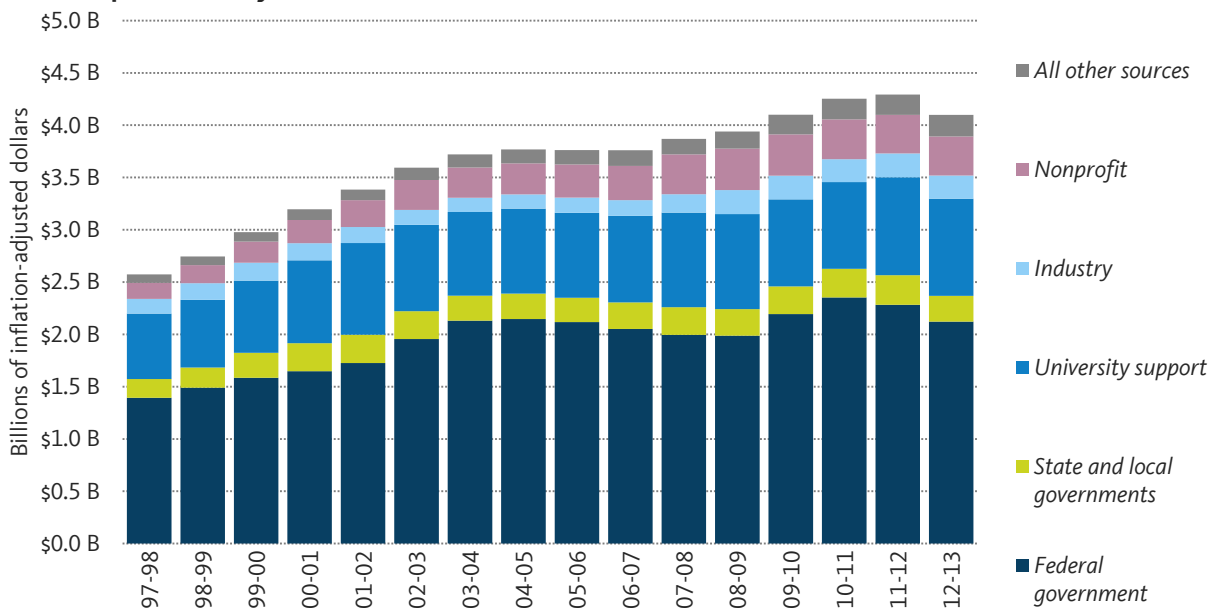
UC’s performance in meeting its research goals may be assessed in a variety of ways. One widely used

indicator of research activity is the total dollars expended each year for research. Although an incomplete measure, research expenditures do provide a basis for charting research trends over time, and for comparing UC to other research institutions. The expenditure data reveal that research activity at UC nearly doubled over the last 15 years to more than \$4.1 billion and that most of this growth is fueled by federal funds. Additionally, UC performs nearly one-tenth of all the academic research and development conducted in the U.S.

Difficult to measure, but clearly a benefit of UC’s research, is the knowledge shared with the state of California and beyond. UC researchers have been called upon to share insights on how to adapt to drought conditions, search for energy alternatives, gain greater understanding of the aging process, preserve indigenous languages, improve high school graduation rates through community-based arts programs, and develop effective therapies and treatments that can enhance global health.

## Federal funds support most of the research work done at UC.

Research expenditures by source, 1997–98 to 2012–13



Source: UC Corporate Financial System

<sup>1</sup>UC co-manages Los Alamos and Lawrence Livermore National Laboratories with Bechtel National, Babcock and Wilcox, and URS Corp. and, for Livermore only, also Battelle.

# BACKBONE OF THE UNIVERSITY OF CALIFORNIA

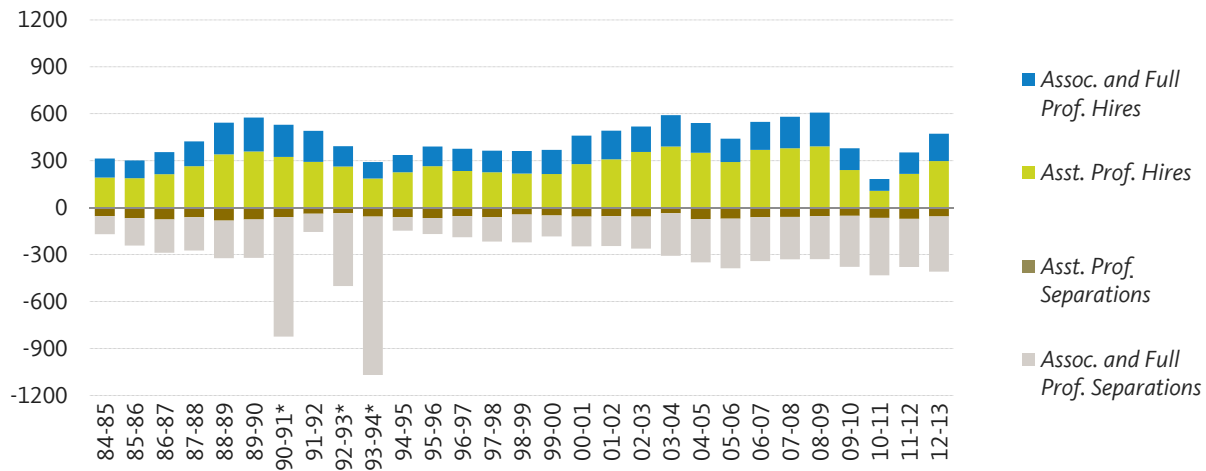
## DISTINGUISHED FACULTY

The members of the UC faculty are a rich source of innovation, discovery and mentorship; they provide top-quality education to students and public service to society. No other public institution in the world can claim as distinguished a group of individuals. Over the last decade, UC has celebrated a faculty member receiving a Nobel Prize on an almost annual basis, with 60 in total for the UC system, ranking it fifth in comparison with other countries.

Currently, UC faces a number of challenges vis-à-vis faculty renewal: sharply decreasing levels of state support, intense competition in recruiting and retaining top-quality educators and researchers, an aging workforce and achieving a diverse academic workforce.

In the last few years, separations have outnumbered new hires, although UC is increasing hires from the 2010–11 low point.

**New hires and separations of ladder- and equivalent-rank faculty, 1984–85 to 2012–13**



Source: UC Academic Personnel Department

\* Reflects years with a Voluntary Early Retirement Incentive Program

## DEDICATED STAFF

Reflecting growth in the size and complexity of the University, the number of UC staff has grown over the past ten years — by 11 percent at the general campuses and by 34 percent at the medical centers. As of fall 2013, UC employed 136,000 non-academic staff (or 100,000 FTE) across a wide range of occupational categories, including doctors, nurses and other health care staff; research administration and laboratory staff; student services staff; food and auxiliary services staff; maintenance and physical plant staff; and management and clerical staff.

hospitals, with additional staff growth due to increases in research activity and auxiliary enterprises, such as residence halls and food service facilities. Consistent with an increase in UC's complexity and the dramatic proliferation of technology, the proportion of highly skilled professional staff has also increased — a shift that aligns with national trends.

Funding sources and the structure and composition of the staff workforce have changed significantly over the past decade. Growth in staff personnel has been driven primarily by expansion in teaching

In recent years, salary increases generally have kept pace with inflation but have not grown as fast as market salaries. Going forward, UC employees will contribute more to their health care costs and to the UC retirement system, which could further erode the competitiveness of UC compensation compared with the broader labor market.

# ENHANCING DIVERSITY AND CAMPUS CLIMATE

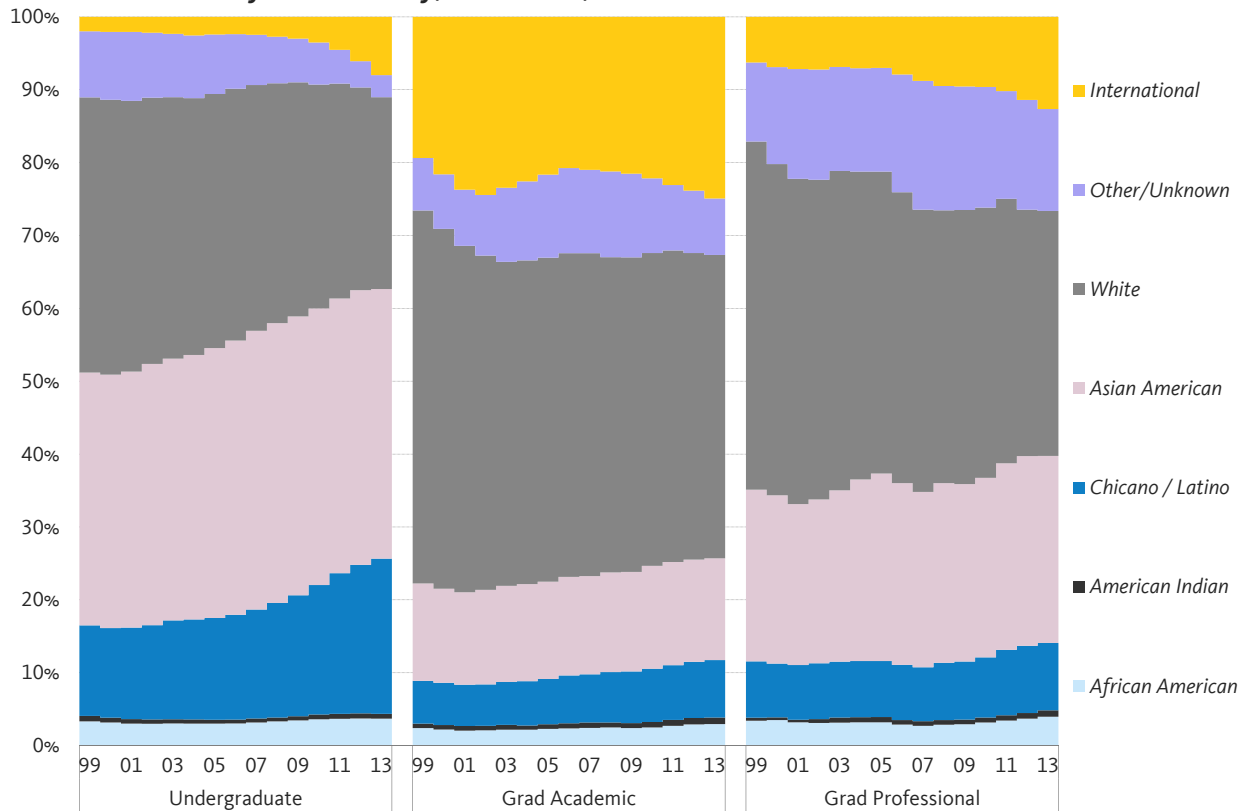
## ASSESSING UC'S PROGRESS

UC has long been dedicated to fostering a diverse community that reflects and participates in an ever-changing, multicultural world. The University's ongoing efforts to increase diversity and improve campus climate can be evaluated a variety of ways, including supporting outreach efforts, tracking diversity statistics, and assessing campus climate.

One indication of UC's progress in achieving diversity goals is seen in the increasing diversity of the student population over the last 14 years. This is especially evident among undergraduates, particularly with increases in Chicano/Latino students. The number of international students at all levels has also grown, reflecting the truly global nature of the economy and society that today's students will encounter when they graduate.

In March 2014, UC released the results of its biannual campus climate survey results for 13 locations — the 10 UC campuses, Lawrence Berkeley National Laboratory, Agricultural and Natural Resources, and UC Office of the President (UCOP). Each location is delving into its results, sharing them with community members, gaining local ideas for improvement and developing action plans and strategic initiatives to improve campus climate.

**Student enrollment by race/ethnicity, all students, fall 1999 to fall 2013**



Source: UC Corporate Student System

## KEEPING CALIFORNIA HEALTHY

### DEVELOPING HEALTH CARE PROFESSIONALS AND MEDICAL RESEARCH

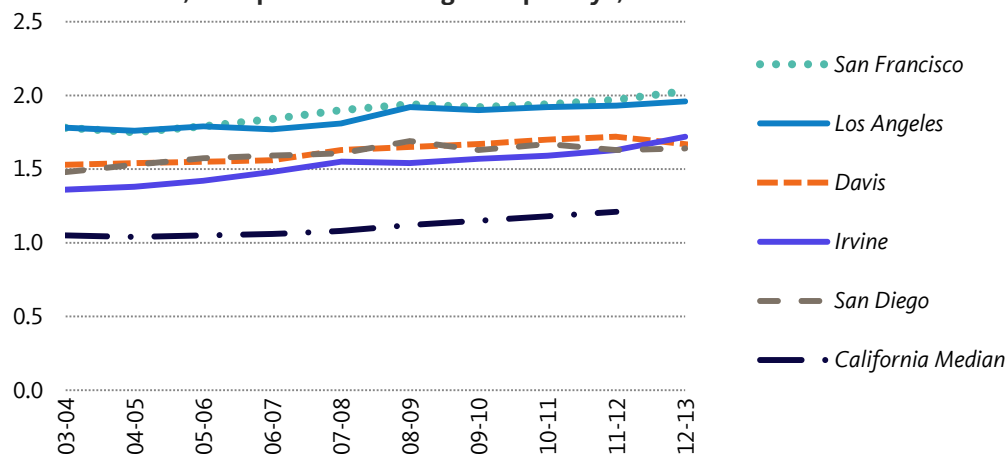
Under the California Master Plan, UC is the only state public institution chartered to grant the D.D.S. (Doctor of Dental Science), M.D. (Doctor of Medicine), O.D. (Doctor of Optometry), Pharm.D. (Doctor of Pharmacy) and D.V.M. (Doctor of Veterinary Medicine) degrees. Along with other private educational institutions, the University also provides doctoral education leading to Ph.D. degrees in nursing and public health, as well as the Dr.P.H. (Doctor of Public Health) degree.

UC operates the largest health sciences instructional program in the nation, enrolling more than 14,000 students annually. The systemwide instructional program includes six schools of medicine and three smaller medical education programs; three schools of nursing and one program in nursing science; two schools each of dentistry, pharmacy and public health; and one school each of optometry and veterinary medicine. The long-standing medical education program operated between UC Riverside and UCLA for more than 30 years has transitioned to an independent UC medical school at Riverside, which enrolled its inaugural class of 50 students in fall 2013.

The University of California's five academic medical centers (Davis, Irvine, Los Angeles, San Diego and San Francisco) provide a vast resource for the clinical training programs of UC health professional schools. These centers prepare future generations of health professionals, catalyze major advances in biomedical and clinical research, and serve as California's fourth largest health-care delivery system, employing approximately 5,000 faculty physicians and more than 36,000 hospital staff, including 10,000 nurses. UC staffs five major trauma centers and provides half of all transplants and one-fourth of extensive burn care in the state. UC medical centers manage more than 147,000 inpatient admissions, 290,000 emergency room visits and 3,800,000 outpatient visits each year. Roughly 60 percent of all hospital days are from Medicare, Medi-Cal or uninsured patients. In support of its teaching, research and public service missions, UC health programs also maintain active relationships with more than 100 affiliated Veterans Affairs, county and community-based health facilities located throughout California.

### The cases treated by UC medical centers tend to be more complicated than is typical for medical centers and hospitals in California.

Case mix index, 1.0="patient of average complexity", 2003-04 to 2012-13



Source: UC Medical Centers' Financial Statements and the CA Office of Statewide Health Planning and Development

# NEED FOR AND SUPPORT OF CALIFORNIA RESOURCES

## BUILDING A SUSTAINABLE FINANCIAL MODEL

UC seeks to develop reliable sources of revenues, including a strong investment from the state and a stable and predictable tuition model.

Totalling \$25 billion in 2012–13, the University’s revenues fund its core mission and a wide range of support activities, including teaching hospitals, the Lawrence Berkeley National Laboratory, Lawrence Livermore National Security, Los Alamos National Security, UC Extension, and housing and dining services.

Prior to 2010–11, state funding was the largest single source of support for the education function of the University. Over the past ten years, state educational appropriations have fallen over \$1 billion in inflation-adjusted dollars despite UC’s enrollment growth. State educational appropriations constituted only 9 percent of UC’s operating budget in 2012–13 compared with 23 percent in 2001–02.

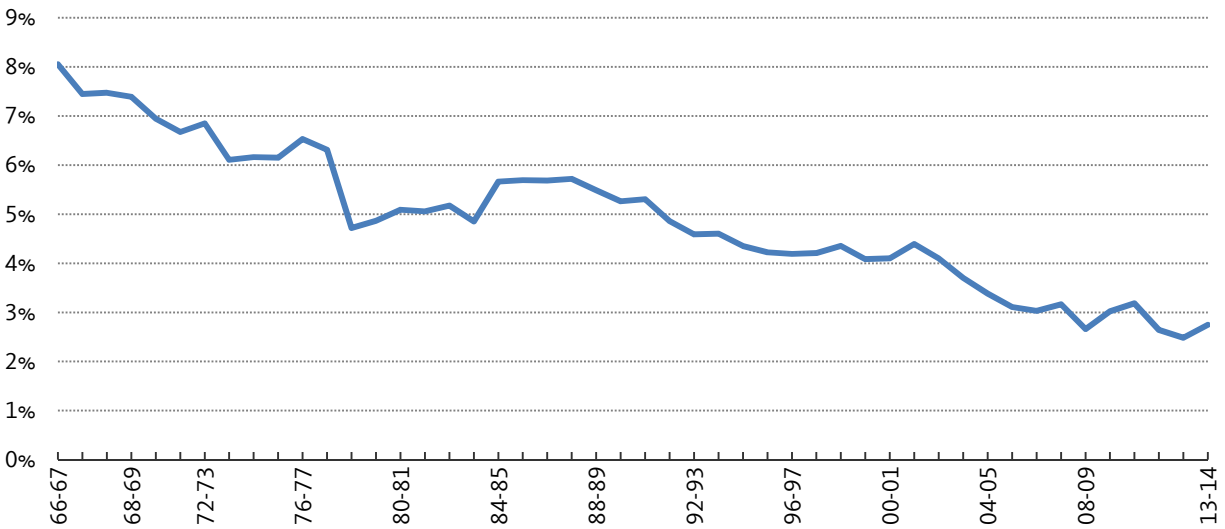
In addition, the University is competing with other state agencies to receive adequate funding. Over the last 50 years, the University’s share of the state’s general funds has dropped from 8.1 percent to 2.7 percent.

To help mitigate declines in state funding, UC has had to raise student tuition and fees and sought increases from other sources like federal indirect cost recovery and private giving. Donors restrict virtually all gift funds (99 percent) in how they may be used. State funding and tuition and fees tend to be unrestricted and as these fund sources become more constrained, so does the University’s flexibility to direct funds where needed.

The University has also moved aggressively to reduce operating costs. Yet, even under the most optimistic assumptions, efficiency improvements and alternative revenue generation can offset only a portion of the budget shortfalls projected over the next few years.

### The University’s share of the state’s general fund dropped from 8.1 percent in 1966–67 to 2.7 percent in 2013–14.

UC share of state general funds, 1966–67 to 2013–14



Source: UC Budget Office

<sup>1</sup> UC general funds are mostly nonresident tuition revenue and indirect cost recovery from research grants and contracts.

# NEED FOR AND SUPPORT OF CALIFORNIA RESOURCES

## ADDRESSING CAPITAL NEEDS AND PROMOTING SUSTAINABILITY

UC maintains more than 5,800 buildings enclosing 130 million square feet on approximately 30,000 acres. With such a substantial infrastructure, the University strives to be a good steward of the capital resources entrusted to its care.

Historically, the majority of UC's core academic infrastructure projects were funded by the state. However, over the past decade, the state's contribution has fallen to about 15 percent, and external financing now plays the dominant role. Approximately half of UC's existing space is eligible for maintenance using state funds; the other half is occupied by self-supporting enterprises, such as parking and housing. Since the mid-1980s, state funding for capital renewal and deferred maintenance has been minimal and unpredictable, significantly affecting the University's limited resources and its ability to maintain its facilities.

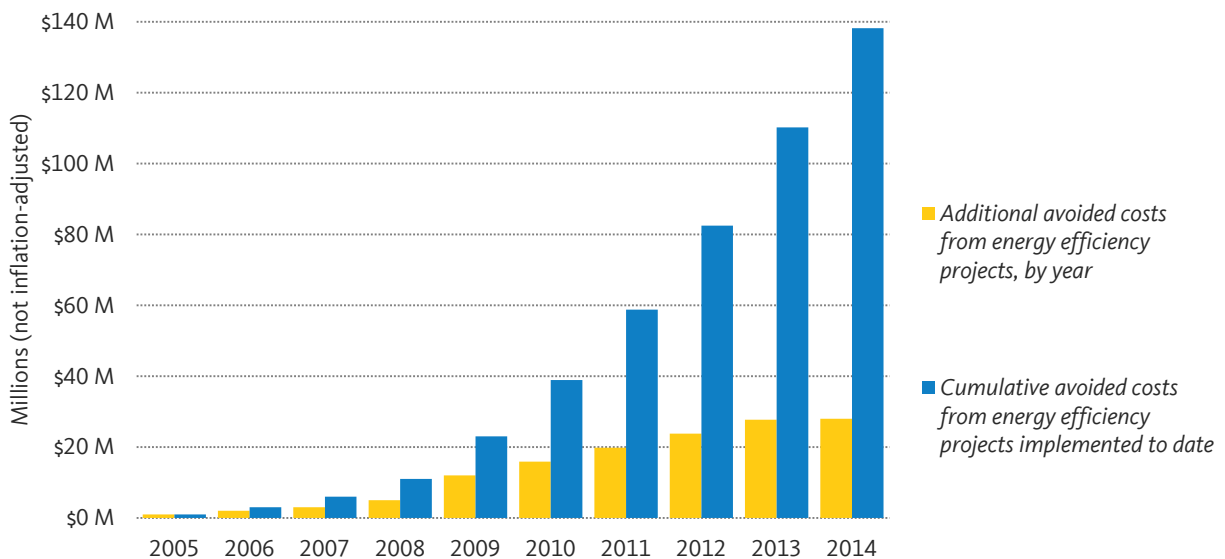
The University is a national leader in sustainability

and strives to reduce greenhouse gases to mitigate climate change. UC affirmed its leadership position in 2007 when all ten Chancellors signed the American College & University Presidents' Climate Commitment. Furthering this leadership, in November 2013 President Napolitano announced an initiative for UC to become the first research university to achieve carbon neutrality by 2025. In addition, the President announced in January 2014 a goal of reducing per capita water use by 20 percent throughout the UC system by the year 2020.

The University's Policy on Sustainable Practices, updated in 2013, has multiple areas of focus, including Climate Action, Green Building, Clean Energy, Transportation, Recycling and Waste Management, Procurement, Food Service and Water. These areas of concern exemplify the University's commitment to wise stewardship of its resources and the environment.

## Energy efficiency upgrades will result in cumulative net avoided costs for the University of \$138 million by the end of 2014.

Energy efficiency cost avoidance, 2005 to 2014



Source: UCOP Capital Resources Management

## EXTERNAL RECOGNITION OF UC

### HOW UC RANKS

One of the points of pride for the UC is providing its students, many of them low income, access to an educational and research environment that is equivalent to the best anywhere. This high quality experience comes in large part from the excellence and recognition of UC's faculty.

In addition, there is a wide range of national and international rankings, two presented below, that highlight UC's excellence across our ten campuses. *U.S. News* ranks institutions on their prestige, resources and selectivity, compared with *Washington Monthly*, which looks at measures of social mobility, research and national service.

#### U.S. News: America's Top National Public Universities

	2007	2008	2009	2010	2011	2012	2013	2014
<b>Berkeley</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>Los Angeles</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
U of Virginia	2	2	2	2	2	2	2	2
U of Michigan	2	3	4	4	3	4	4	4
<b>Davis</b>	<b>13</b>	<b>11</b>	<b>12</b>	<b>11</b>	<b>9</b>	<b>9</b>	<b>8</b>	<b>9</b>
<b>San Diego</b>	<b>8</b>	<b>8</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>8</b>	<b>8</b>	<b>9</b>
<b>Santa Barbara</b>	<b>13</b>	<b>13</b>	<b>12</b>	<b>11</b>	<b>9</b>	<b>10</b>	<b>10</b>	<b>11</b>
U of Illinois	10	8	10	9	15	13	13	11
<b>Irvine</b>	<b>12</b>	<b>13</b>	<b>12</b>	<b>14</b>	<b>11</b>	<b>13</b>	<b>12</b>	<b>14</b>
<b>Santa Cruz</b>	<b>33</b>	<b>35</b>	<b>45</b>	<b>29</b>	<b>29</b>	<b>31</b>	<b>32</b>	<b>36</b>
U at Buffalo	-	-	-	-		54	51	53
<b>Riverside</b>	<b>39</b>	<b>45</b>	<b>40</b>	<b>43</b>	<b>41</b>	<b>41</b>	<b>46</b>	<b>55</b>

UC does not endorse nor set goals tied to any particular set of rankings. However, we recognize these rankings, although limited in scope, can give an indication of institutions' overall academic quality and allow them to assess performance relative to peers in a public way. We also recognize the age of an institute can be a factor in rankings. Despite caveats, UC campuses rate top compared not only to public but also private institutions, as the *Washington Monthly* data show.

#### Washington Monthly: National University Rankings

	2005	2006	2007	2008 <sup>1</sup>	2009	2010	2011	2012	2013
<b>San Diego</b>	<b>8</b>	<b>6</b>	<b>4</b>	<b>n/a</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>Riverside</b>	<b>-</b>	<b>22</b>	<b>15</b>	<b>n/a</b>	<b>16</b>	<b>40</b>	<b>5</b>	<b>9</b>	<b>2</b>
<b>Berkeley</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>n/a</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>5</b>
Stanford	5	7	13	n/a	4	4	4	3	6
Harvard	16	28	27	n/a	11	9	6	11	8
<b>Los Angeles</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>n/a</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>6</b>	<b>10</b>
MIT	1	1	27	n/a	12	15	11	15	11
U of Michigan	10	18	6	n/a	18	7	10	13	12
U of Illinois	13	16	11	n/a	24	27	38	22	19
<b>Santa Barbara</b>	<b>-</b>	<b>57</b>	<b>36</b>	<b>n/a</b>	<b>21</b>	<b>11</b>	<b>13</b>	<b>14</b>	<b>22</b>
<b>Davis</b>	<b>17</b>	<b>10</b>	<b>8</b>	<b>n/a</b>	<b>10</b>	<b>6</b>	<b>8</b>	<b>17</b>	<b>23</b>
U of Virginia	22	20	16	n/a	26	59	53	48	51
Yale	15	12	38	n/a	23	33	39	41	54
<b>Santa Cruz</b>	<b>--</b>	<b>68</b>	<b>76</b>	<b>n/a</b>	<b>56</b>	<b>93</b>	<b>70</b>	<b>67</b>	<b>65</b>
<b>Irvine</b>	<b>--</b>	<b>72</b>	<b>49</b>	<b>n/a</b>	<b>44</b>	<b>50</b>	<b>60</b>	<b>117</b>	<b>84</b>

<sup>1</sup> *Washington Monthly* did not publish rankings for 2008.

## QUICK FACTS ABOUT UC

### UC Community Headcount

Students	244,000
Faculty and staff	138,390
Retirees	61,000
Alumni	1,600,000

### Freshman Applications (Fall 2013)

Applications	140,024
Admitted	86,270
Enrolled	39,984

### Transfer Applications (Fall 2013)

Applications	35,051
Admitted	22,378
Enrolled	16,765

### Fall 2013 Enrollment

<b>Fall 2013 Enrollment</b>	<b>244,126</b>
Undergraduates	188,290
Graduate academic doctoral	25,873
Graduate academic master's	5,583
Graduate professional	18,953
Medical residents	5,427

### Undergraduate Pell Grant recipients, 2011–12

UC average	42 percent
AAU public average	23 percent
AAU private average	17 percent

### Undergraduate Cumulative Debt (2011–12 graduates, freshman entrants)

UC average	\$20,205
Public 4-year average	\$25,704
Private nonprofit 4-year average	\$30,737
Private for profit average	\$37,840

### Freshman Graduation Rates

4-year (2009 cohort)	63 percent
6-year (2007 cohort)	83 percent

### Transfer Graduation Rates

2-year (2010 cohort)	54 percent
4-year (2008 cohort)	86 percent

### Patient Care

Outpatient clinic visits	3,800,000
Inpatient days	147,000
Emergency room visits	290,000

### Agriculture and Natural Resources

Cooperative extension advisors	200
Local offices	57
Campus-based specialists	130
Research and extension centers	9

### Natural Reserves

Sites	39
Acres	756,000

### Research Expenditures (2012–13) **\$4.1 billion**

Federal	\$2,100 million
State and local governments	\$246 million
University support	\$928 million
Industry	\$222 million
Non-profit	\$373 million

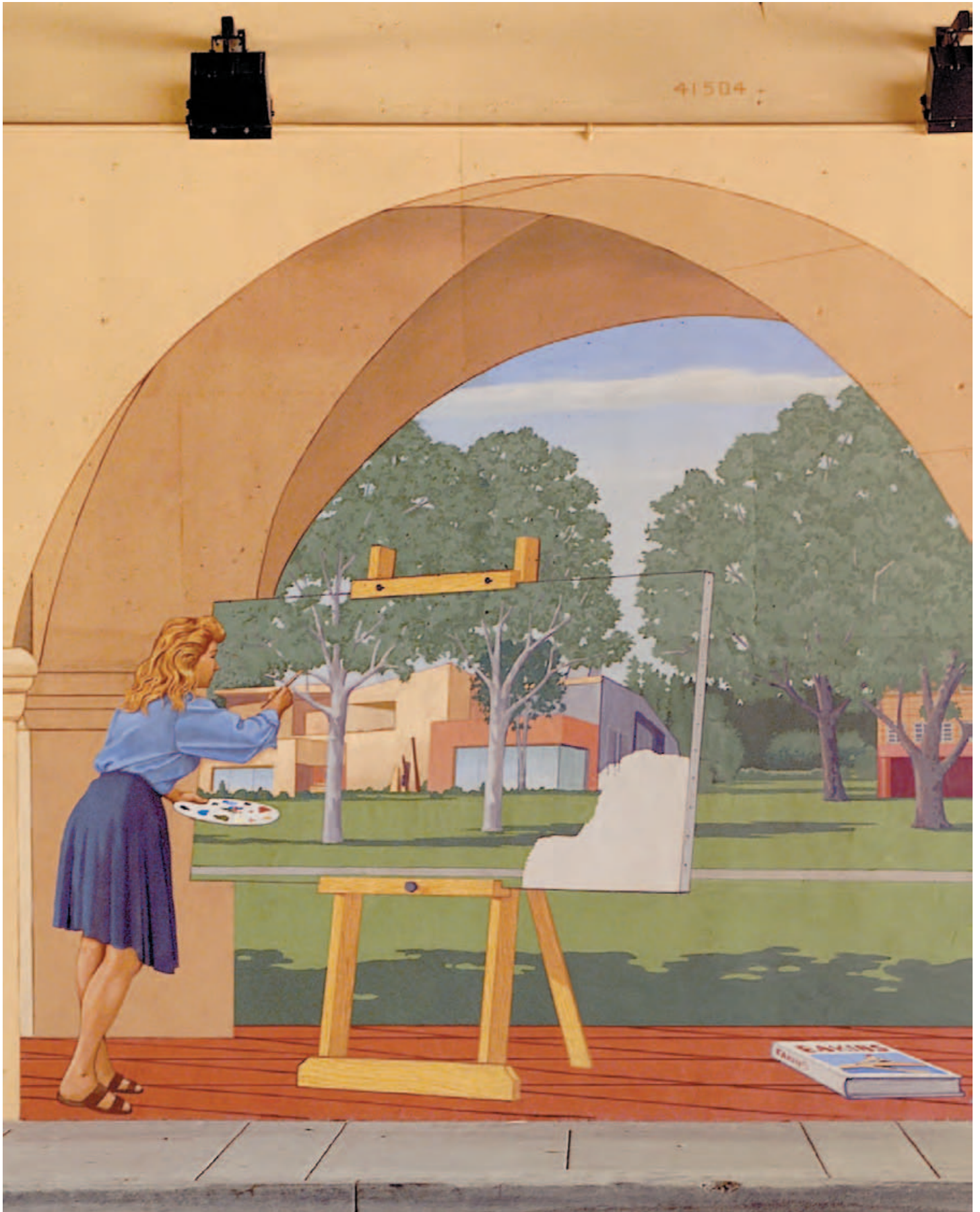
### Research Workforce FTE (2012–13) **28,064**

Faculty	2,093
Other academics	5,258
Other staff	11,576
Postdoctoral researchers	4,256
Students	4,879

### Capital Resources

Buildings	5,800
Gross square feet	130 million





*A mural at UC Riverside, one of a series depicting the history of the campus.*

# Chapter 1. UC's Impact on the State of California

## Higher education in California

In 1960, California's *Master Plan for Higher Education* transformed a collection of uncoordinated and competing colleges and universities into a coherent system and a unique model for higher education. It accomplished this by assigning each public segment — the University of California (UC), the California State University System (CSU) and the California Community Colleges (CCC) — its own distinctive mission and pool of students.

The University of California became the state's public research university, with the responsibility to admit the top 12.5 percent of students from the state's graduating high school class, to conduct research and to award doctoral and professional degrees.

## Affecting Californians every day

Founded in 1868, the University of California system today encompasses ten campuses, five medical centers, sixteen health professional schools, five law schools and the state's only public veterinary school. UC generates about \$45 billion annually in economic activity in California and contributes about \$32.8 billion to the gross state product.

The immediate UC community includes 244,000 students, 138,000 faculty and staff, over 61,000 retirees and over 1.6 million living alumni. The broader UC community includes many more people. Patients at UC's hospitals account for 3.8 million outpatient clinic visits, more than 147,000 inpatient days and 290,000 emergency room visits each year. Numerous farmers and agriculturalists work with UC Cooperative Extension agents. Entrepreneurs and employees in industry use findings from UC's research. Many others attend concerts, movies and lectures at UC and visit its numerous museums, libraries, botanical gardens and natural reserve sites.

This Accountability Report will illustrate UC's impact in California by describing its role in:

- educating undergraduate, graduate and health science students and medical residents;
- serving as one of the largest employers in the state;
- conducting research that educates students and results in discoveries that benefit the state and beyond;
- operating California's largest teaching hospitals and health science instructional programs, caring for Californians today while producing health science professionals for tomorrow;
- being a leader in sustainability to demonstrate what is possible in achieving carbon neutrality, energy efficiency and water savings.

The University's reach goes far beyond its ten campuses, and this chapter utilizes detailed maps to illustrate UC's impact on the state. The maps presented here show the locations of UC community programs and partnerships throughout California. They provide, in location-specific detail, a sense of UC's diverse impact in all regions. Though they are dense with information, these maps understate UC's statewide activities because not all programs can be mapped to a discrete location. They nonetheless illustrate the breadth and depth of the University.

## Teaching — enrollments, degrees and alumni

UC awards more than 30 percent of California's bachelor degrees (with significant contributions to STEM fields), more than 60 percent of its academic doctoral (Ph.D.) degrees and more than 60 percent of its medical professional practice degrees. There are more than 1.6 million alumni, with 1.2 million living in California.



## Research — agriculture and natural reserves

The UC Natural Reserve System comprises 39 sites, encompassing more than 756,000 acres across California, with most state ecosystems represented. These lands provide undisturbed environments for teaching, research and public service. In January 2014, the Regents approved the addition of the Merced Vernal Pools and Grasslands next to UC Merced.

## Public service — community programs

UC engages students long before they enroll and supports all levels of education. UC provides student service programs at both K-12 and community college locations, with the focus on raising student achievement levels and closing achievement gaps.

UC administers the California Subject Matter Project (CSMP), providing professional development for teachers at about 4,800 locations and building teacher leadership capability through about 120 teacher preparation programs across the state. CSMP also supports collaborative networks among K-12 educators and university faculty.

## Economic impact — workforce

UC is one of the largest employers in the state, with more than 138,000 faculty and staff. Its current workforce and more than 45,000 retirees live and purchase goods and services throughout California.

## For more information

Master Plan for Higher Education in California:  
[www.ucop.edu/acadinit/mastplan/](http://www.ucop.edu/acadinit/mastplan/)

Interactive map application: includes Assembly districts (Senate info available in 2015) and campus-specific information –  
<http://arcgis.cisr.ucsc.edu/ucop/>

Natural Reserve System:  
<http://nrs.ucop.edu/index.htm>

Division of Agriculture and Natural Resources:  
<http://ucanr.edu/>

California Subject Matter Project:  
<http://csmp.ucop.edu>

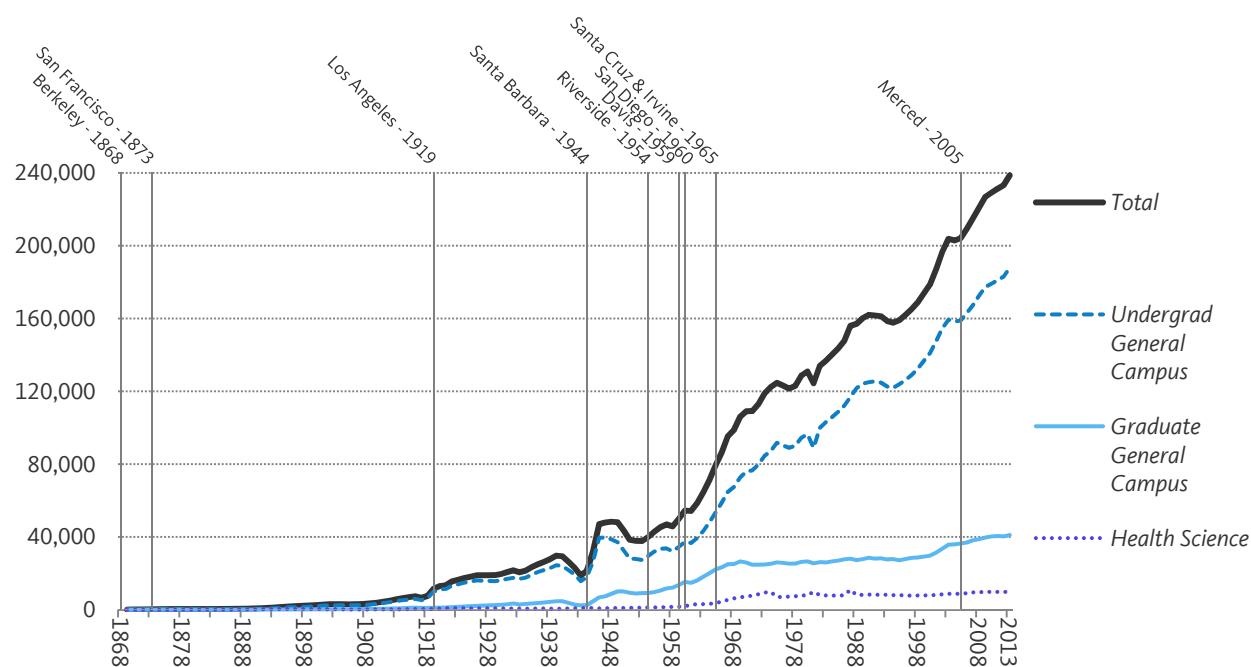


*At the Merced Vernal Pools and Grassland Reserve, the community can learn alongside researchers and students, gaining experience with the springtime pools, their fragile flora, endangered fauna and unique soils.*

## 1.1 STUDENTS

### Student enrollment at the University has quadrupled over the past 50 years.

#### 1.1.1 Undergraduate and graduate student enrollment, with campus opening date Universitywide Fall 1868 to 2013



Source: UC Corporate Student System<sup>1</sup>

Enrollment growth, especially in the number of undergraduates, has been driven by growth in the number of high school graduates in the state. The Master Plan guarantees a place at UC for the top 12.5 percent of the graduating high school class in California and to all eligible community college transfer students.

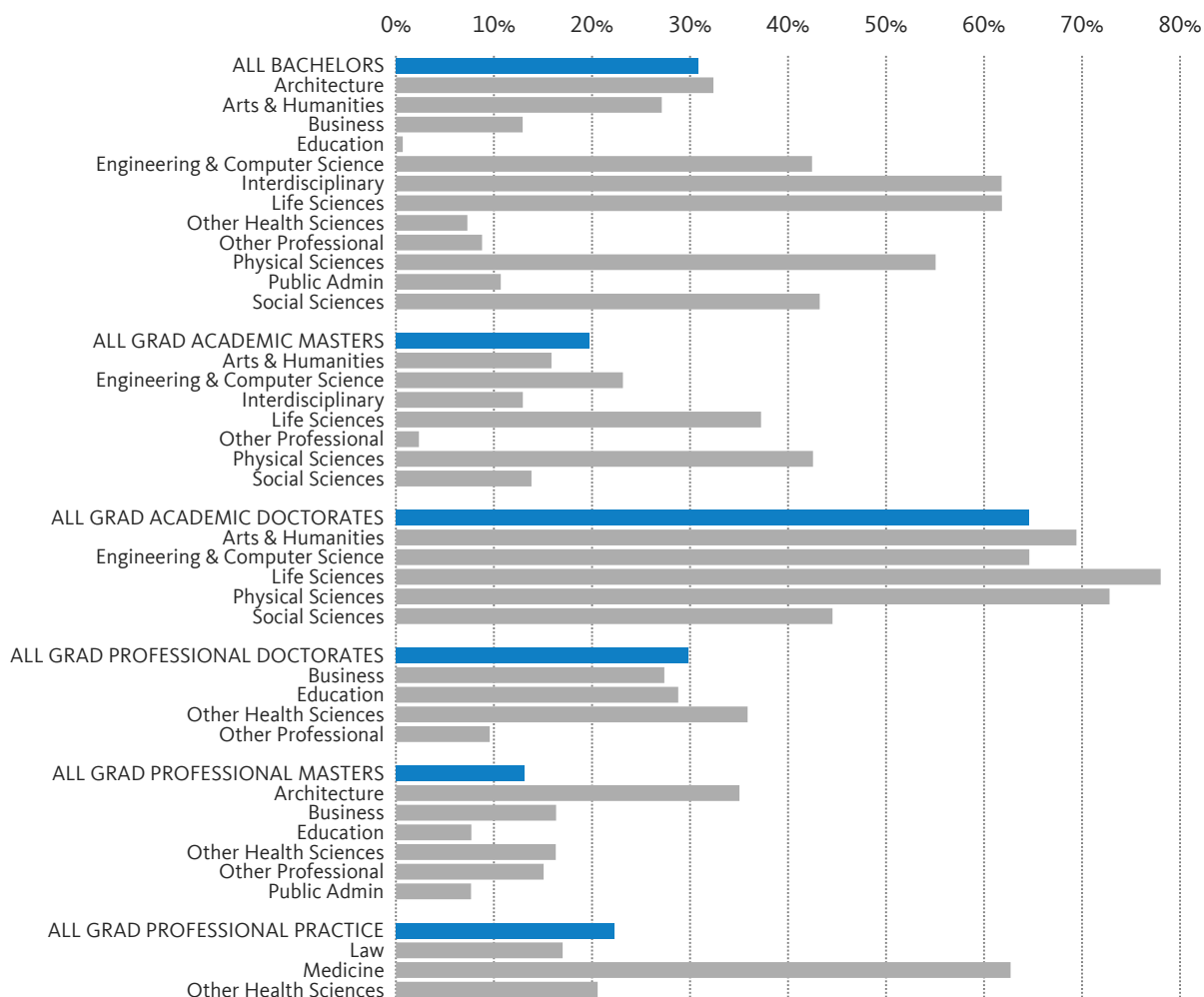
Given growth in undergraduate enrollments, the share of graduate and professional students has fallen, though their numbers have increased. In 1961, UC enrolled 68 percent general campus undergraduates. In 2013, the University enrolled about 79 percent general campus undergraduates. This change in the proportion of undergraduate to graduate students is one of the largest structural changes in the University over the past 50 years.

<sup>1</sup> Does not include medical residents. Health Science includes both graduate and a small number of undergraduate students.

## 1.1 STUDENTS

### UC awards more than 30 percent of the bachelor degrees and more than 60 percent of academic doctoral (Ph.D.) degrees in California.

#### 1.1.2 UC share of degrees awarded in California, by discipline Universitywide 2011–12



Source: IPEDS<sup>1</sup>

The Master Plan stipulates that UC will provide undergraduate, graduate and professional education. Within public higher education, UC has exclusive jurisdiction for doctoral degrees (with the exceptions of CSU's Doctorates of Education and Physical Therapy, and joint doctorates with UC and independent institutions).

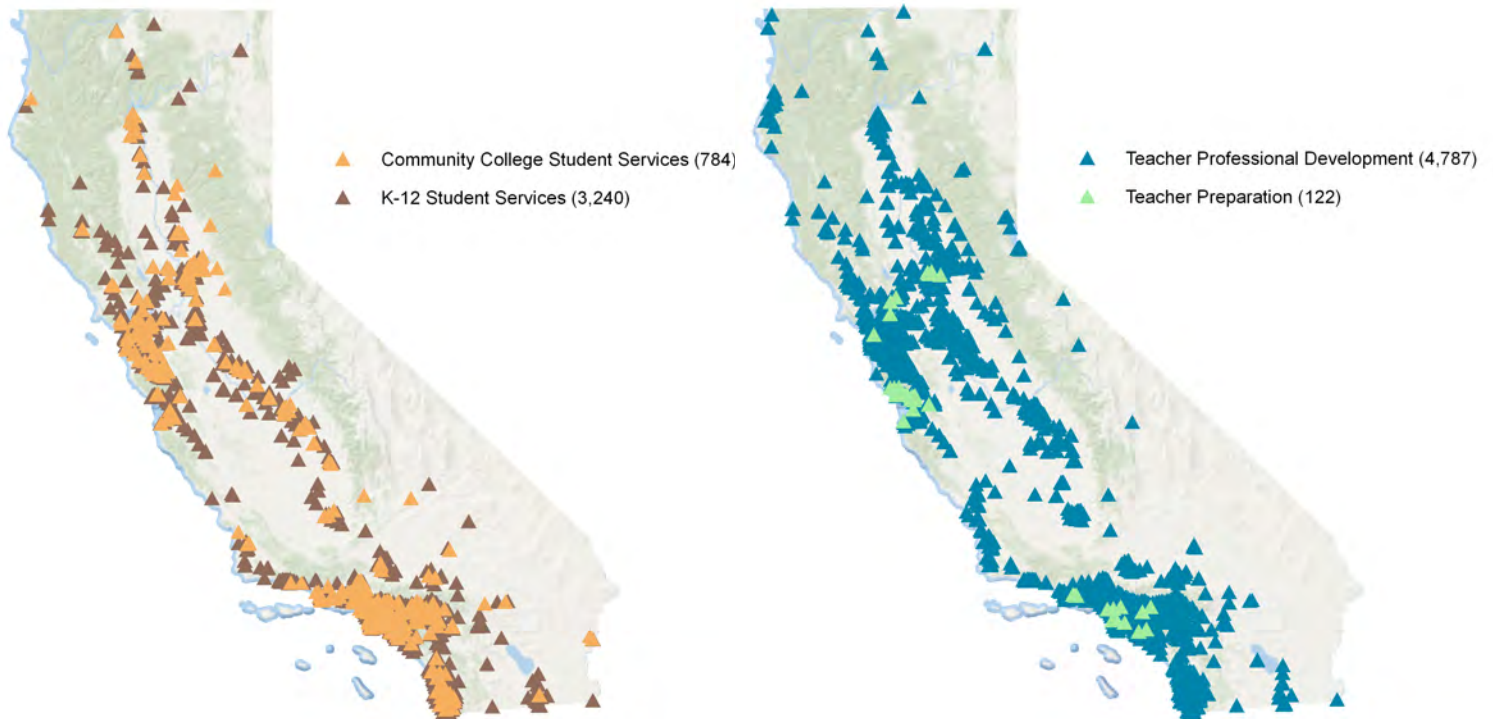
UC contributes significantly to Science, Technology, Engineering and Mathematics (STEM) degrees, awarding more than 60 percent of the state's Life Science and more than 50 percent of the Physical Sciences bachelor degrees. In addition, UC awards more than 60 percent of statewide graduate medical professional practice degrees.

<sup>1</sup> Excludes for-profit and specialized institutions.

## 1.2 UC IN THE COMMUNITY

### UC engages students long before they enroll, and supports all levels of education.

#### 1.2.1 UC's K-12 and community college student services, and teacher professional development and teacher preparation programs Fall 2012



Source: UC campuses

Through outreach programs, publications, counselor training, teacher preparation and various professional development initiatives, UC has long been engaged with all levels of education in California. This engagement currently extends to both K-12 public schools and community colleges. It includes programs to help high school students complete a rigorous college preparatory curriculum. These efforts prepare students for study and careers, and provide support at every educational level.

The University's statewide preparation programs work in partnership with K-12, the business sector, community organizations and other institutions of higher education to raise student achievement levels and to close achievement gaps.

Through the Science and Mathematics Teacher Initiative (CalTeach), UC recruits and prepares

mathematics and science majors for teaching careers by providing special coursework and field experiences in K-12 schools. UC undergraduates enrolled in the CalTeach program have worked with over 500 mentor teachers in over 400 schools.

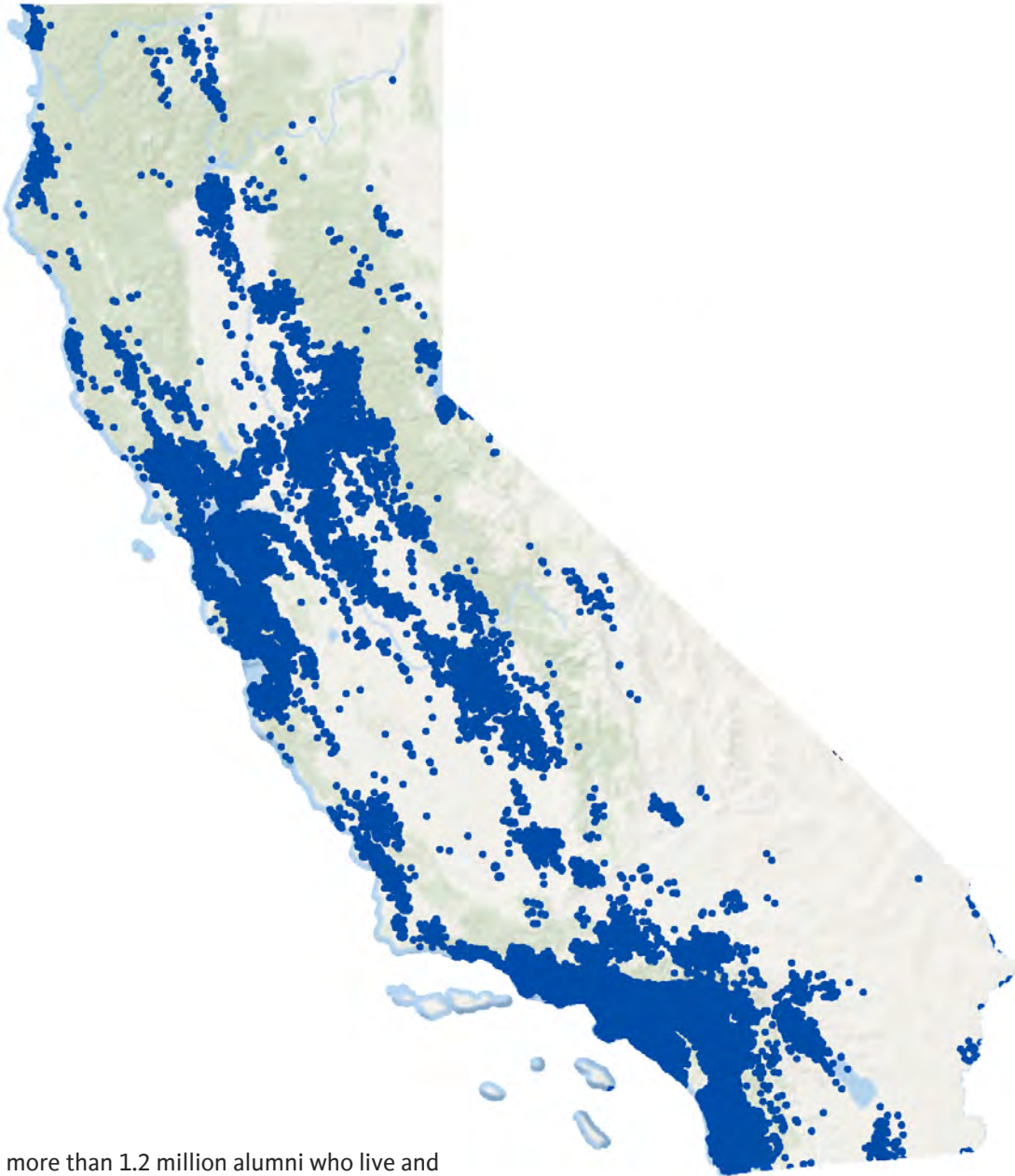
The California Subject Matter Project creates sustainable teacher learning communities throughout California. Its network of nine discipline-based projects supports quality professional development to improve instructional practices and student achievement. The network includes projects in history-social science, international studies, mathematics, physical education-health, science, reading & literature, world language, writing and arts.

UC operates close to 4,800 teacher professional development locations and about 125 teacher preparation programs.

## 1.2 UC IN THE COMMUNITY

### Of UC's 1.6 million living alumni, many reside within California.

#### 1.2.2 Home residence of UC alumni Fall 2012



UC has more than 1.2 million alumni who live and work across California. They are leaders, volunteers and contributors to the vitality of our communities, our businesses and our culture.

Source: UC campuses

Twenty-five percent of international students and 35 percent of domestic non-California students remain in California to work in the state after graduating from UC.



## 1.2 UC IN THE COMMUNITY

**UC is one of California's largest employers, and its faculty, staff and retirees live in and support communities throughout the state.**

### 1.2.3 Faculty, staff and other employees Fall 2013



Source: UCCorporate Personnel System

The University of California employs approximately 138,000 faculty and staff, making it one of the largest employers in California.

UC's economic impact goes well beyond its ten campus locations. Members of its workforce purchase goods and contribute to local economies across the state.

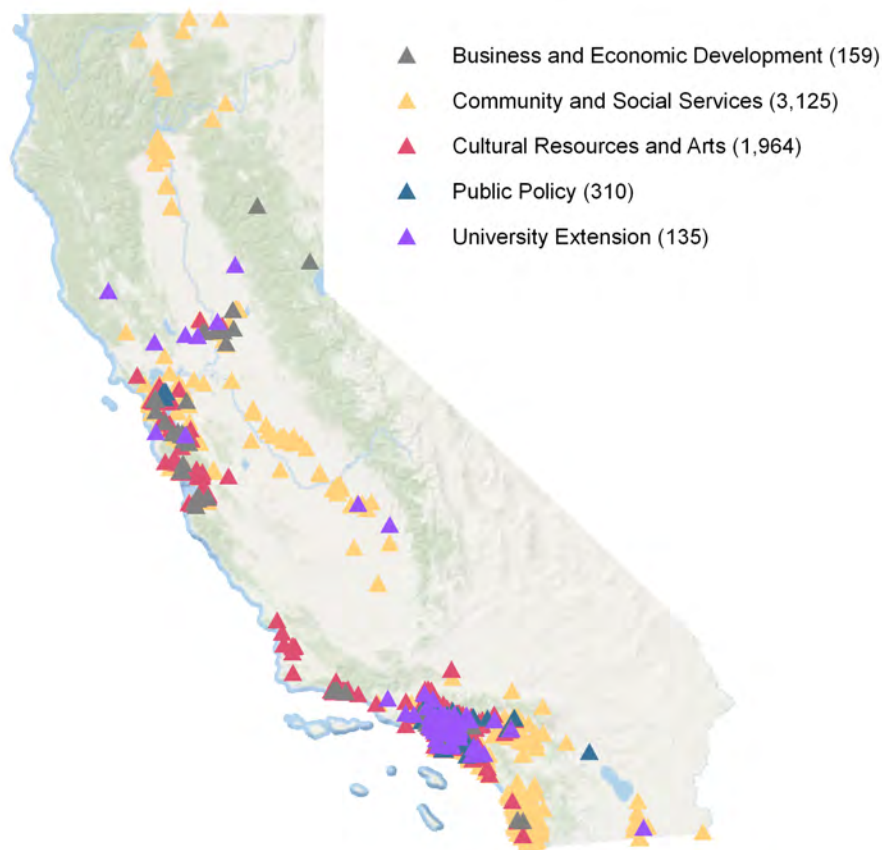
All told, the ripple effect of UC's operations generates about \$46 billion in economic activity statewide. Not shown on the map are 45,000 of UC's retirees who live in the state.



## 1.2 UC IN THE COMMUNITY

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

#### 1.2.4 UC business and economic development, community and social services, cultural resources and arts, public policy and university extension programs Fall 2012



Source: UC campuses

UC administers 3,125 programs in community and social services throughout the state, affecting the lives of Californians in nearly every community. These programs include public health partnerships and services, social welfare clinics, community law centers, neighborhood projects, internship programs, employment training, community volunteer programs, educational research collaboratives, and partnerships with all levels of education from preschool to community college.

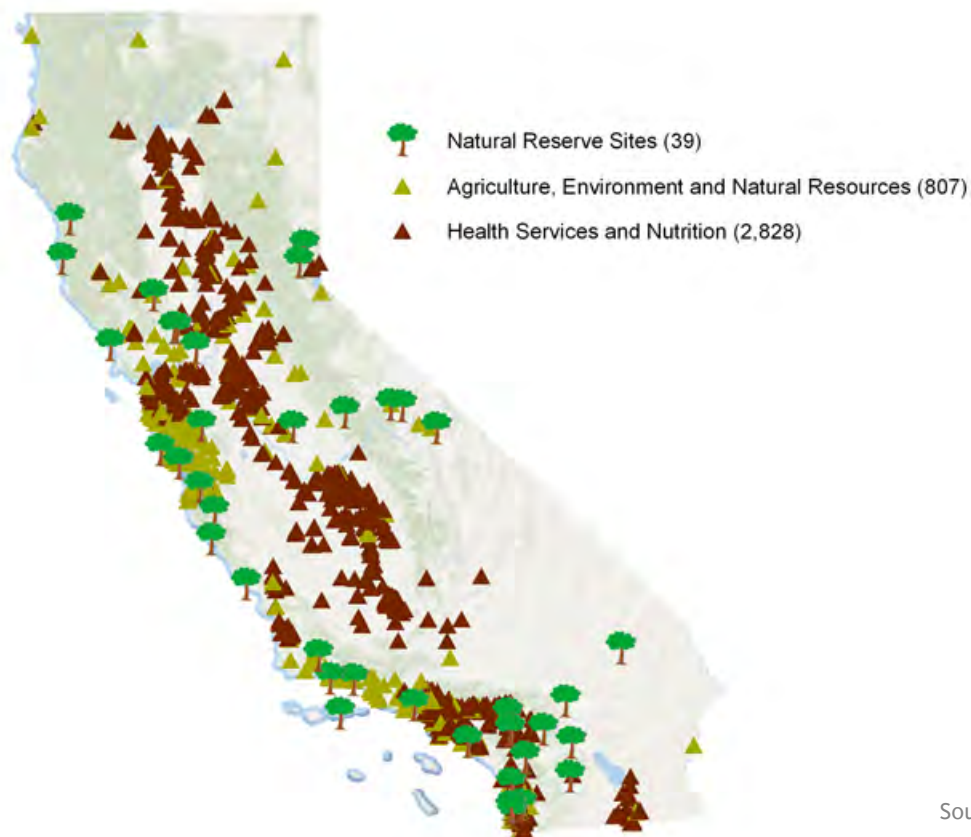
UC provides almost 2,000 valuable arts education and outreach programs that teach art, dance, drama, music and digital arts in the community. It has dozens of arts venues and archival collections. Its gardens and herbaria are open to the public, while providing important test beds for research.

In addition, there are more than 300 public policy programs and sponsorship series that engage communities and raise awareness of public policy issues. UC also sponsors nearly 160 business and economic development programs, including student internships with academic credit. These programs focus on bringing together local companies and motivated individuals, promoting civic engagement and community economic development by placing students in high-tech and green-tech startups. Finally, with 135 university extension programs, UC serves approximately 300,000 course registrants annually and encourages lifelong learning for all Californians.

## 1.2 UC IN THE COMMUNITY

### A snapshot of the programs and activities of UC's Division of Agriculture and Natural Resources illustrates their impact throughout California.

#### 1.2.5 UC health services/nutrition programs, natural reserve sites and agriculture, environment and natural reserves Fall 2012



Source: UC campuses

The UC Natural Reserve System (NRS) is a network of protected natural areas throughout California. Its 39 sites include more than 756,000 acres, making it the largest university-administered reserve system in the world. NRS contributes to understanding and wise stewardship of the Earth through its protection of undisturbed environments for research, education and public service.

UC's Division of Agriculture and Natural Resources (ANR) provides practical research about agriculture in California through its 200 locally based Cooperative Extension advisers and specialists, 57 offices throughout the state, 130 campus-based specialists, nine Research and Extension Centers, and 700 academic researchers.

As part of ANR, the Agriculture, Environment and

Natural Resources partnership programs provide research-based curriculum and staff training to community and youth-serving agencies. These efforts support quality afterschool environments for children ages 5–19. In addition, the Health Service and Nutrition partnership programs use UC-developed, evidence-based curricula to create lessons that present important messages from the federal Dietary Guidelines for Americans.

Other ANR activities include the Integrated Pest Management Program, the Master Gardener Program (with almost 6,000 participants in 45 counties), and the Youth, Families and Communities Program. The latter includes both 4-H, which serves more than 130,000 California youth, and UC's CalFresh program, which provides nutrition education to 140,000 Californians.





*The Oakville Research Station at UC Davis.*



# Chapter 2. Undergraduate Admissions and Enrollment

## Goals

One of the University of California's highest priorities is to ensure that a UC education remains accessible to all Californians who meet its admissions standards. This goal is articulated in California's *Master Plan for Higher Education*, which calls for UC to admit all qualified freshman applicants in the top 12.5 percent of California public high school graduates. It also calls for UC to admit all qualified California Community College transfer students.

In 2013, around 140,000 freshmen and 35,000 transfer students applied to UC. Campus admissions decisions are based on comprehensive review of the qualifications of applicants and target the incoming class size based on the capacity of classrooms, laboratories and housing.

In 2014, UC created a Transfer Action Team to examine ways to increase demand, provide access and better serve transfer students.

## Admissions trends — freshmen

Freshman applications have risen dramatically over the past two decades, growing more than 5 percent per year and nearly tripling since 1994. UC relies on a comprehensive review process to make admissions decisions, including successful completion of A-G (college preparatory) courses, high school GPA and standardized test scores. In addition, UC looks beyond test scores to consider special talents, special projects and academic accomplishments in the light of life experiences and special circumstances.

With a growing number of applicants, admit rates have lowered as campuses become more selective. Despite that trend, UC continues to comply with Master Plan goals. UC accomplishes this by admitting the top 9 percent of high school graduates statewide, the top 9 percent of graduates from each high school that participates in the Eligibility in the Local Context (ELC) program, and

those who meet the minimum A-G course requirements via the Entitled to Review (ETR) process. Qualified freshman applicants are offered an opportunity to be admitted to another UC campus if they do not receive an offer of admission from the UC campus to which they applied. While all campuses offer admission to out-of-state and international students, these students must meet a higher standard for academic qualifications than California residents.

## Admissions trends — transfer students

Transfer applications have almost doubled over the last 20 years, reaching a high of 36,200 in 2011. Applicants dropped to 34,800 in 2012 and increased to around 35,000 in 2013.

The slight recent drop in transfer applications to UC is most likely due to the cumulative effects of state budget cuts to the community colleges. Over the past few years, the CCCs took budget cuts of \$1.5 billion and lost more than 500,000 students. They have reported that the combination of reduced enrollment, limited availability of courses needed for transfer and insufficiently supported advising services have undercut student progress toward transferring.

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

## Enrollments

The University enrolls freshman and transfer students from every county of California, but students tend to apply to campuses closest to their residence. One goal of the President's transfer initiative is to increase the geographic diversity of transfer entrants.

The Master Plan specifies that the University maintain a 60:40 ratio of upper-division to lower-division students, which corresponds to a 2:1 ratio of new freshmen to new CCC transfer students. Over the past decade, UC has moved closer to that

ratio, from 2.61:1 to 2.43:1. The report from the President's Transfer Action Team recommits the University to fulfilling that goal.

Compared to a decade ago, freshman and transfer entrants today are better prepared academically as measured by grades and, for freshmen, test scores and the number of college preparatory high school courses. As academic qualifications of the entering class continue to improve, UC still maintains access for populations historically underserved by higher education. More than 40 percent of undergraduates come from low-income families and/or will be the first in their families to complete a four-year degree.

The number of nonresident domestic and international students has increased in recent years, although their proportion is still much lower than at comparable research universities. Nonresident students enrich and diversify the student body; they also pay supplemental tuition (\$22,878 in 2013–14) not charged to California residents. This extra revenue enables UC to improve educational programs for all students.

## Looking forward

At the May 2014 Regents meeting, the Transfer Action Team reported findings and recommendations designed to strengthen and streamline the transfer process, such as increased outreach, targeted communications, enhanced campus transfer services and new UC-community college partnerships.

## For more information

Information on admissions:  
[www.universityofcalifornia.edu/admissions](http://www.universityofcalifornia.edu/admissions)

The Transfer Action Team report:  
<http://ucop.edu/transfer-action-team/transfer-action-team-report-2014.pdf>

Information on the *California Master Plan for Higher Education* is available at  
[http://ucfuture.universityofcalifornia.edu/documents/ca\\_masterplan\\_summary.pdf](http://ucfuture.universityofcalifornia.edu/documents/ca_masterplan_summary.pdf)

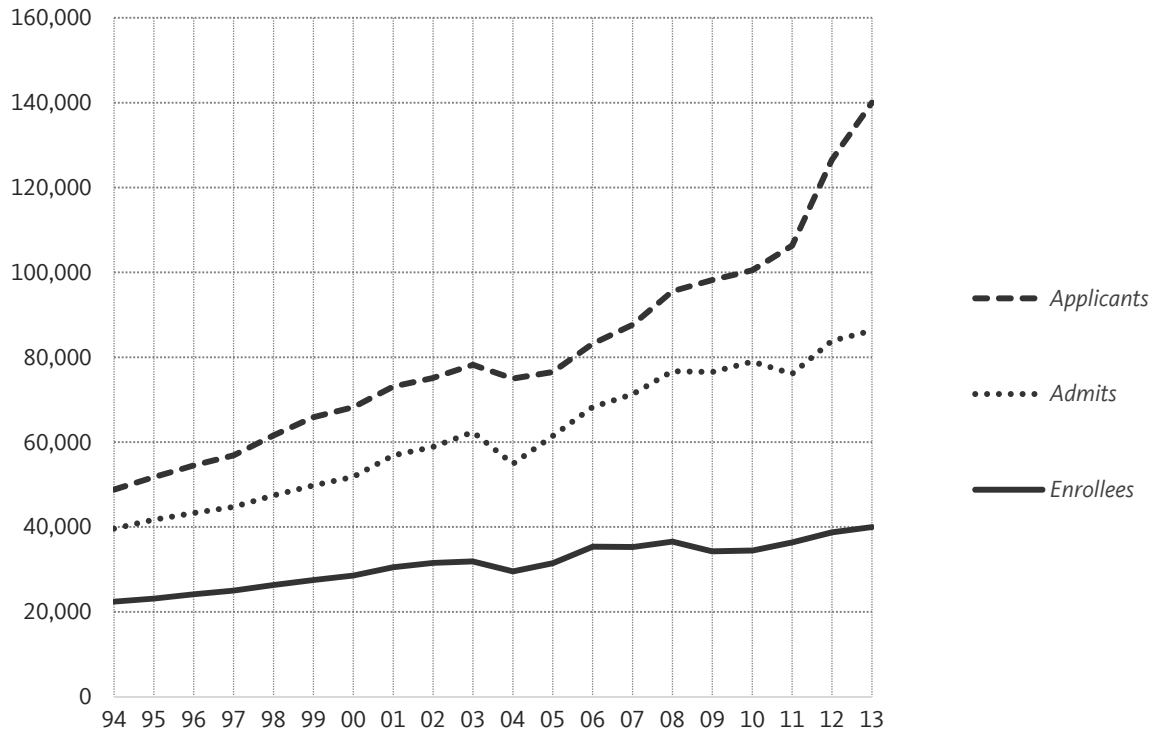


*Students at the Sather Gate entrance to UC Berkeley.*

## 2.1 APPLICANTS, ADMITS AND ENROLLEES

### UC continues to become more selective.

#### 2.1.1 Freshman applicants, admits and enrollees Universitywide Fall 1994 to fall 2013



Source: UC Corporate Student System<sup>1</sup>

The rapid growth in freshman applications to UC over the past two decades demonstrates the increased demand for college education, the growth of California's population and UC's continued popularity among California high school graduates. UC has made access to California students a priority, enrolling about 7,600 students in 2013–14 for whom it has never received funding from the State. UC continues to maintain its obligations under the Master Plan by guaranteeing admission to all qualified students.

Due to enrollment constraints, some qualified applicants are not offered admission at a campus they applied to but instead are admitted to another campus by a referral process.

<sup>1</sup>Admits and enrollees here include the "referral pool," which comprises eligible applicants who are not offered admission at a campus to which they applied, but who are admitted by another campus with sufficient capacity. Some campuses admit fall applicants for a subsequent term (winter or spring). These "rollover" admits and enrollees are excluded in the graphs here, which show only fall data. Students who apply to multiple UC campuses are counted only once in this Universitywide indicator.

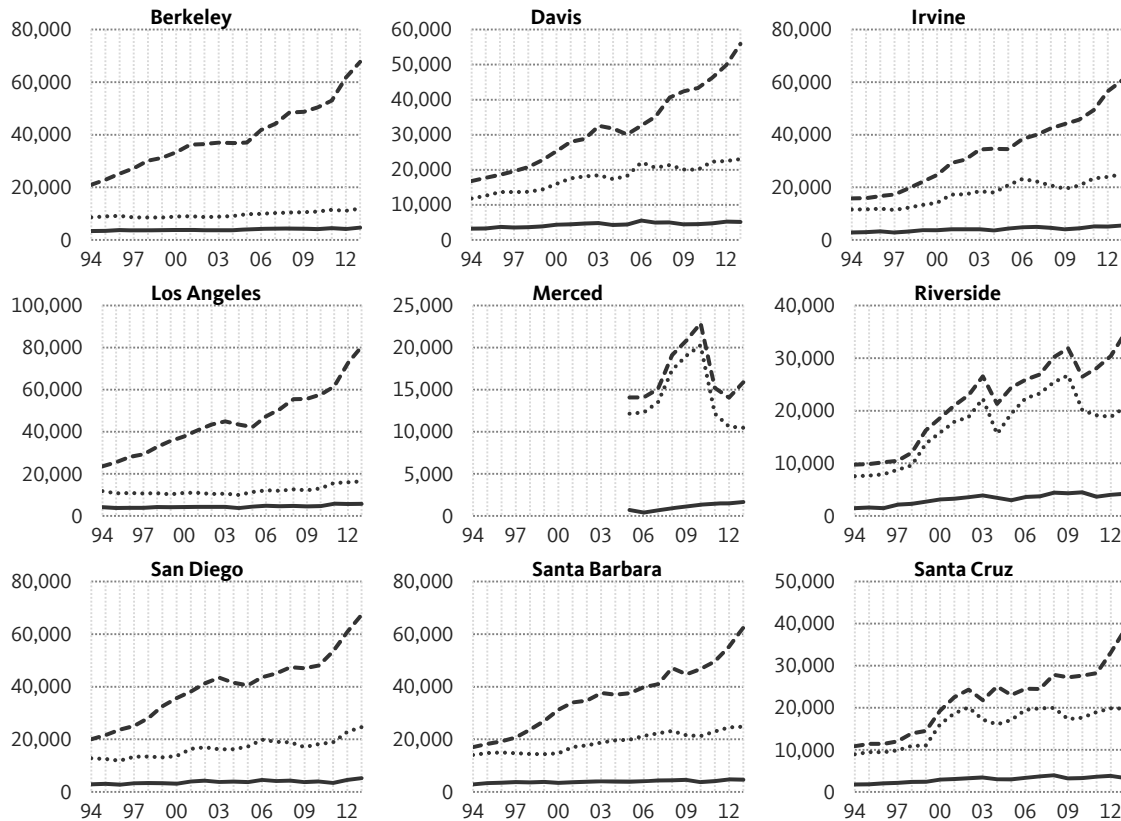
## 2.1 APPLICANTS, ADMITS AND ENROLLEES

### Most UC campuses have experienced tremendous growth in applications and admissions. Trends in campus enrollments have been more stable over time.

#### 2.1.1 Freshman applicants, admits and enrollees

UC campuses

Fall 1994 to fall 2013 [NOTE SCALES; SEE LEGEND ON PREVIOUS PAGE]



Source: UC Corporate Student System<sup>1</sup>

Most UC campuses have seen considerable growth in the number of freshman applications they receive, as demonstrated by the steep dashed lines in the graphs above. One factor contributing to this growth is the increase in the number of UC campuses chosen by each applicant; this grew from about 2.8 campuses per applicant in 1994 to about 3.5 campuses per applicant in 2013.

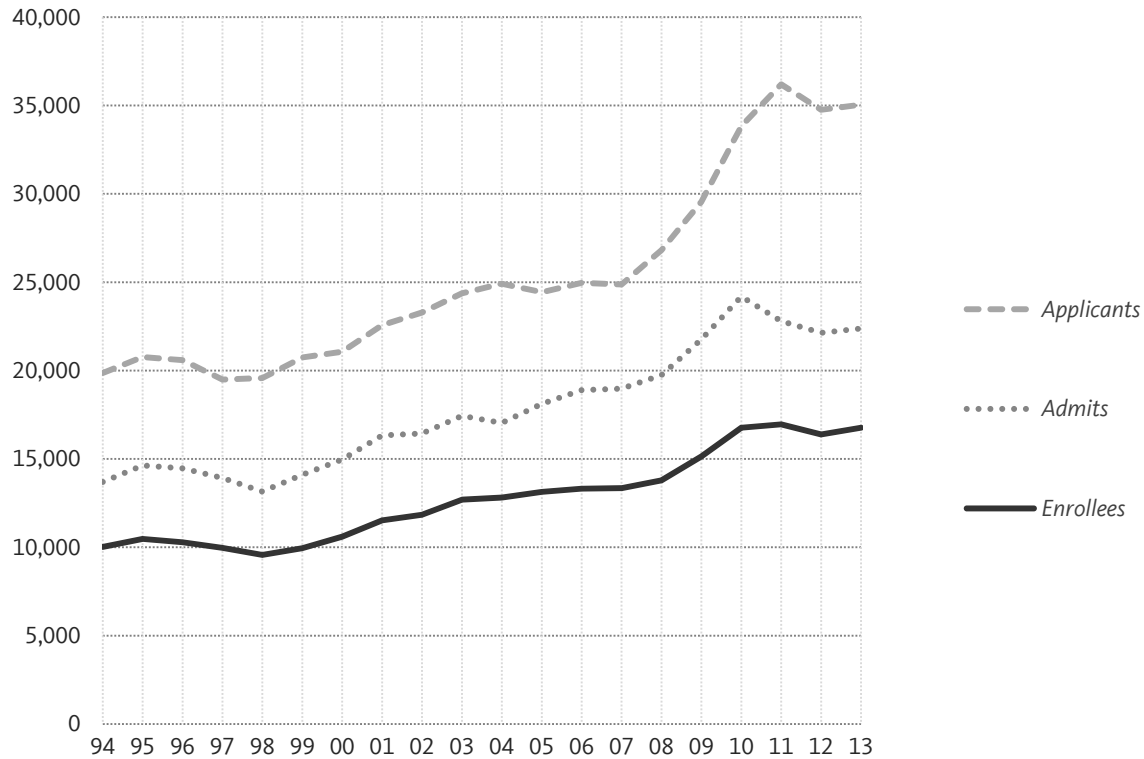
From 2010 to 2013, unduplicated freshman Universitywide applications grew 40 percent, compared to a 27 percent increase in the six-year period between 2003 and 2009. Applications from California residents increased by 21 percent between 2010 and 2013. Additional growth was fueled by domestic nonresidents and international applicants.

<sup>1</sup> Applicants here *exclude* the “referral pool,” which comprises eligible applicants who are not offered admission at a campus to which they applied, but who are admitted to another campus with sufficient capacity. Some campuses admit fall applicants for a subsequent term (winter or spring). These “rollover” admits and enrollees also are excluded from the graphs. A change in accounting for referral students is responsible for the apparent drop in 2011 admits. Beginning that year, UC Merced began admitting only students who indicated interest in a referral offer, rather than every student who qualified for such an offer. This procedural change is reflected in the 2.1.2 and 2.2.2 graphs for Merced.

## 2.1 APPLICANTS, ADMITS AND ENROLLEES

### Since 2011, transfer applications and admissions have decreased, with transfer enrollments fluctuating.

#### 2.1.2 Transfer applicants, admits and enrollees Universitywide Fall 1994 to fall 2013



Source: UC Corporate Student System<sup>1</sup>

After a period of sizable growth from 2007 to 2011, which followed a decade of more modest growth, UC experienced a drop in transfer applications from California residents in 2012, with a slight increase in 2013. A similar but less dramatic trend is seen for enrollments.

Recent funding increases to the CCC and UC's transfer initiative are to likely expand the number of students that transfer to UC. These trends will not likely be immediately apparent because of the lag in time before prospective applicants to UC are prepared to transfer.

The decline in applicants is likely due to fiscal constraints in the California Community Colleges (CCC), which forced them to decrease enrollment by about 500,000 students in the past few years, curtail courses students needed for transfer and cut counseling services.

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

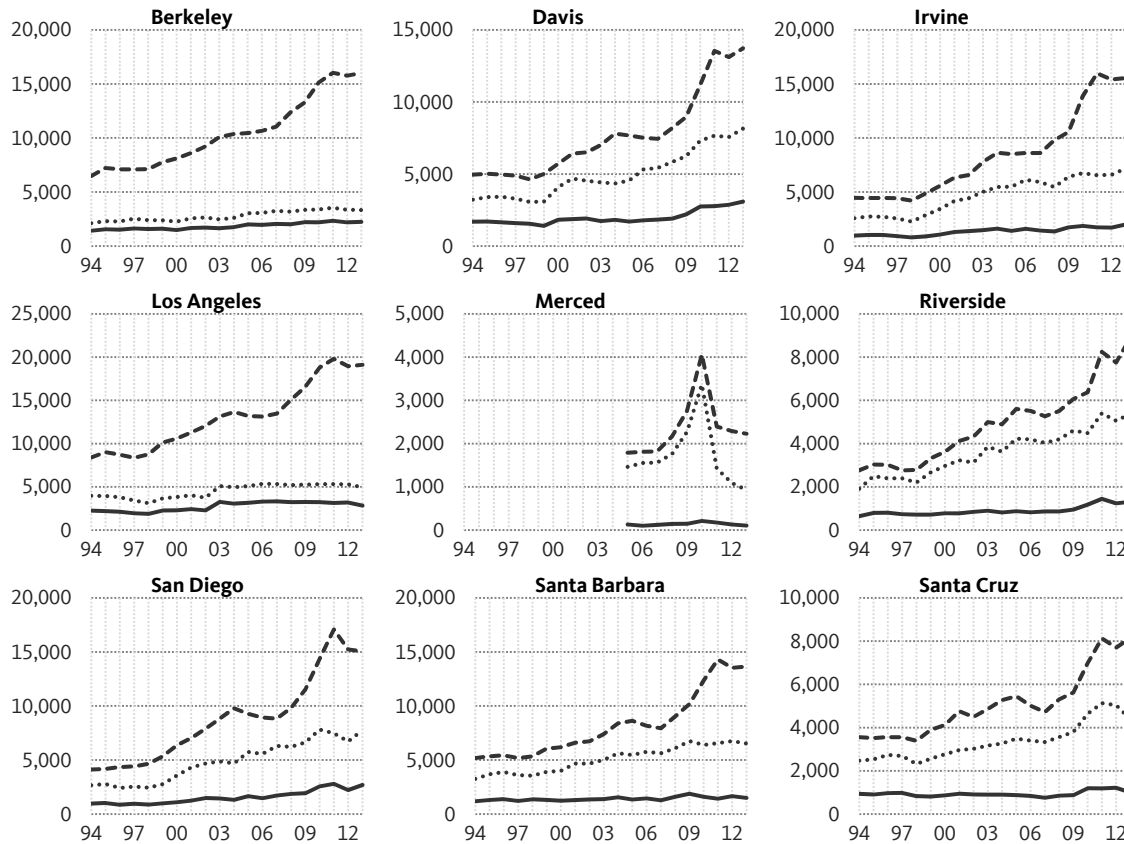


## 2.1 APPLICANTS, ADMITS AND ENROLLEES

**Despite fluctuations in transfer applicants, the number of transfer students enrolled has remained relatively constant overall, with increases for some UC campuses.**

### 2.1.2 Transfer applicants, admits and enrollees UC campuses

Fall 1994 to fall 2013 [NOTE SCALES; SEE LEGEND ON PREVIOUS PAGE]



Source: UC Corporate Student System

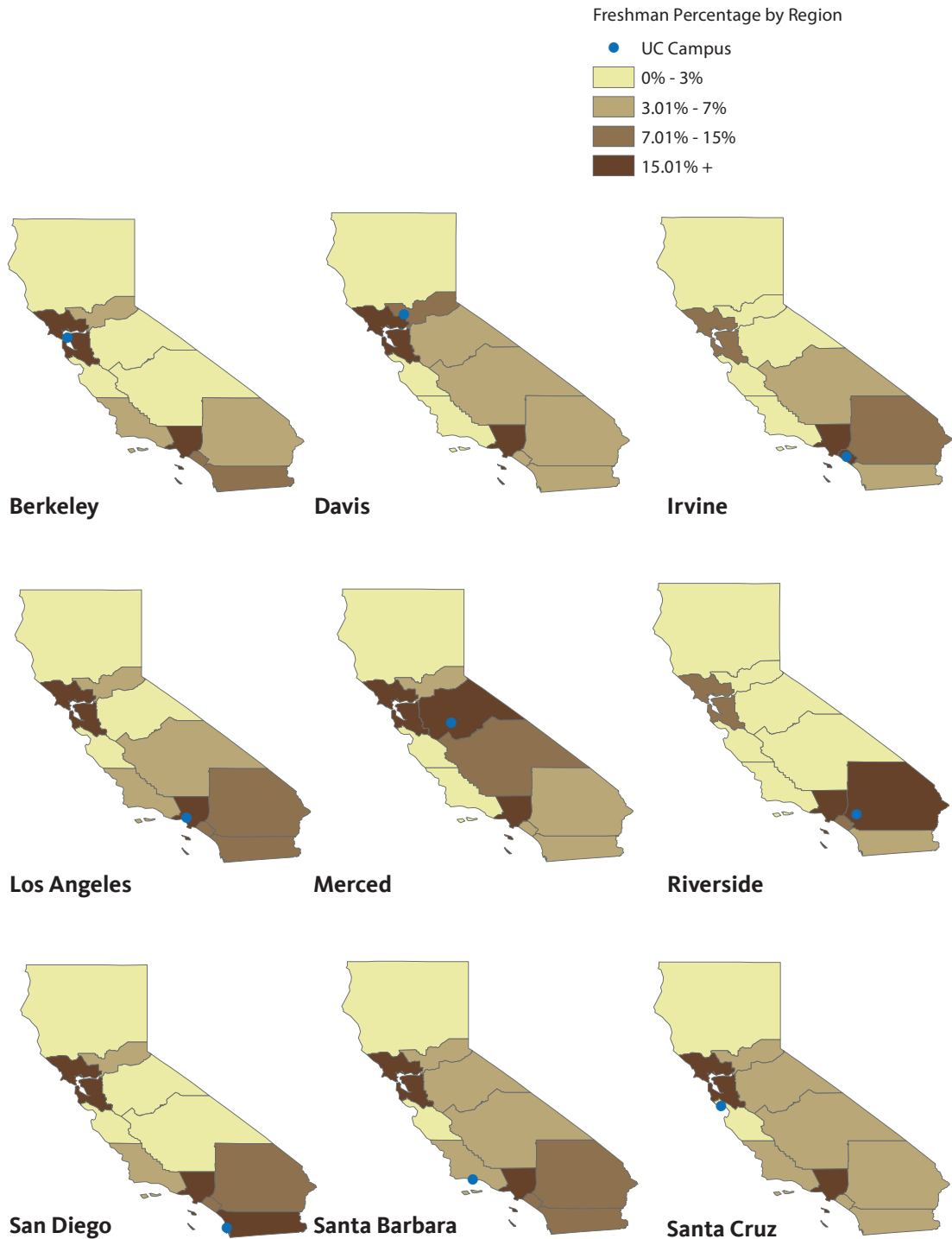
Consistent with UC's commitment to transfer students, the fall enrollment of new California Community College (CCC) California resident transfer students has increased 63 percent since 1994 (from 8,400 to over 13,700). In fall 2012 and 2013, transfer applications dropped, likely due to reduced enrollments and course offerings at the community colleges.

In June 2012, the UC Academic Senate approved a policy change that will help clarify the transfer process for CCC students interested in UC and also improve their preparation for UC-level work. The policy will be fully implemented by fall 2015.

## 2.2 GEOGRAPHIC OUTCOMES

### UC campuses attract students from their local regions along with the major urban areas of California.

#### 2.2.1 Percentage of new CA resident freshman enrollees at each campus from each region UC Campuses Fall 2013

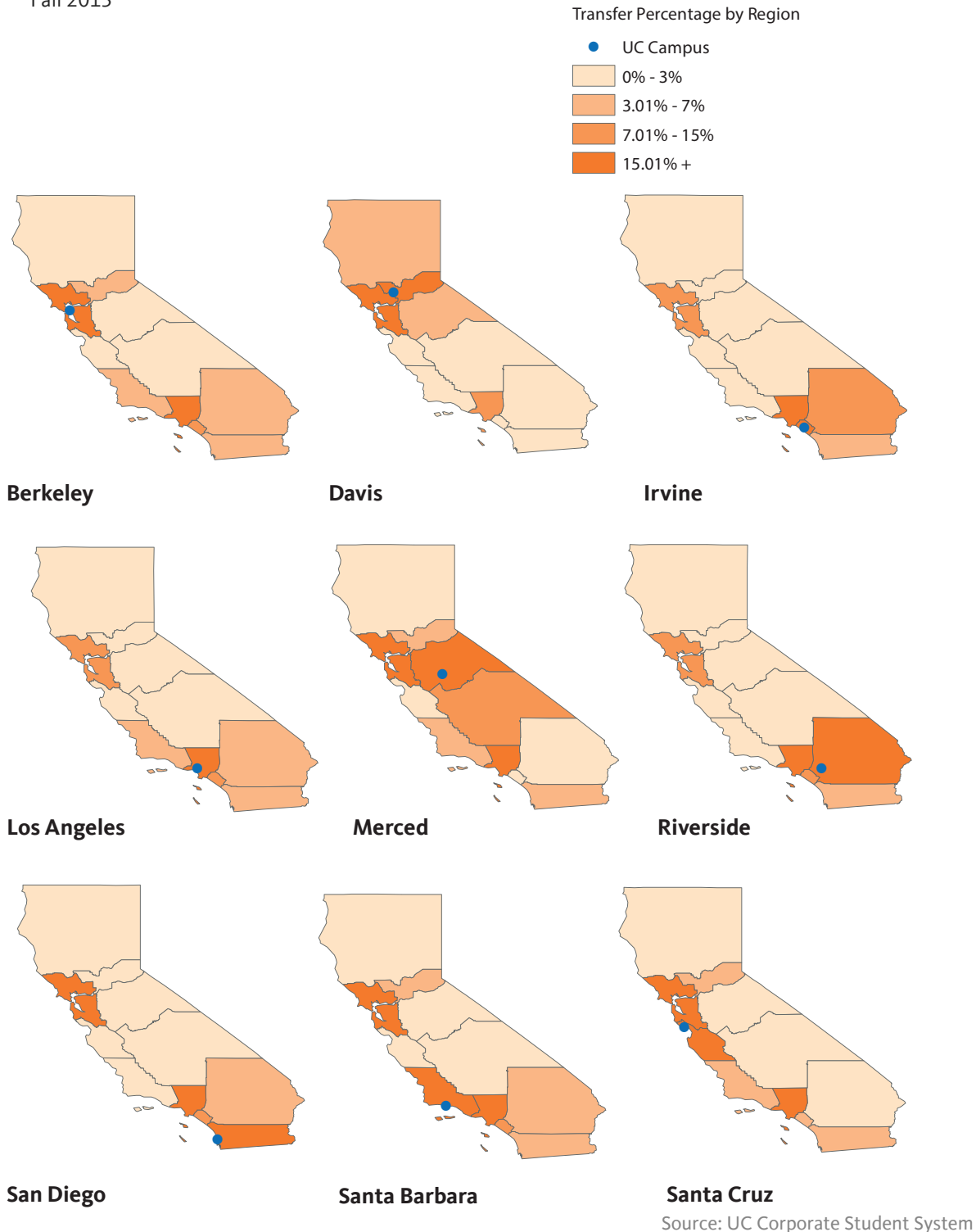


Source: UC Corporate Student System

## 2.2 GEOGRAPHIC OUTCOMES

**Regions with high freshman attendance rates also tend to have high transfer attendance rates, though greater clustering is from CCCs near UC campuses.**

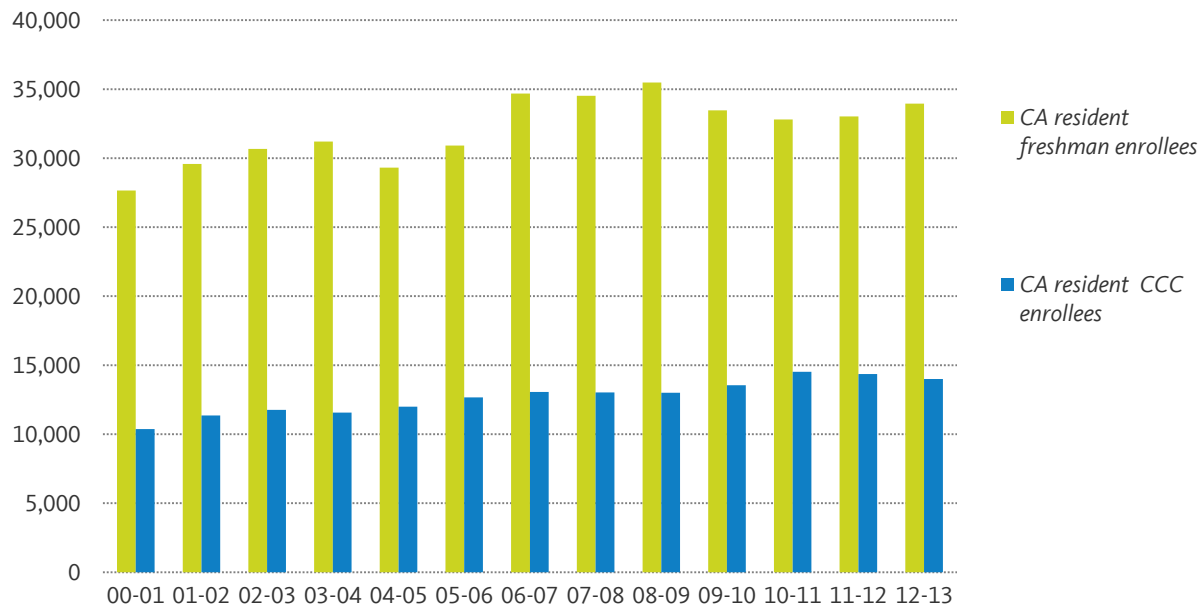
**2.2.2** Percentage of new CA resident transfer enrollees at each campus from each region  
UC Campuses  
Fall 2013



## 2.2 GEOGRAPHIC OUTCOMES

### UC continues to work toward achieving its goal of a 2:1 ratio of California resident freshmen to transfer students.

#### 2.2.3 New freshmen and transfer students Universitywide 2000–01 to 2012–13



Source: UC Corporate Student System

The Master Plan calls for UC to accommodate all qualified California Community College (CCC) transfer students. It specifies that the University maintain at least a 60:40 ratio of upper-division (junior- and senior-level) to lower-division (freshman- and sophomore-level) students to ensure space for CCC transfer students. Students transferring into the upper division from CCCs are crucial to maintaining this balance. To do so, UC aims to enroll one new CA resident CCC transfer student for each two new CA resident freshmen, or 67 percent new resident freshmen to 33 percent new resident CCC transfer students.

	Percent resident freshmen	Percent resident CCC	New CA freshmen to new CA transfer ratio
00-01	73%	27%	2.67
01-02	72%	28%	2.61
02-03	72%	28%	2.61
03-04	73%	27%	2.70
04-05	71%	29%	2.45
05-06	71%	29%	2.44
06-07	73%	27%	2.66
07-08	73%	27%	2.65
08-09	73%	27%	2.73
09-10	71%	29%	2.47
10-11	69%	31%	2.26
11-12	70%	30%	2.30
12-13	71%	29%	2.43





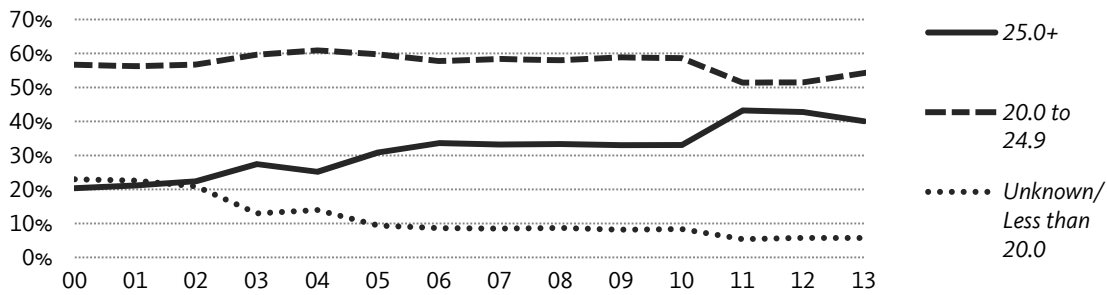
*The Bay Tree building at UC Santa Cruz.*

## 2.3 PREPARATION OUTCOMES

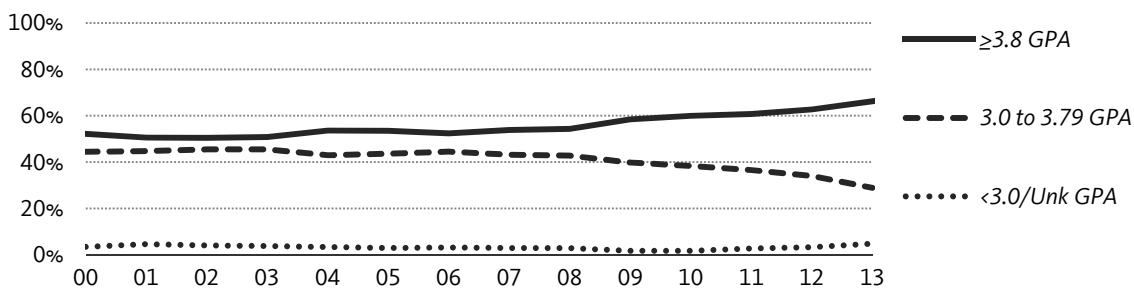
### Freshmen entering UC are better prepared.

**2.3.1** A-G (college preparatory)<sup>1</sup> courses, weighted high school grade point average (GPA) and standardized test scores of entering freshmen, as share of class  
Universitywide  
Fall 2000 to fall 2013

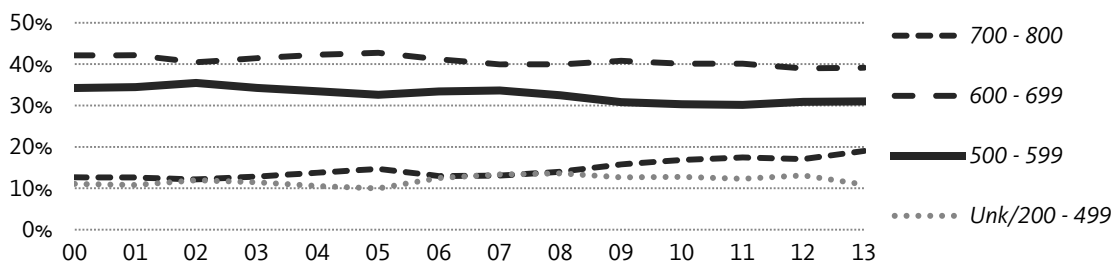
Yearlong “a-g” courses



HS weighted GPA



SAT scores



Source: UC Corporate Student System<sup>2</sup>

Despite growth in the number of applicants, the academic qualifications of UC applicants and admitted students has improved over the past several years. For admissions purposes, the University computes two different high school GPAs: weighted and unweighted. The weighted

GPA (shown here) provides extra credit for succeeding in difficult courses, such as those in the College Board’s Advanced Placement programs. An A in such a course receives 5 points, a B 4 points and so forth. In other college preparatory courses, an A counts for 4 points, a B for 3 and so forth.

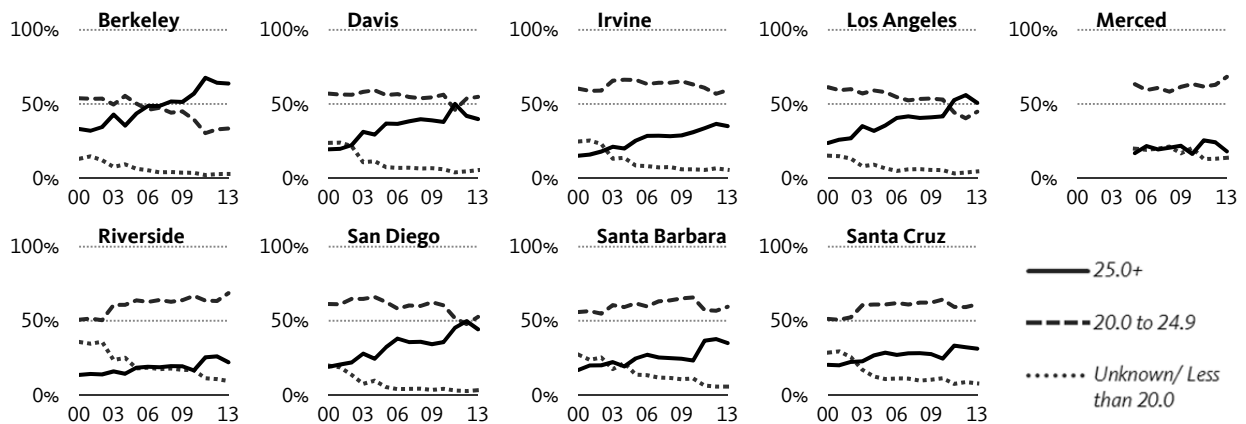
<sup>1</sup> A-G courses refer to those high school courses that UC has reviewed and approved as college preparatory.

<sup>2</sup> From 2000 to 2005, test scores are the average of SAT I Math and Verbal scores. From 2006 onward, they are the average of SAT Critical Reading and Math scores.

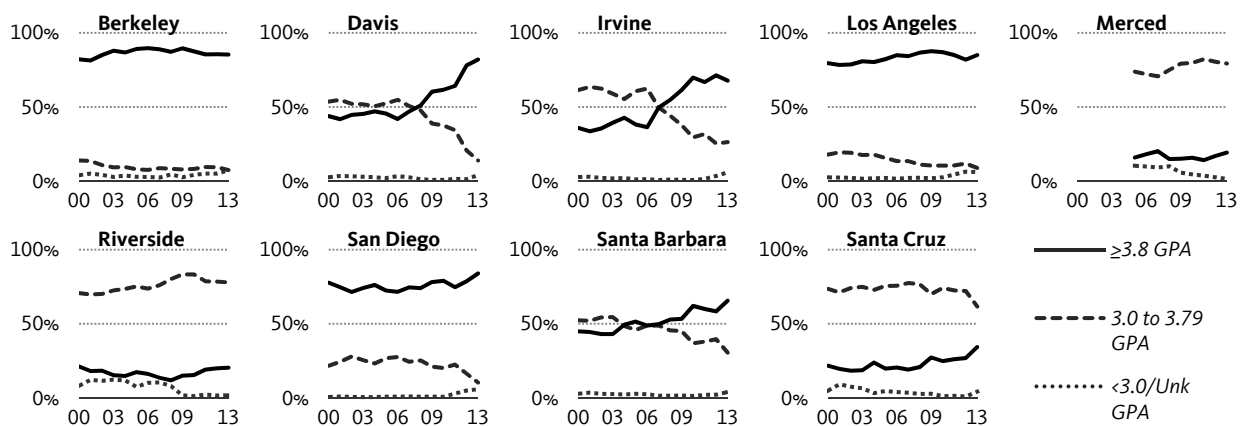


## 2.3 PREPARATION OUTCOMES

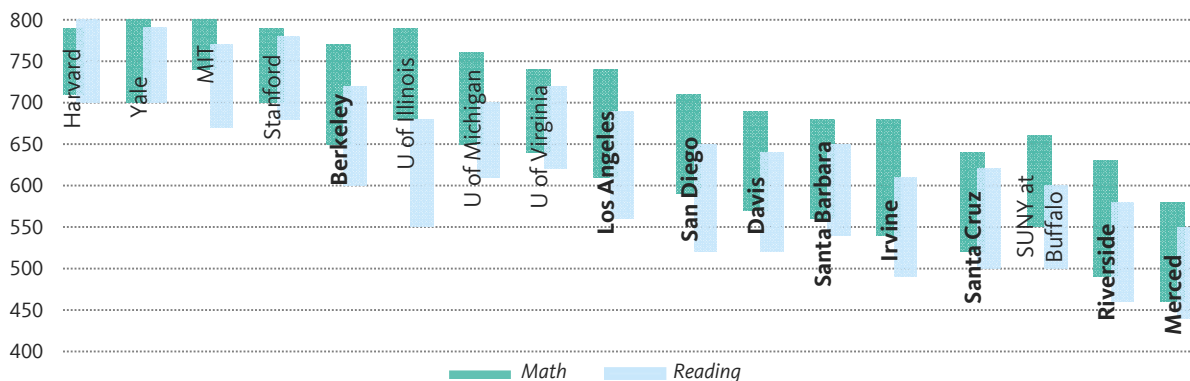
### 2.3.2 A-G (college preparatory)<sup>1</sup> courses, weighted grade point average (GPA) and standardized test scores of entering freshmen by campus, as share of class Fall 2000 to fall 2013



### High school weighted GPA, incoming freshmen Fall 2000-2013



### 2.3.3 SAT Reading and Math scores, 25th to 75th percentile UC campuses and comparison institutions Fall 2012



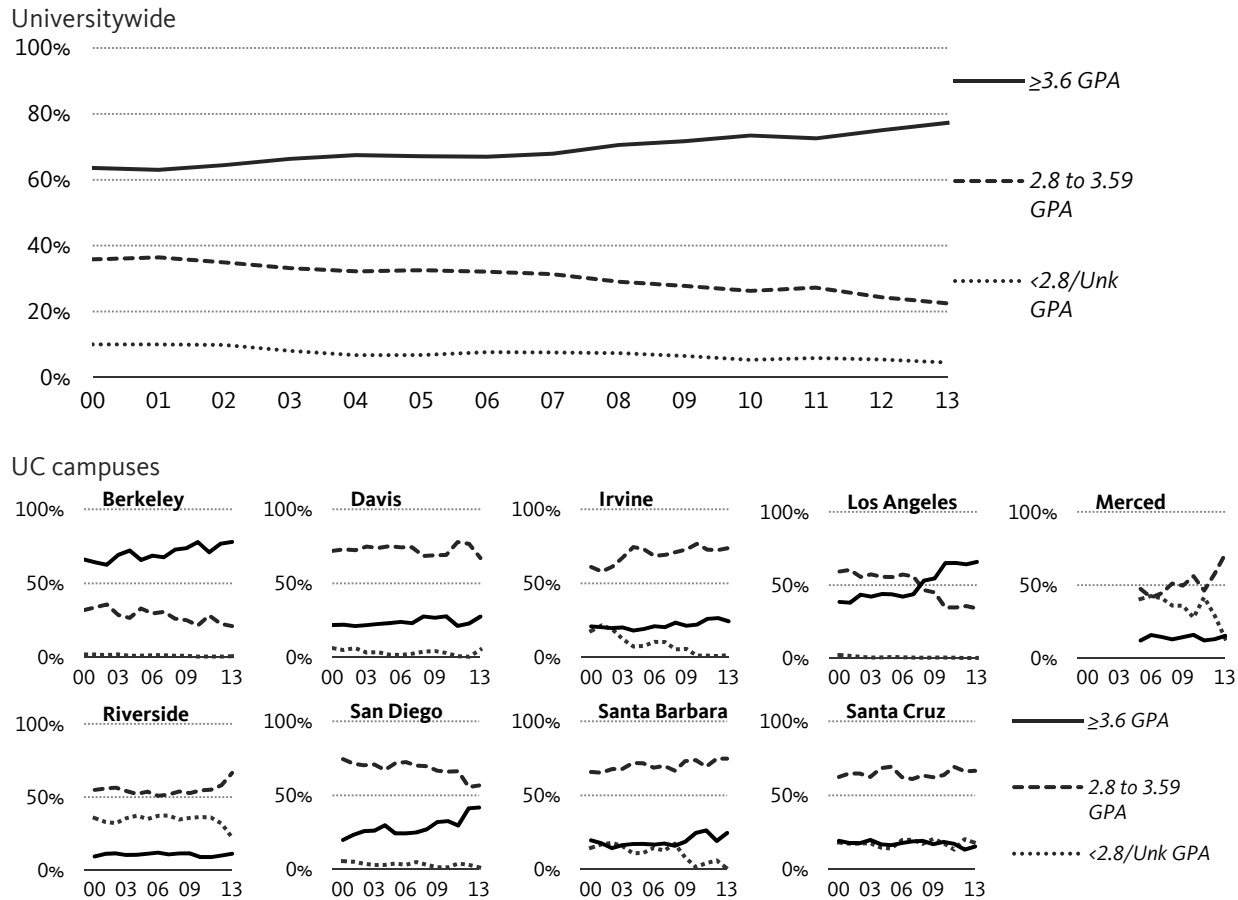
Source for SAT scores is IPEDS. Other data are from UC Corporate Student System<sup>1</sup>.

<sup>1</sup> A-G courses refer to those high school courses that UC has reviewed and approved as college preparatory.

## 2.3 PREPARATION OUTCOMES

### Like freshmen, UC transfer students in fall 2013 were better prepared academically than their counterparts in earlier years, as measured by their grades.

#### 2.3.4 College grade point average (GPA)<sup>2</sup> of entering transfer students, as share of class Fall 2000 to fall 2013



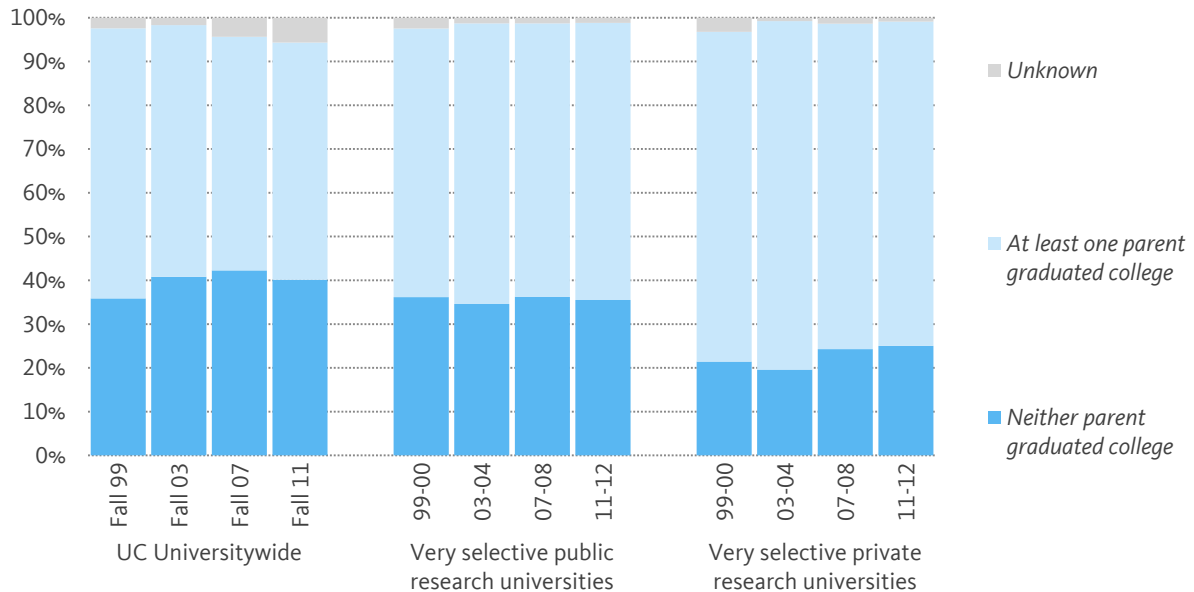
<sup>1</sup> Data for the SAT Writing Test are not available for comparison institutions.

<sup>2</sup> The transfer GPA is based on grades for college-level academic courses from the college(s) where students were previously enrolled. \*Merced opened in 2005.

## 2.4 DEMOGRAPHIC OUTCOMES

### UC enrolls a higher proportion of first-generation students than other very selective public and private universities.

#### 2.4.1 First-generation undergraduate students Universitywide and very selective public and private research universities 1999–2000, 2003–04, 2007–08 and 2011–12



Source: NPSAS and UC Corporate Student System<sup>1</sup>

A first-generation student is one whose parents do not hold college degrees. Having one or both parents with a college degree can provide a student with the role models, family expectations, knowledge and financial means that ease transition from high school to college, and that contribute to student success in college. Students whose parents have not graduated from college may lack these resources and the advantages that they can confer.

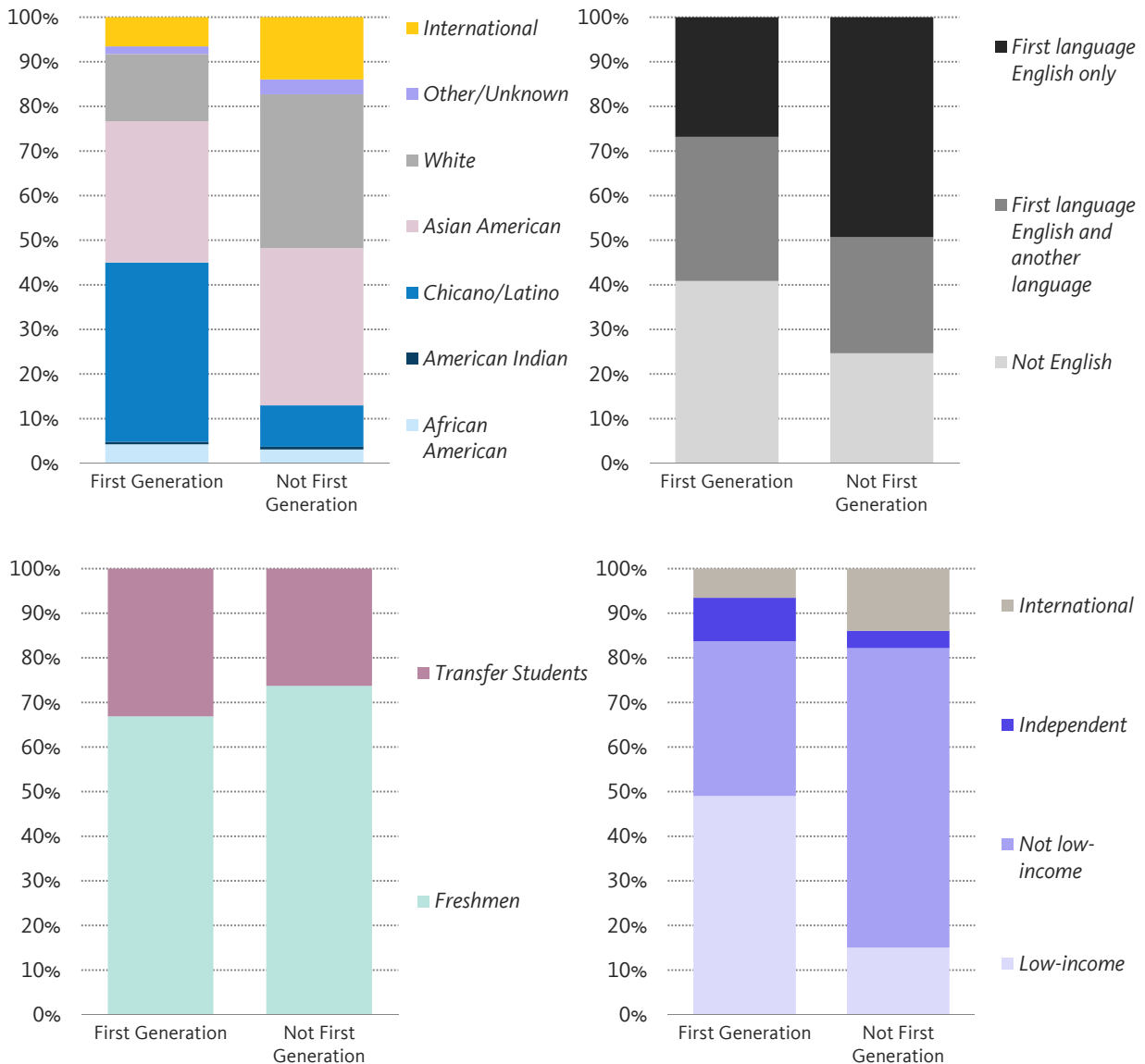
In 2011, around 40 percent of UC undergraduates came from first-generation families, compared with 36 percent for very selective public research universities and 25 percent of very selective private research universities.

<sup>1</sup> Selectivity is as defined in IPEDS and based on two variables: 1) the centile distribution of the percentage of students who were admitted (of those who applied); and 2) the centile distribution of the midpoint between the 25th and 75th percentile SAT/ACT combined scores reported by each institution (ACT scores were converted into SAT equivalents). The institutions included here are in the most selective group.

## 2.4 DEMOGRAPHIC OUTCOMES

**UC's entering first-generation students are more likely to be from an underrepresented minority group, to have spoken a language other than English at home and/or to have a lower income than students who had at least one parent who graduated from college. They are also more likely to be transfer students.**

### 2.4.2 Entering students by first generation status, race/ethnicity, first language spoken at home, income and entering level Universitywide Fall 2013



Source: UC Corporate Student System<sup>1</sup>

<sup>1</sup> First-generation students do not have a parent with a 4-year college degree. Low-income students have family incomes less than \$45,000. Total of first-generation students is 24,800 (43.7%); non-first-generation students total 30,650 (54.0%); and missing/unknown are 1,300 (2.3%). Unknowns are excluded from charts.

## 2.4 DEMOGRAPHIC OUTCOMES

### There are significant differences in the racial/ethnic/income profiles for students entering UC via the freshman or transfer paths.

#### 2.4.3 Entering domestic undergraduates by race/ethnicity, income and freshman/transfer status Universitywide Fall 2013

		Freshmen	Transfer Students	All	
Low-income (family income less than \$45,000)	URM	14.6%	8.4%	12.8%	
	Asian	12.4%	10.2%	11.8%	
	White	4.0%	6.9%	4.8%	
<b>Low-income total (includes unk)</b>		<b>31.7%</b>	<b>26.2%</b>	<b>30.1%</b>	n=17,080
Non-low-income	URM	12.8%	9.6%	11.8%	
	Asian	23.7%	11.9%	20.2%	
	White	18.8%	17.4%	18.4%	
<b>Non-low-income total (includes unk)</b>		<b>57.4%</b>	<b>40.3%</b>	<b>52.3%</b>	n=29,700
<i>Independent of parents</i>		<b>0.7%</b>	<b>21.0%</b>	<b>6.7%</b>	n=3,830
<i>International</i>		<b>10.2%</b>	<b>12.4%</b>	<b>10.8%</b>	n=6,140
<b>All</b>		<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	
		n=39,980	n=16,770		n=56,750

Source: UC Corporate Student System

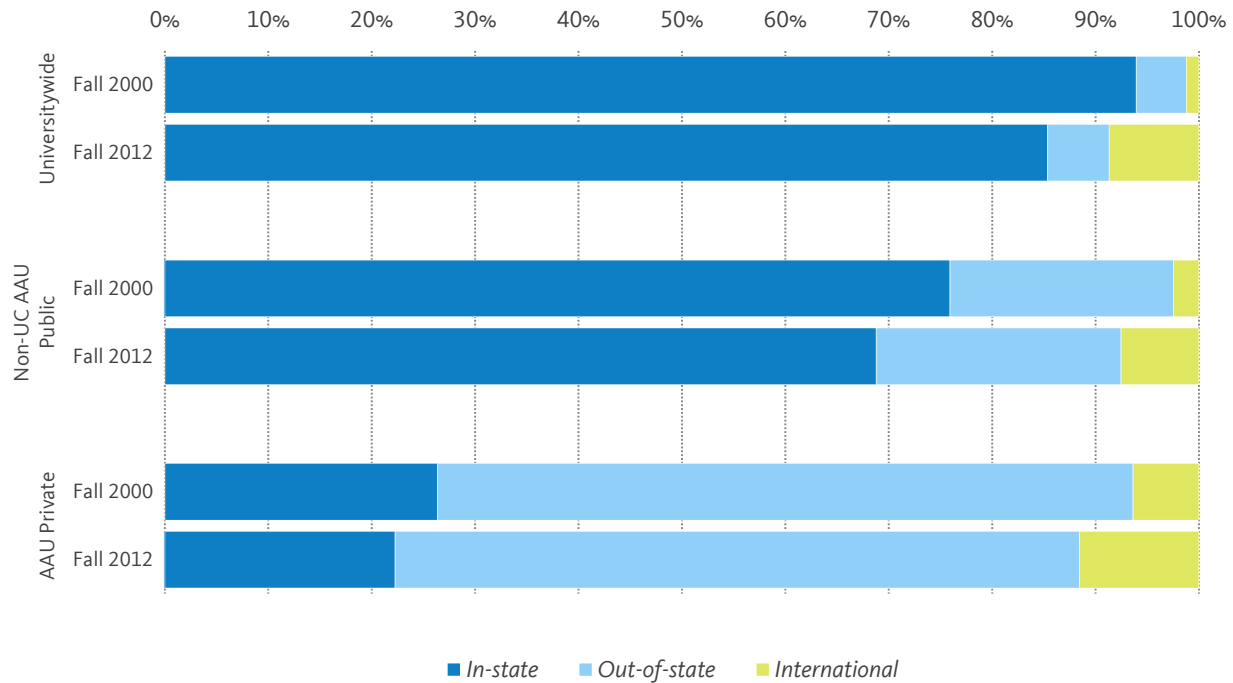
Underrepresented students constitute a larger proportion of the incoming freshman class than of the entering transfer class, both for low-income and non-low-income families. This is also true for Asian students, although those from non-low-income families are almost twice as prevalent in the freshman class as the transfer class.

The transfer route is being utilized by students of all racial/ethnic and income groups.

## 2.5 NONRESIDENTS

**UC has a substantially lower proportion of out-of-state undergraduates than other AAU universities. In fall 2012, less than 15 percent of new UC freshmen were out-of-state or international, compared with 31 percent and 78 percent for AAU publics and AAU privates, respectively.**

### 2.5.1 Geographic origin of entering freshmen Universitywide and comparison institutions Fall 2000 and fall 2012



Source: IPEDS. Residency based on IPEDS definition.

Nonresidents provide geographic diversity to the student body. They also pay the full cost of their education. In 2013–14, tuition and fees at UC campuses for a nonresident undergraduate, including health insurance, ranged from \$36,900 to \$39,000, compared with a range of \$14,000 to \$16,200 for resident students.

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

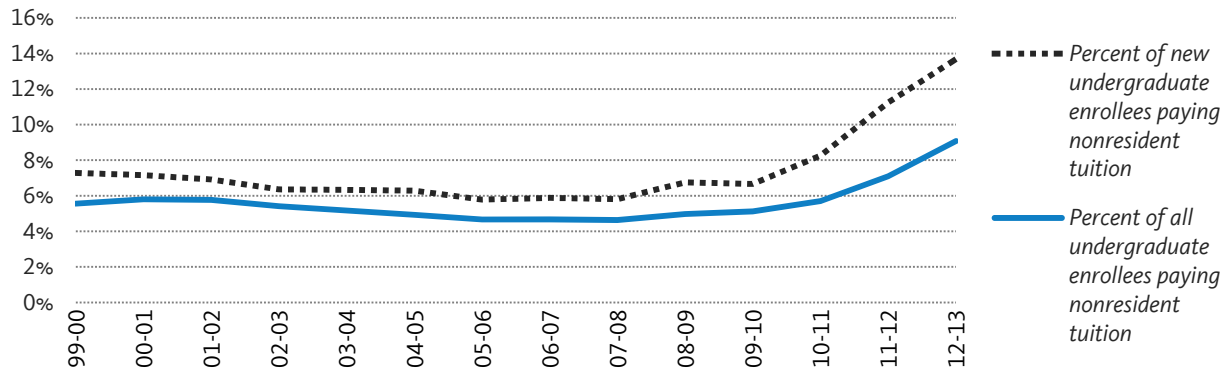
Nonresident applicants must meet higher criteria to be considered for admission. The minimum high school GPA for nonresident freshmen is 3.4, compared with 3.0 for California freshmen. The minimum college GPA for nonresident transfer students is 2.8, compared with 2.4 for California residents.



## 2.5 NONRESIDENTS

### The proportion of undergraduate students paying nonresident tuition is rising.

**2.5.2** Percentage of full-time-equivalent undergraduate enrollees classified as nonresidents for tuition purposes  
Universitywide  
1999–2000 to 2012–13



Source: UC Corporate Student System

There are some differences between the data shown in the graph above and the data shown earlier in this chapter. Here, the graph shows the annual full-time-equivalent undergraduates who pay nonresident tuition, while the previous page shows new freshmen whose permanent address is outside California. These measures have different uses depending on the policy question under consideration.

The proportion of nonresident students at individual campuses will vary depending on a campus's capacity as well as its ability to attract nonresident students.<sup>1</sup>

With decreases in state support and flat undergraduate tuition, some UC campuses are leveraging increased revenue from nonresident tuition to support the provision or expansion of undergraduate courses or to expand financial aid for California residents.

<sup>1</sup> Not all nonresident students pay nonresident tuition. Some have statutory exemptions, such as AB540 students, children of UC employees and others designated by the state. AB540 students are considered California residents for tuition purposes as established by Assembly Bill 540, passed in 2001.

## Chapter 3. Undergraduate Students — Affordability

### Goals

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

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

### Maintaining access

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

Focusing on in-state students who live on campus, the total cost of attendance, divided into tuition and fees and other expenses (e.g., living and personal expenses, books and supplies, transportation and health care), has remained relatively flat over the last couple years at just under \$32,000. This figure is about \$7,500 more than the average at other AAU publics and around \$27,000 less than the AAU private average.

The income profile indicators demonstrate that the University remains accessible to students from all income groups, including low-income students.

Since 2008-09, the proportion of UC students in the lower income categories increased noticeably, with an offsetting decline among upper- and upper-middle-income families. This reflects, in part, a statewide decline in the proportion of middle-income families due to the economic recession.

In 2012-13, 42 percent of all UC undergraduates qualified for Pell Grants, the highest proportion nationwide for comparable research universities.

### Financing a UC education

UC is able to provide access to students across the socio-economic spectrum thanks to a progressive

financial aid program that takes into consideration how much parents can afford; federal, state and University gift aid or grants; and a manageable student "self-help" contribution from work and/or borrowing.

There is more gift aid available to UC students than to students at other AAU public institutions, which dramatically reduces the net cost of attendance for the neediest families (i.e., less than \$30,000). This enables UC to attract a sizable proportion of students from low-income families. In addition, the net cost of attendance for students from families earning less \$100,000 has remained fairly steady since 2004-05.

The federal and state governments provide critical support through the Pell Grant and Cal Grant programs. In addition, UC's commitment to affordability is evident in the University's systemwide Blue and Gold Opportunity Plan, which ensures that needy students with family incomes below \$80,000 receive gift aid sufficient to cover their tuition and fees. Furthermore, in 2011-12, UC provided a grant to cover the full cost of that year's tuition increase for students with need from families earning incomes up to \$120,000.

An undergraduate's self-help requirement can be met through a combination of work and loans. UC relies on student survey data — including the UC Undergraduate Experience Survey (UCUES) and Cost of Attendance Survey — to measure how much students work. UCUES data show that more than 50 percent of undergraduates do not work, and more importantly, only 8 percent of students worked 20 hours or more. Studies have shown this seems to be the threshold for affecting academic performance and progress to degree.

Finally, the 2012-13 Annual Report on Student Financial Support states that 45 percent of undergraduates relied on student loans to help finance their education with loan amounts averaging \$6,470. These figures are slightly lower than the year before. Parental borrowing under the federal PLUS loan program remains under 10 percent overall, though the average loan amounts

increased slightly but remain below \$16,000 per year. This slight increase may be due to a decline in the availability of other borrowing options (e.g., home equity loans) due to the recent economic downturn.

### Limiting cumulative debt

The proportion of undergraduates leaving with debt is lower than a decade ago. About 55 percent of the 2012–13 graduating class graduated with debt, with the average amount at about \$20,500. This translates into a monthly repayment amount of about \$230 for 10 years at a 6 percent annual interest rate.

Comparison data show the 2011–12 cumulative debt level for UC undergraduates at \$20,205, compared with \$25,704 for public 4-year, \$30,737 for private nonprofit 4-year and \$37,840 for private for-profit institutions.

### Looking forward

The University is working to develop additional fund sources for student financial aid, including

Project You Can, a fundraising initiative that has raised over \$900 million as of March 2014, and aims to raise \$1 billion in private support for student aid.

Beginning in 2013–14, students who qualify for in-state tuition and fees under AB540 will become eligible for Cal Grants. Preliminary figures suggest that approximately 900 of these students will receive \$11 million in Cal Grants that year.

### For more information

More information about UC costs and financial aid, including details about UC's Blue and Gold Opportunity Plan and links to financial aid estimators, is available at <http://admission.universityofcalifornia.edu/paying-for-uc>.

Detailed information about trends in UC financial aid can be found in the University's *Annual Report on Student Financial Support*, which is available at <http://ucop.edu/student-affairs/data-and-reporting>.

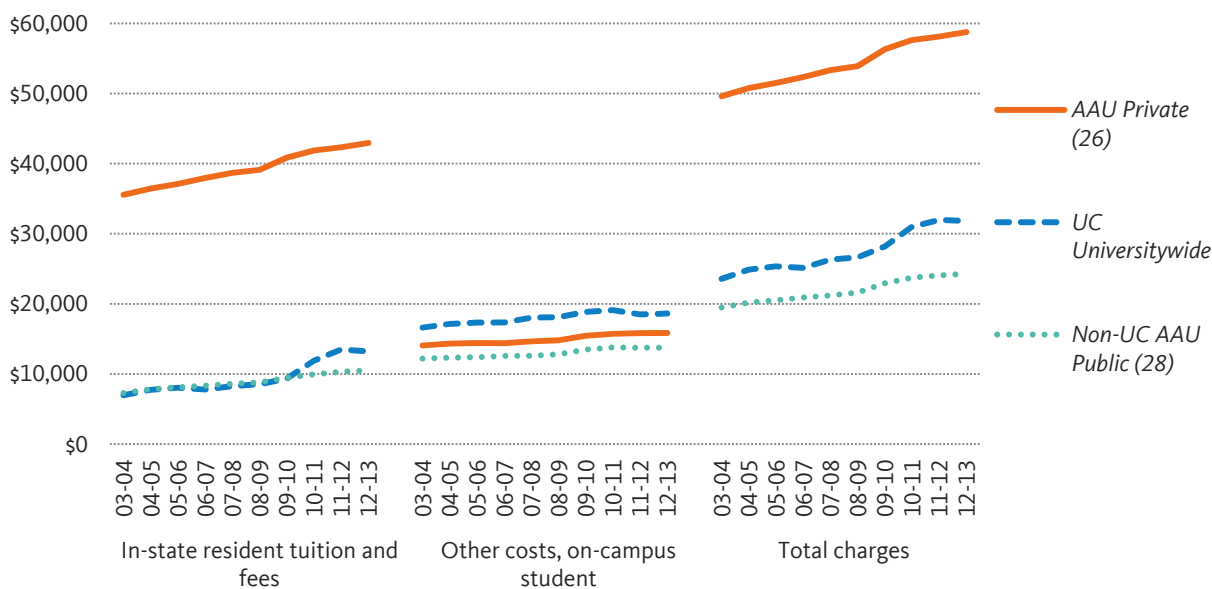


*Students bicycle past the Storke Tower at UC Santa Barbara.*

### 3.1 COST OF ATTENDANCE

**UC resident tuition and fees and total costs have remained relatively flat over the last couple years, but still exceed the national average for AAU public institutions, and are below the average for AAU private institutions.**

#### 3.1.1 Total cost of attendance for undergraduates Universitywide and comparison institutions 2003–04 to 2012–13



Source: IPEDS. Charges are for in-state students living on-campus. Averages are simple averages.<sup>1</sup>

The total cost of attending college includes tuition and fees, as well as living expenses, books and supplies, transportation, health insurance and personal expenses. The total cost of attendance is higher at UC than at AAU public comparison institutions, partly because of the relatively high cost of living in California.

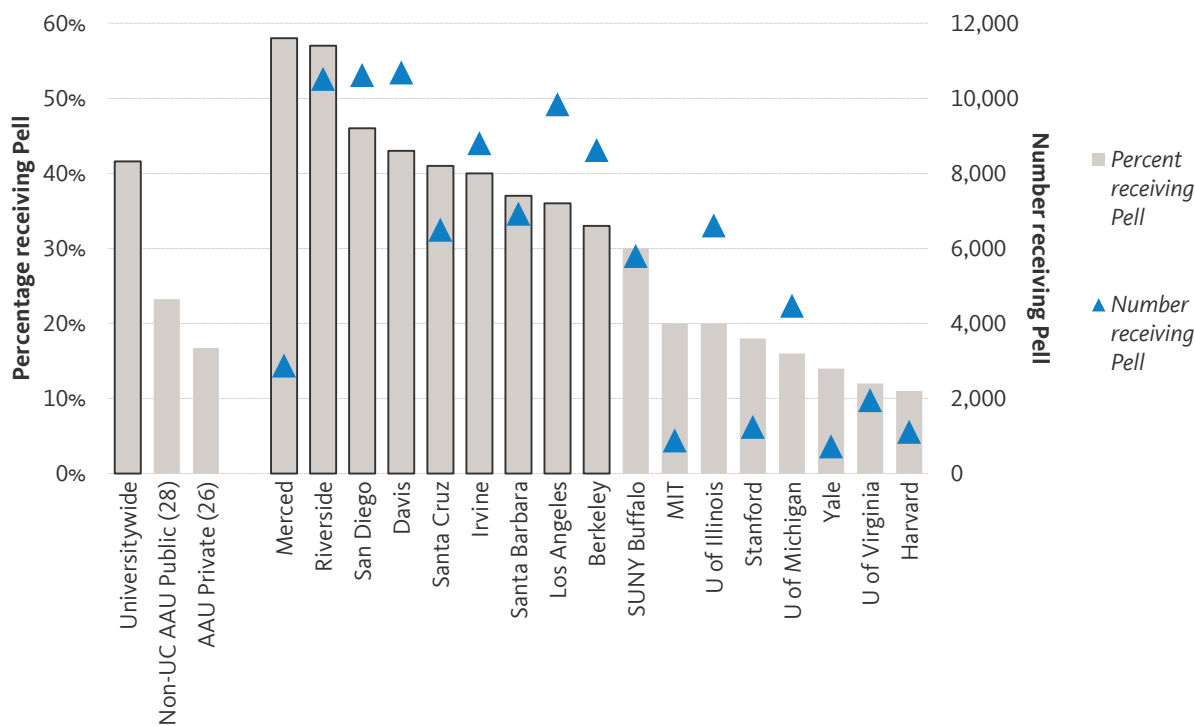
After several years of increases, UC tuition and fees and total cost of attendance have remained relatively flat.

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

### 3.2 INCOME PROFILE

## UC enrolls a higher percentage of Pell Grant recipients than any other top research university in the country.

### 3.2.1 Undergraduate Pell Grant recipients UC and comparison institutions 2011–12



Source: IPEDS<sup>1</sup>

The percentage of undergraduate students with Pell Grants provides a useful means to compare different institutions in terms of their accessibility for low-income students. It is also a useful indicator for comparing the socio-economic diversity of an institution's undergraduate student population.

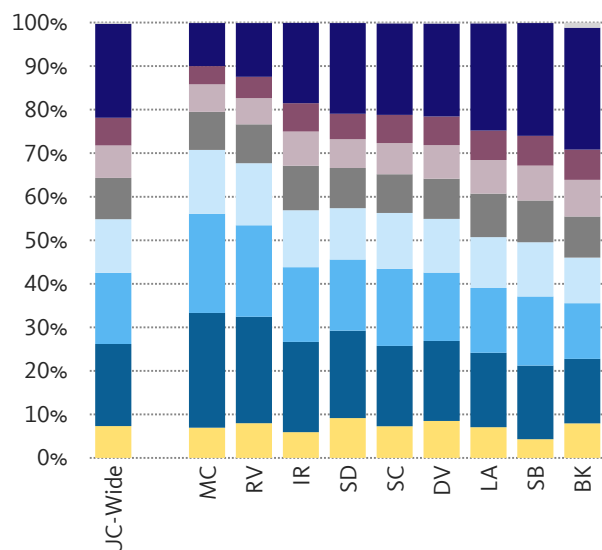
The data shown above represent the most recent year where data on comparison institutions are available. The proportion of UC undergraduates receiving Pell Grants went up from 31 percent in 2008–09 to 42 percent in 2011–12. This is primarily a result of increased federal spending, which made more students eligible for Pell Grants, as well as the economic downturn, which caused broad declines in family income.

<sup>1</sup> Percentage reported is that of students who received Pell Grants at any time during the 2011–12 year as a percentage of all undergraduates. Note that Pell Grant eligibility criteria change annually, both because of the federal appropriations process and other formula changes. Thus, trend analysis of Pell recipients would not be a valid measure of changes in low-income students but rather would reflect the changes in eligibility criteria. A list of the institutions in the AAU comparison groups can be found in the data glossary.

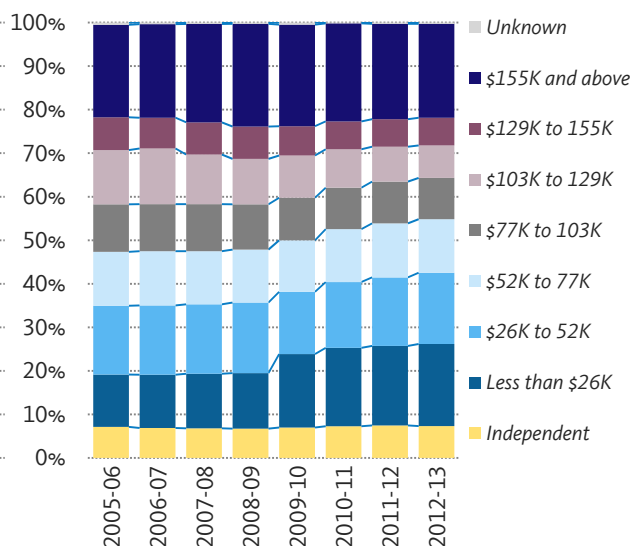
## 3.2 INCOME PROFILE

### A large proportion of UC students come from low-income families, especially at UC's newer campuses.

#### 3.2.2 Undergraduate income distribution Universitywide and UC campuses 2012–13



#### 3.2.3 Trends in the parent income of UC undergraduates, 2012–13 constant dollars Universitywide 2005–06 to 2012–13



Source: UC Corporate Student System <sup>1</sup>

While all UC campuses enroll a significant proportion of low-income students, the proportion varies across the campuses. For more information on low-income students, see indicator 2.6.2.

The income distribution of UC undergraduates remained stable for many years despite increases in the University's cost of attendance. This suggests that the University's financial aid programs kept the University's net cost of attendance within reach of low- and middle-income families, and that UC's total cost of attendance remains affordable for others. The figure above also shows the impact of the recent economic downturn on UC families. Since 2008–09, the proportion of UC students in the lower-income categories increased noticeably, with an offsetting decline among upper- and upper-middle-income families.

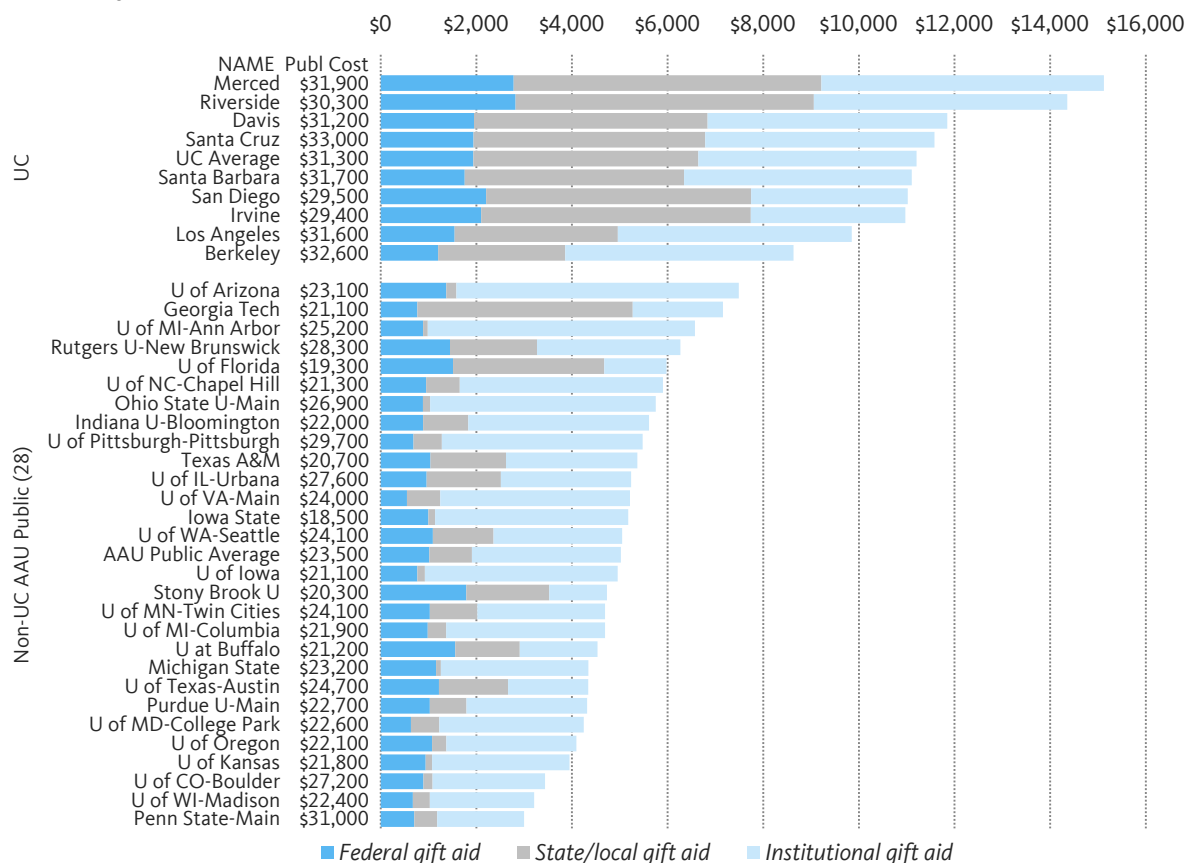
<sup>1</sup> Prior to 2007–08, an increasing number of students at one campus with parent incomes above \$100,000 were incorrectly categorized as having an income of \$100,000. This problem was fixed in 2007–08, resulting in an apparent (but not actual) decline in the percentage of students shown in the \$103,000 to \$129,000 category and a corresponding increase in the percentage shown in higher income categories.



### 3.3 GIFT AID AND NET COST

## More gift aid is available to UC students than to students at other AAU public institutions.

### 3.3.1 Average per capita gift aid for new freshmen UC campuses and public AAU institutions 2011–12



“Publ cost” in the column right of the institutions is the published cost for in-state students living on campus. Source: IPEDS<sup>1</sup>

One remarkable aspect of UC’s financial aid awards is the high level of gift aid compared with other AAU public institutions. While federal Pell Grants are available to low-income students at any institution, UC students also currently benefit from the combination of a strong state financial aid program (Cal Grants) and a strong UC aid program (Blue and Gold Opportunity Plan). AAU institutions in other states generally have either a strong state aid program or a strong institutional aid program, but not both.

Institutional gift aid is the largest source of grant and scholarship support for UC undergraduates. The primary source of institutional gift aid is the nearly one-third of all tuition and fee revenues that UC sets aside for need-based financial aid.

Although 90 percent of all gift aid received by UC students is based on need, one in six UC undergraduates receives a merit-based scholarship. In 2012–13, the average merit-based scholarship was about \$4,750, funded from a mix of federal, state, external private and institutional sources.

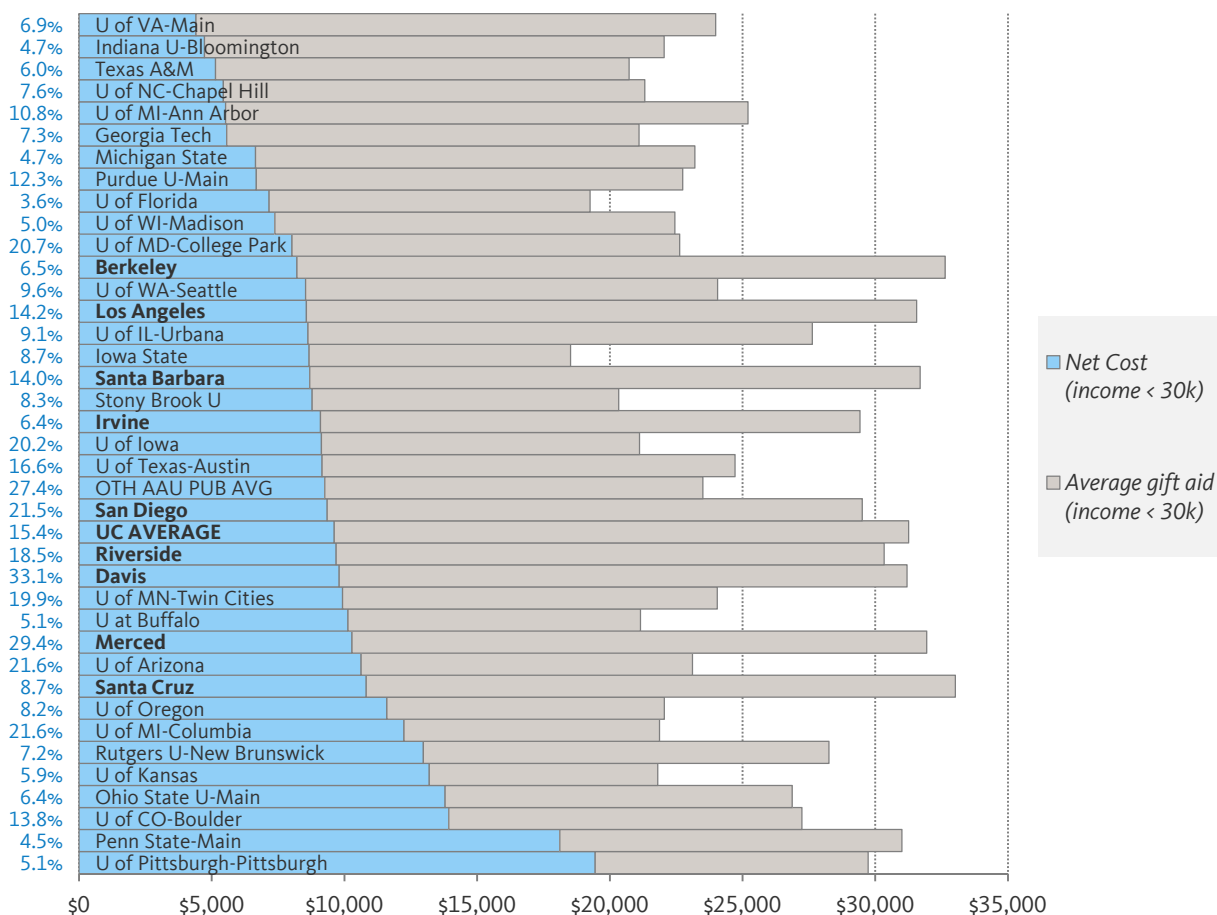
<sup>1</sup>Figures include gift aid given to all full-time first-time students, while the data in Indicator 3.4 shows gift aid all to very-low-income students. Pell Grants are the main source of federal gift aid. For California students, Cal Grants are the main source of state gift aid.

### 3.3 GIFT AID AND NET COST

**For very-low-income students at UC, the high amount of gift aid offsets UC's comparatively higher cost of attendance. This enables UC to attract, support and graduate a sizable proportion of high-achieving students from low-income families.**

#### 3.3.2 Average gift aid, cost of attendance and net cost for very-low-income students UC campuses and public AAU institutions 2011-12

Percentage shown is the percentage of full-time, first-time freshmen whose families have incomes below \$30,000.



Source: IPEDS<sup>1</sup>

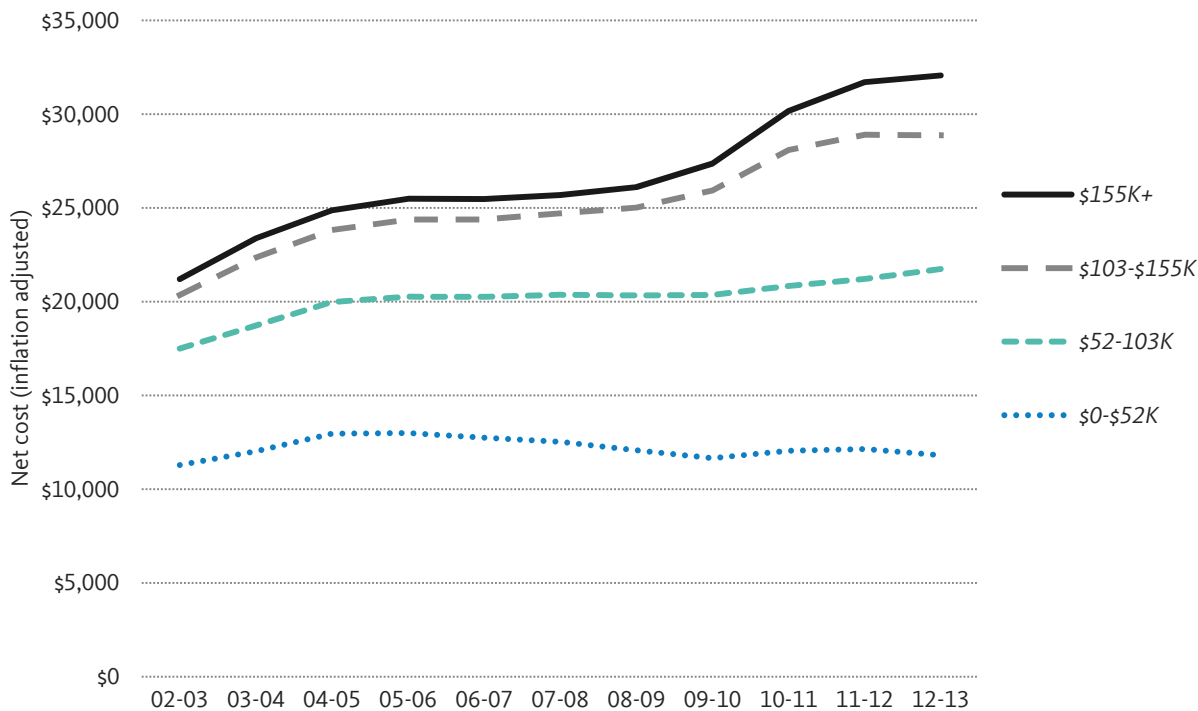
Despite a greater proportion of very-low-income students and higher total costs at UC, the net cost of UC for these students is comparable to that of other AAU public institutions.

<sup>1</sup> Very-low-income students shown here have family income below \$30,000. Published Cost of Attendance = Tuition + Published Living Expenses. Living expenses vary depending on a student's housing choices and on the housing market around a campus. This leads to the slightly different averages shown in this chart for the different UC campuses.

### 3.3 GIFT AID AND NET COST

The net cost of attendance for students from families earning less than \$100,000 annually has remained fairly steady since 2004–05, but has increased for other families.

#### 3.3.3 Net cost of attendance by family income Universitywide 2002–03 to 2012–13



Source: UC Corporate Student System.<sup>1</sup>

A general measure of the University’s affordability is its average net cost of attendance. This represents the actual cost of attending the University for undergraduates after taking into account scholarships and grants.

Scholarships and grants reduce the net cost of attending UC for students at all income levels, but have the greatest impact on students from low- and middle-income families.

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

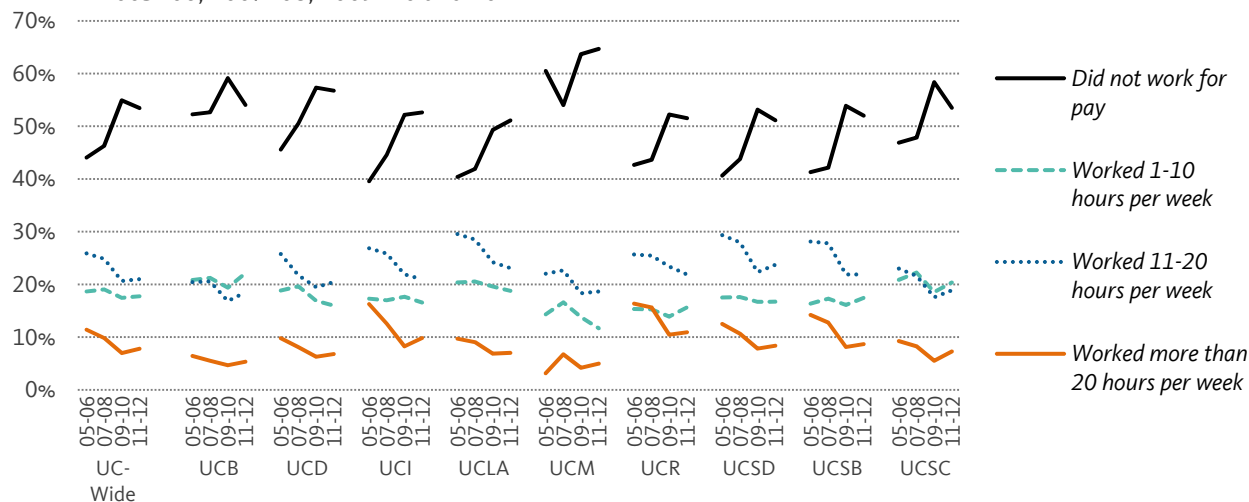
Between 2001–02 and 2012–13, the average increase in inflation-adjusted net cost for all UC undergraduate students, including independent students, was approximately \$4,000. Inflation-adjusted increases ranged from \$500 for low-income students to about \$11,000 for high-income students.

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

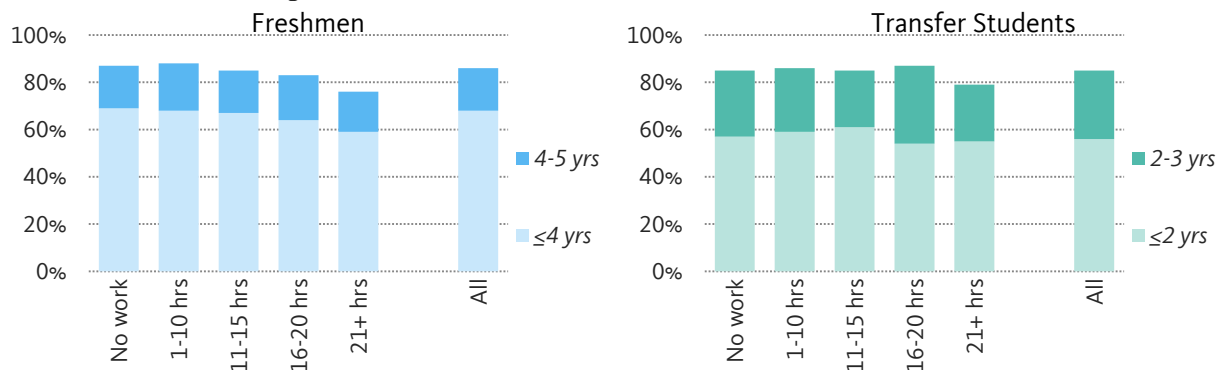
### 3.4 STUDENT WORK

The proportion of students working for pay decreased from 2006 to 2012. The proportion working more than 20 hours per week decreased from 2006 to 2012 on all but one campus.

#### 3.4.1 Undergraduate hours of work Universitywide and UC campuses 2005-06, 2007-08, 2009-10 and 2011-12



#### 3.4.2 Graduation rates by hours worked in first year Universitywide 2007-08 entering freshmen and transfer students



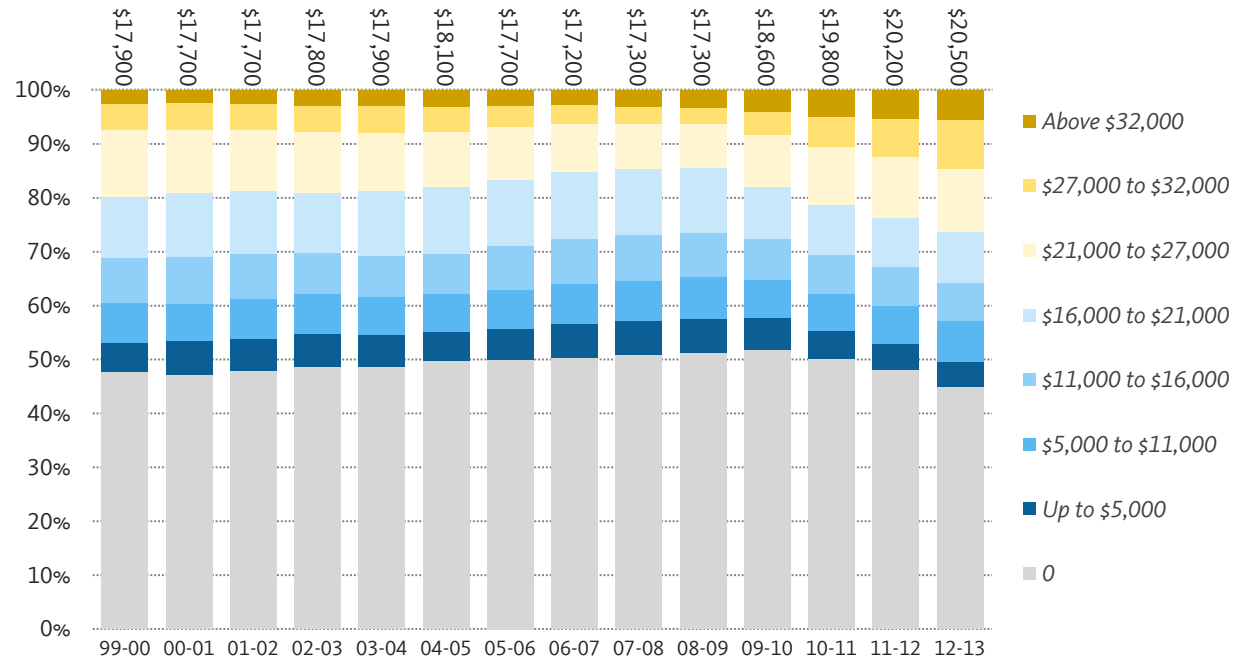
Source: UCUES and Corporate Student System

UC expects all students to help finance their education through a combination of work and borrowing. With respect to student work, the University's goal is for students to work at a reasonable level that does not impede progress toward completion of the baccalaureate degree. Studies show that work less than 20 hours a week has little effect on academic performance or progress to degree.

### 3.5 STUDENT DEBT

**The average inflation-adjusted debt at graduation of student borrowers increased 14.1 percent (from \$17,900 to \$20,500) over the past 12 years.**

**3.5.1** Student loan debt burden of graduating seniors, inflation-adjusted Universitywide 1999–2000 to 2012–13 (average debt of those with debt shown above each year)



Source: UC Corporate Student System<sup>1</sup>

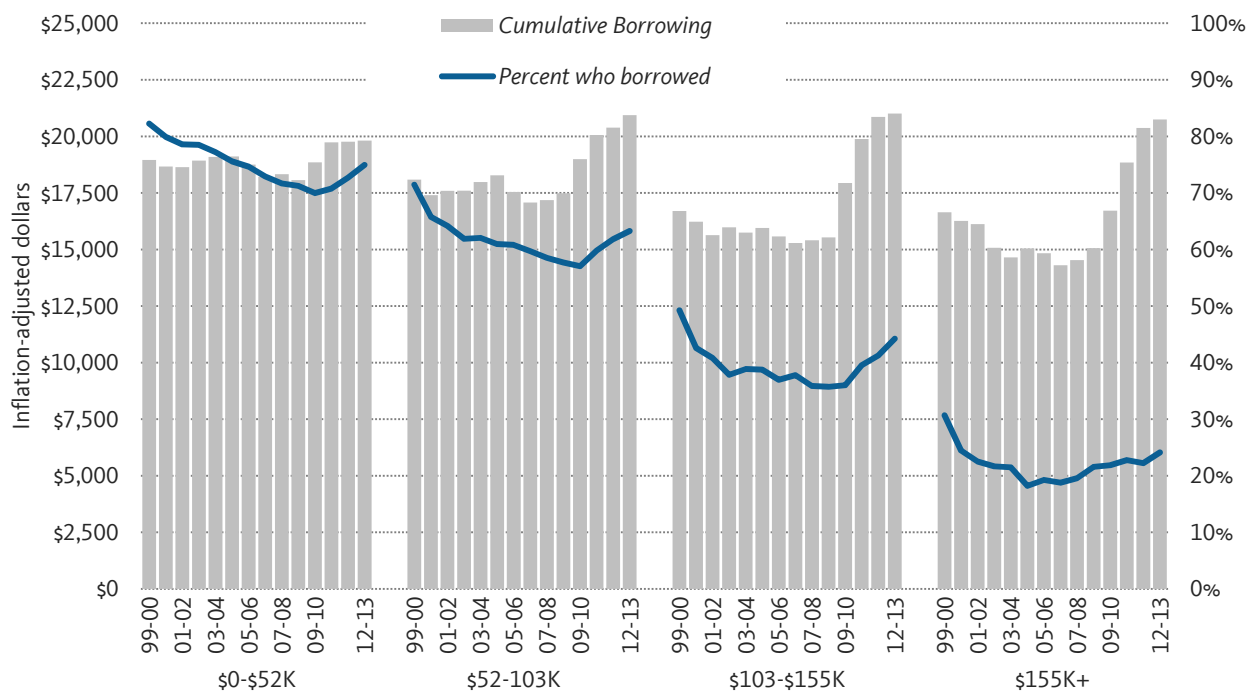
Forty-five percent of UC undergraduates graduate with no debt at all. For those who do borrow, the average student loan debt at graduation in 2012–13 was about \$20,500. The monthly repayment for this amount is about \$230 for 10 years at the 6 percent average interest rate that typically applies to student loans. Lower payments are available with longer repayment periods.

<sup>1</sup> Figures adjusted for inflation in 2012 dollars using CA CPI-W. Borrowing shown here represents loans coordinated through the campus financial aid offices; some families also borrow from outside sources, which is not captured in this indicator. Independent students and students with unknown parent incomes are not shown. Only includes graduates who originally entered as freshmen.

### 3.5 STUDENT DEBT

Despite recent increases, the proportion of students across all income categories graduating with loan debt was still lower in 2012–13 than it was a decade ago.

#### 3.5.2 Student loan debt burden of graduating seniors by parent income Universitywide 1999–2000 to 2012–13



Source: UC Corporate Student System<sup>1</sup>

The proportion of students who borrow decreased steadily from 1999–2000 through 2009–10 for students in nearly every income category. More recently, however, student borrowing has increased, both in percentage and in cumulative amount. The recent uptick in borrowing may reflect a combination of higher costs and a reduction in other borrowing alternatives (e.g., home equity loans).

#### 3.5.3 Average cumulative loan debt UC and national comparison institutions 2011-12 graduates

Riverside	\$21,087
San Diego	\$20,944
Los Angeles	\$20,878
Santa Cruz	\$20,826
Irvine	\$20,284
<b>UC AVERAGE</b>	<b>\$20,205</b>
Santa Barbara	\$19,769
Davis	\$19,728
Merced	\$19,218
Berkeley	\$18,377
Private for profit	\$37,840
Private nonprofit 4-year	\$30,737
Public 4-year	\$25,704

Source: NPSAS

<sup>1</sup> Figures adjusted for inflation in 2012 dollars using CA CPI-W. Borrowing shown here represents loans coordinated through the campus financial aid offices; some families also borrow from outside sources, which is not captured in this indicator. Independent students and students with unknown parent incomes are not shown. Only includes graduates who originally entered as freshmen.





*Graduates in front of UCLA's Royce Hall.*

# Chapter 4. Undergraduate Student Success

## Goals

The University of California seeks to enable all freshman and transfer entrants to complete their undergraduate degrees in a timely fashion, and to ensure that their education prepares them to be the next generation of leaders for California, the nation and the world.

## Improving graduation rates

By traditional graduation rate measures, UC's undergraduates are highly successful.

UC's four-year graduation rates for freshmen have risen significantly over the past 12 years — from 46 percent for the 1997 entering cohort to 63 percent for the 2009 cohort. The most recent six-year graduation rate sits at 83 percent. In addition, time to degree has steadily improved, with freshman entrants currently taking an average of four years plus one quarter to graduate.

Similar gains can be found with transfer entrants, whose average two-year graduation rate has increased from 37 percent for the 1997 entering cohort to 54 percent for the 2010 cohort. The most recent four-year graduation rate is 86 percent.

At the May 2013 Regents meeting, Regents asked about factors that influence timely graduation or contribute to students dropping out or taking longer to graduate. Some of these factors are described in this chapter.

## Researching factors that affect graduation rates

Implicit in the discussion of graduation rates is the need to understand factors that affect retention, because improving retention rates raises the potential ceiling for graduation rates.

While employment is often thought to contribute to lower graduation rates, undergraduates have to work a significant number of hours (i.e., 21 hours or more) for it to play a role, and a very small proportion of undergraduates work to that extent.

## Undergraduate self-evaluation

The percent of graduating seniors who express through the UC Undergraduate Experience Survey (UCUES) that they are satisfied with their campus experiences has been relatively consistent over the past eight years, at over 80 percent. However, fewer seniors now state that they are very satisfied and more indicate they are somewhat satisfied. As chapter 9 shows, a substantial proportion feel that their UC education has markedly enhanced their critical thinking and writing skills, as well as their knowledge of a specific field of study.

UCUES also asks undergraduates to report their goals and aspirations with regard to receiving a UC degree. The top three responses are to “obtain knowledge and skills I need to pursue my chosen career” (87 percent); to “discover what kind of person I really want to be” (80 percent); and to “acquire a well-rounded general education” (74 percent). Thirteenth on the list is to “be in a position to make a lot of money,” at 51 percent.

## Undergraduate outcomes

Overall, the number of undergraduate degrees awarded by UC over the past 12 years has grown by 48 percent, from 32,976 to 48,899 degrees. Increases in the size of the entering freshman class and improving graduation rates have contributed to these positive developments. In addition, one-third of the undergraduate degrees UC awarded in 2011–12 were in STEM disciplines (science, technology, engineering and math).

Four years after graduation, more than a quarter of bachelor degree recipients have enrolled in graduate or professional programs.

Analysis of wage data reported for UC alumni working in California shows differences in earnings depending on the student's major. Overall, and over time, the earning capacity of UC alumni increases rapidly; ten years after graduation, alumni are earning double what they were just two years post-graduation.



Finally, California employment data of UC bachelor's degree recipients illustrates that ten years out, more than 30 percent of life science majors end up in health care; 15 percent of engineering/computer science majors end up in the Internet and computer systems industries and another 11 percent in engineering services; and 10 percent of social science majors end up in K-12 education.

### Looking forward

Despite UC's record of success, there are continued systemwide and campus efforts to improve undergraduate outcomes.

The March 2014 Performance Outcomes report shows that when comparing Pell and non-Pell recipients, there is a gap in graduation rates at four years, which all but disappears in six years for freshmen. Graduation rates at UC tend to be lower for socioeconomically disadvantaged students (especially African-American and Chicano/Latino males) and for students from first-generation families.

### For more information

The May 2013 Regents discussion on academic performance indicators is at <http://regents.universityofcalifornia.edu/regmeet/may13/e1.pdf>.

The March 2014 Performance Outcomes report submitted to the legislature is at [http://ucop.edu/operating-budget/\\_files/legreports/1314/performanceoutcome-measureslegreport-March-2014.pdf](http://ucop.edu/operating-budget/_files/legreports/1314/performanceoutcome-measureslegreport-March-2014.pdf)

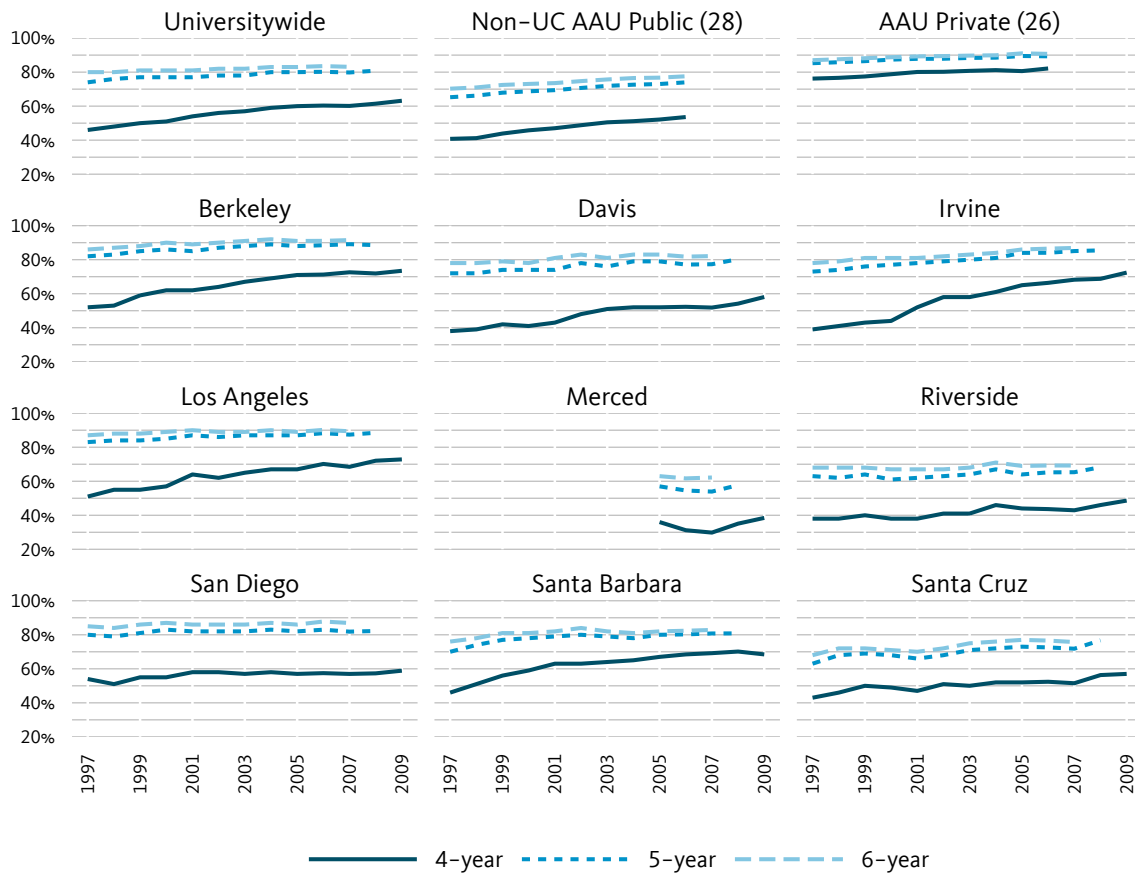


*UC Irvine student Wilbert Cheng films basketball player Mamadou Ndiaye inviting President Obama to speak at commencement. The President accepted.*

## 4.1 GRADUATION RATES

**Graduation rates for students who enter as freshmen have improved substantially since 1997. They are better than the average graduation rates at AAU public institutions, and some campuses approach the average rates of the AAU private institutions.**

### 4.1.1 Freshman graduation rates Cohorts entering fall 1997 to 2009 UC and comparison institutions



Source: UC Corporate Student System and IPEDS<sup>1</sup>

UC's four-year graduation rates for freshmen have risen significantly over the past 12 years — from 46 percent for the 1997 entering cohort to 63 percent for the 2009 cohort. The steady improvement in graduation rates is due to many factors, including campus efforts to encourage four-year completion, improvements in the academic preparation levels of incoming students and the current costs of a UC

education, which motivate students to complete their educations more quickly. Merced's four-year graduation rate nine years after the first undergraduates enrolled is 38 percent, compared with 32 percent for Irvine and 40 percent for Santa Cruz in 1995 (the earliest data are available), more than 30 years after opening.

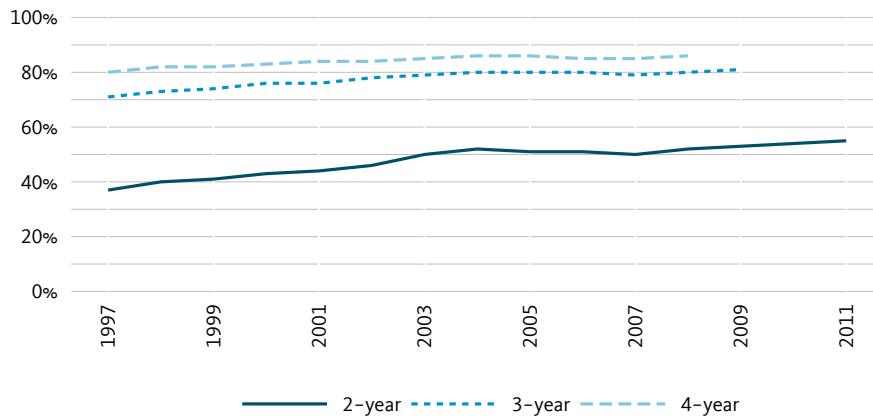
<sup>1</sup> Comparison IPEDS data are available for more limited years. The AAU comparison institutions are in the data glossary. Graduation rates are weighted by total cohort size. Institutions with missing data are excluded for that year. Freshmen are those students who entered UC directly from high school. UC statistics give credit to the originating campus for inter-UC campus transfers.

## 4.1 GRADUATION RATES

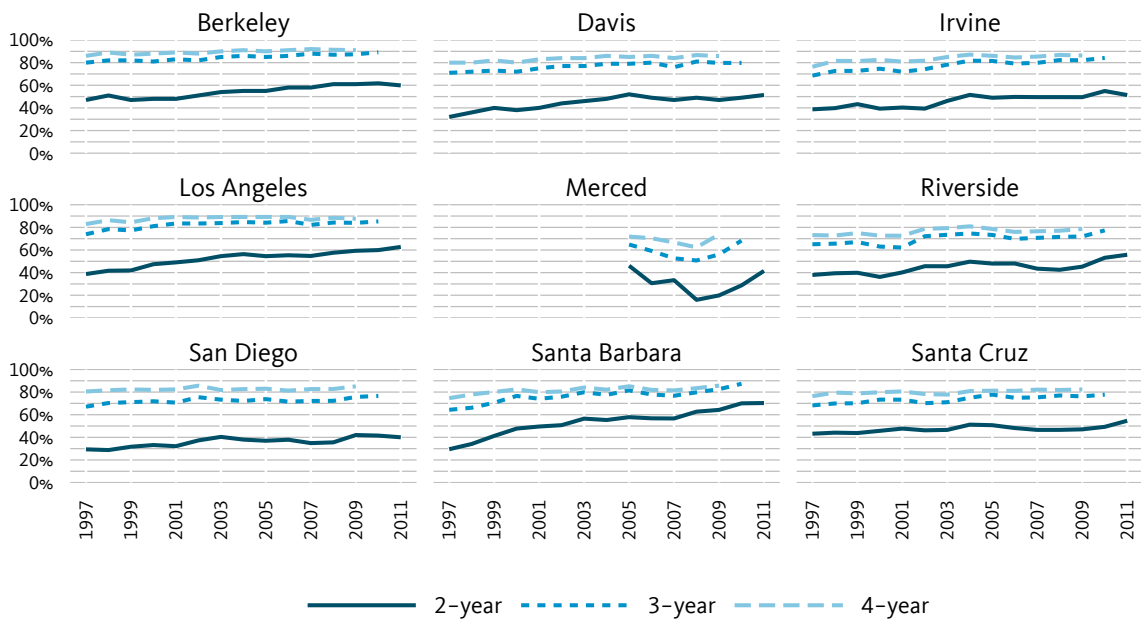
### Graduation rates for students who enter as transfers grew steadily for classes entering between 1997 and 2004, but have leveled off since then.

#### 4.1.2 Transfer graduation rates Cohorts entering fall 1997 to 2011

##### Universitywide



##### UC Campuses



Source: UC Corporate Student System<sup>1</sup>

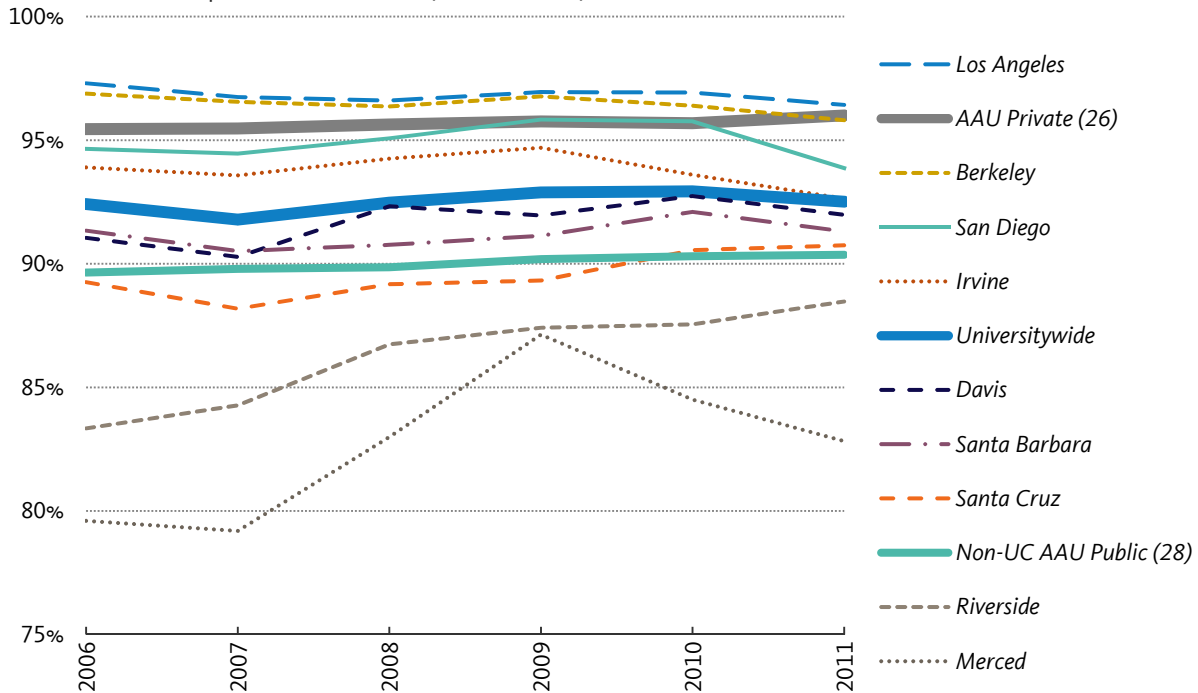
The two-year graduation rate for transfers has increased to 55 percent. The four-year graduation rate is 86 percent, compared with 83 percent for the six-year freshman graduation rate.

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

## 4.2 RETENTION RATES

### Freshman retention rates are high, but there is room for some improvement.

#### 4.2.1 Freshman first-year retention rates Cohorts entering fall 2006 to fall 2011 UC and comparison institutions (NOTE SCALE)



Source: IPEDS<sup>1</sup>

Improving first-year retention is the first step to raising graduation rates. For some campuses, there is greater room for improvement; for others, it is important to identify subpopulations where retention rates could be improved.

Studies of retention data divide students into two groups: those who leave UC in good academic standing (i.e., GPA  $\geq$  2.0) or transfer to another UC and those who leave in poor academic standing (i.e.,  $<$  2.0).

The strategies needed to address retention vary based on this distinction. For students leaving in good academic standing, some UC campuses are

considering expansion of honors programs or introduction of undergraduate research activity as early as the freshman year.

For those leaving in poor academic standing, some UC campuses are using summer bridge or early orientation programs to provide a productive start and smooth transition on campus. Other campuses are looking into housing and residential programs and cohort programs.

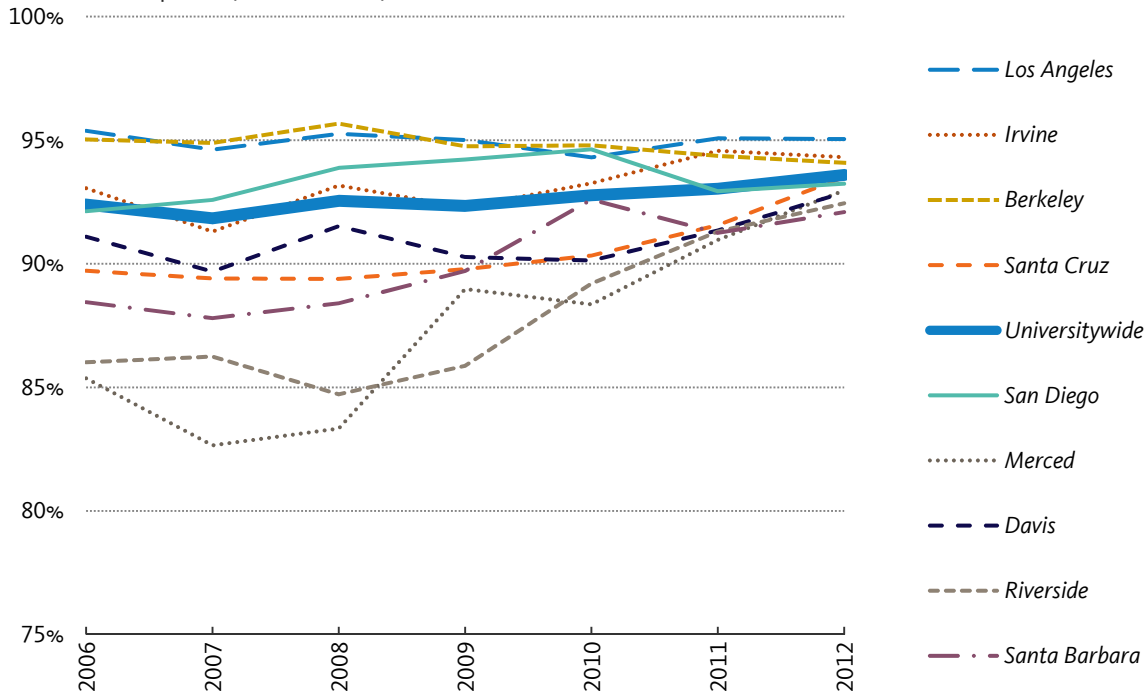
<sup>1</sup> Freshmen are first-time, full-time, degree-seeking students from the fall who enroll again in the next fall term.



## 4.2 RETENTION RATES

### Transfer retention rates are improving.

#### 4.2.2 Transfer retention rates Cohorts entering fall 2006 to fall 2012 UC campuses (NOTE SCALE)



Source: UC Corporate Student System<sup>1</sup>

For transfer students, there has been a slight improvement in first-year retention. Campuses vary in terms of whether transfer students are more likely to leave in poor or good academic standing. Very few leave for another UC campus.

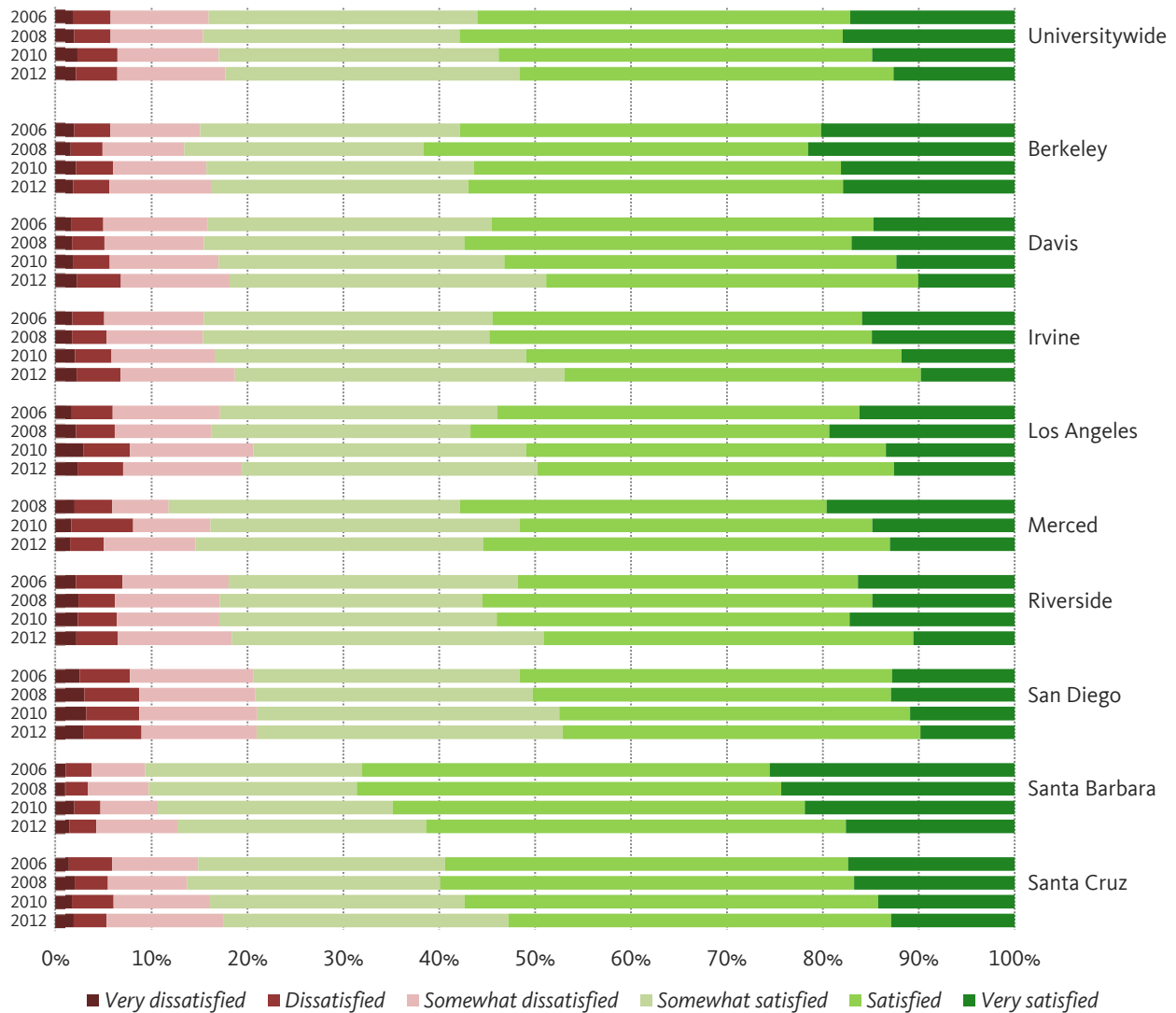
Like entering freshmen, transfer students benefit from a productive start at UC campuses and a smooth transition during their first year. Several UC campuses are launching or expanding summer programs to support transfer students.

<sup>1</sup> Comparison data are not available for transfer students.

### 4.3 OUTCOMES

Survey data suggest that graduating seniors' satisfaction with their overall academic experience has remained high over the last four UCUES survey administrations; however, the proportion of students who are very satisfied is falling.

#### 4.3.1 Student satisfaction with overall academic experience, graduating seniors Universitywide and UC campuses Spring 2006, spring 2008, spring 2010 and spring 2012



Source: UCUES<sup>1</sup>

For the UC system overall and for most campuses, the percent of seniors who are satisfied (somewhat satisfied through very satisfied) has remained relatively stable.

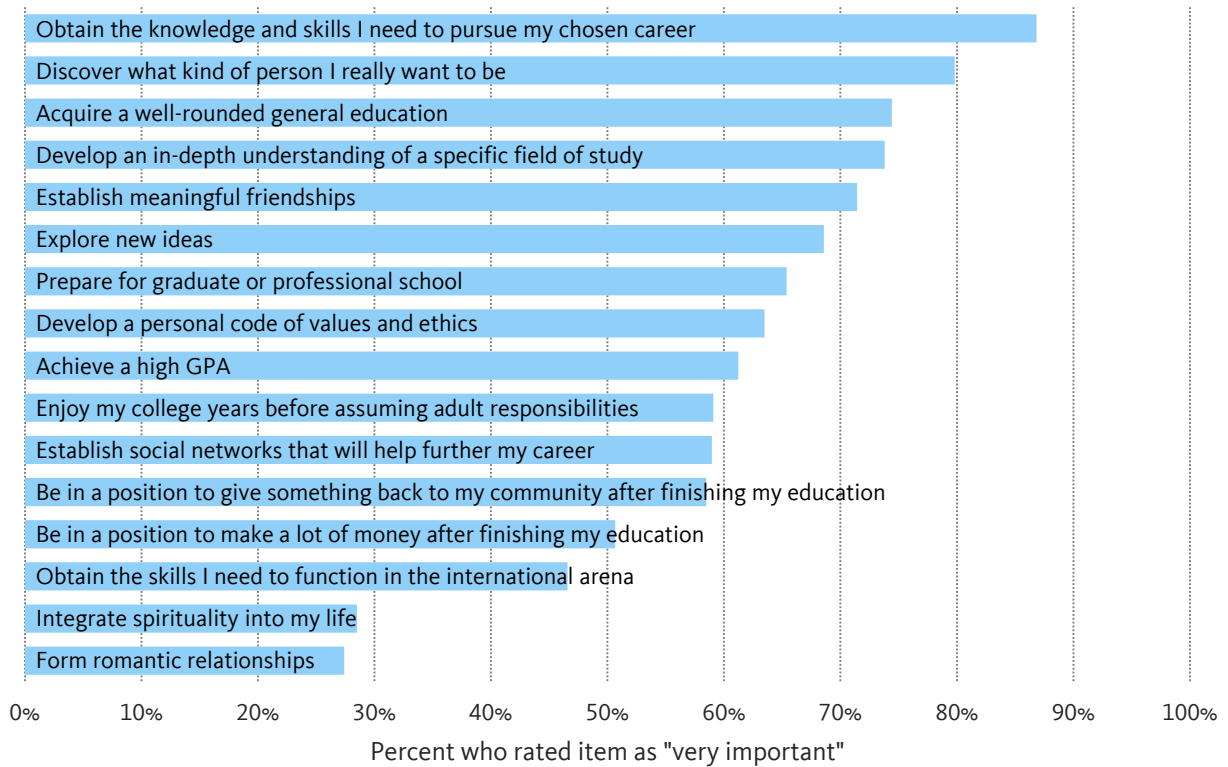
However, recent survey data shows a smaller percent of seniors who are very satisfied and a higher percent who are somewhat satisfied.

<sup>1</sup> Merced's 2006 data are not displayed because the campus had very few seniors that year.

### 4.3 OUTCOMES

## Career preparation, self-discovery and a well-rounded education are the three goals of most importance to UC undergraduates.

4.3.2 Importance of college goals  
Universitywide  
Spring 2012 UCUES respondents



Source: UCUES

UCUES survey data highlight undergraduate goals and aspirations in attending UC. As one might expect, the top of the list is “obtaining knowledge and skills I need to pursue my chosen career.” The next two include “discovering the kind of person I really want to be” and “acquiring a well-rounded general education.”

## 4.3 OUTCOMES

### Across disciplines, undergraduate degree recipients tend to double their earnings during the period from two to ten years after graduation.

#### 4.3.3 Inflation-adjusted average alumni wages by selected majors, two, five and ten years after graduation UC Universitywide 2000 to 2010 Exit Cohorts

		After two years	After five years	After ten years
<b>Arts &amp; Humanities</b>	Philosophy	\$34,000	\$53,200	\$83,400
	History	\$34,100	\$51,100	\$71,700
	Foreign Language	\$34,400	\$47,400	\$67,100
	English/Literature	\$33,300	\$48,000	\$63,900
<b>Professional/ Interdisciplinary</b>	Business	\$55,600	\$74,600	\$105,900
	Cognitive Science	\$49,100	\$72,200	\$105,700
	Ag. Business	\$51,600	\$72,300	\$96,400
	Legal Studies	\$44,200	\$65,700	\$91,700
	Communications	\$39,200	\$57,500	\$78,400
	Architecture	\$43,700	\$57,800	\$73,300
	International Studies	\$37,200	\$53,100	\$71,400
	Social Work	\$32,000	\$47,600	\$65,200
<b>Life Sci, Phys Sci, Eng, CS</b>	Computer Science	\$66,300	\$89,100	\$127,400
	Engineering	\$64,600	\$85,300	\$114,000
	Chemistry	\$43,300	\$60,300	\$106,900
	Physics	\$48,900	\$66,200	\$98,900
	Biology	\$37,400	\$60,500	\$97,800
	Mathematics	\$50,300	\$64,700	\$81,700
<b>Social Sciences</b>	Economics	\$49,200	\$68,800	\$100,800
	Political Science	\$38,800	\$63,200	\$95,400
	Geography	\$38,900	\$57,500	\$89,900
	Psychology	\$34,500	\$52,200	\$72,200
	Sociology	\$36,500	\$52,300	\$67,900
	Anthropology	\$32,900	\$46,600	\$65,300
<b>All Majors</b>		<b>\$42,600</b>	<b>\$61,200</b>	<b>\$86,700</b>

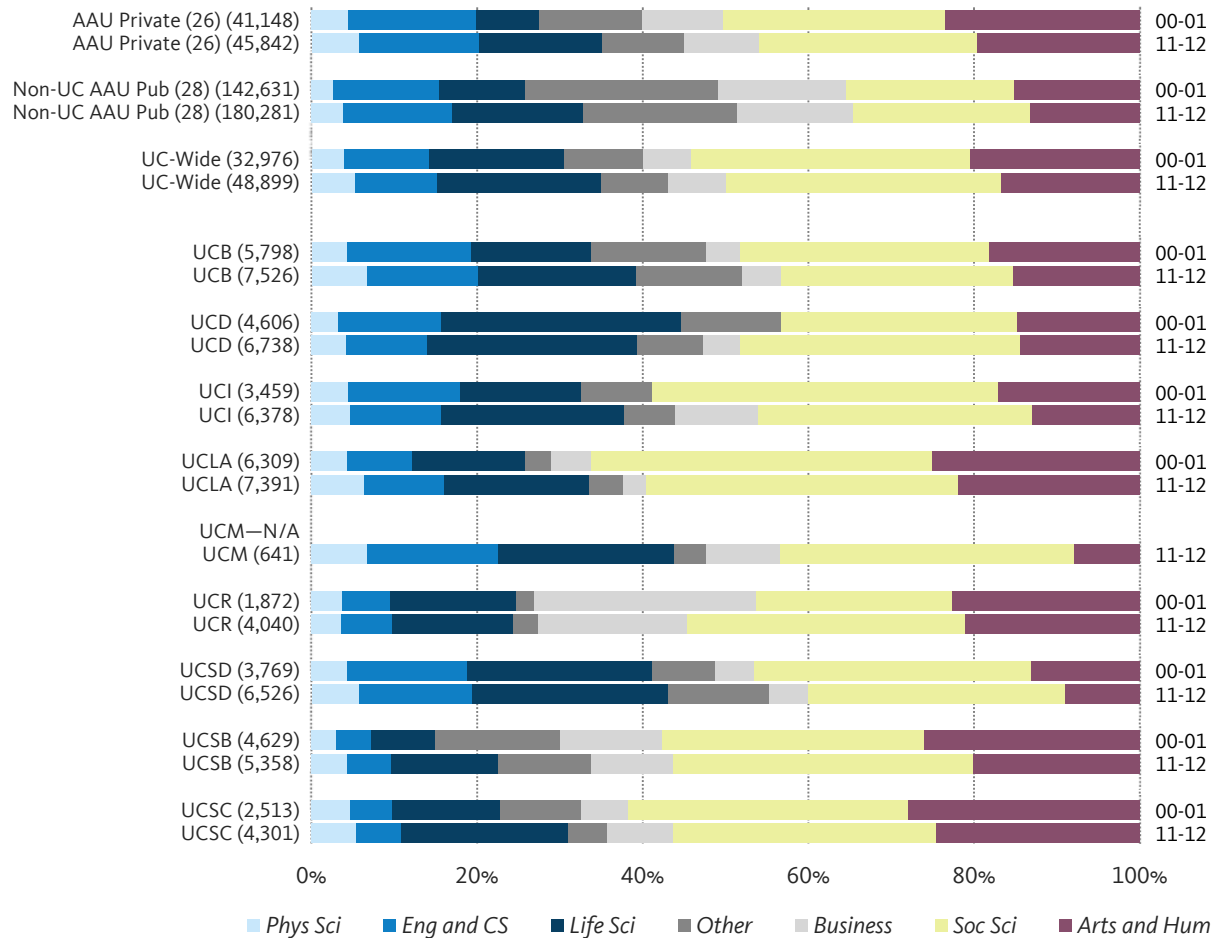
Source: California Employment Development Department and UC Corporate Student System.  
Amounts are inflation-adjusted to 2012 dollars.

Alumni wage data provide compelling evidence of UC's role as an engine of social mobility in the state. From 2000 to 2011, UC graduated more than 160,000 Pell Grant recipients, whose family incomes are generally below \$50,000. More than 50 percent of Pell Grant recipients that graduate from UC and work in California go on to earn more than their pre-UC family incomes within five years.

### 4.3 OUTCOMES

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

### 4.3.4 Undergraduate degrees awarded by discipline UC and comparison institutions 2000–01 and 2011–12



Source: IPEDS

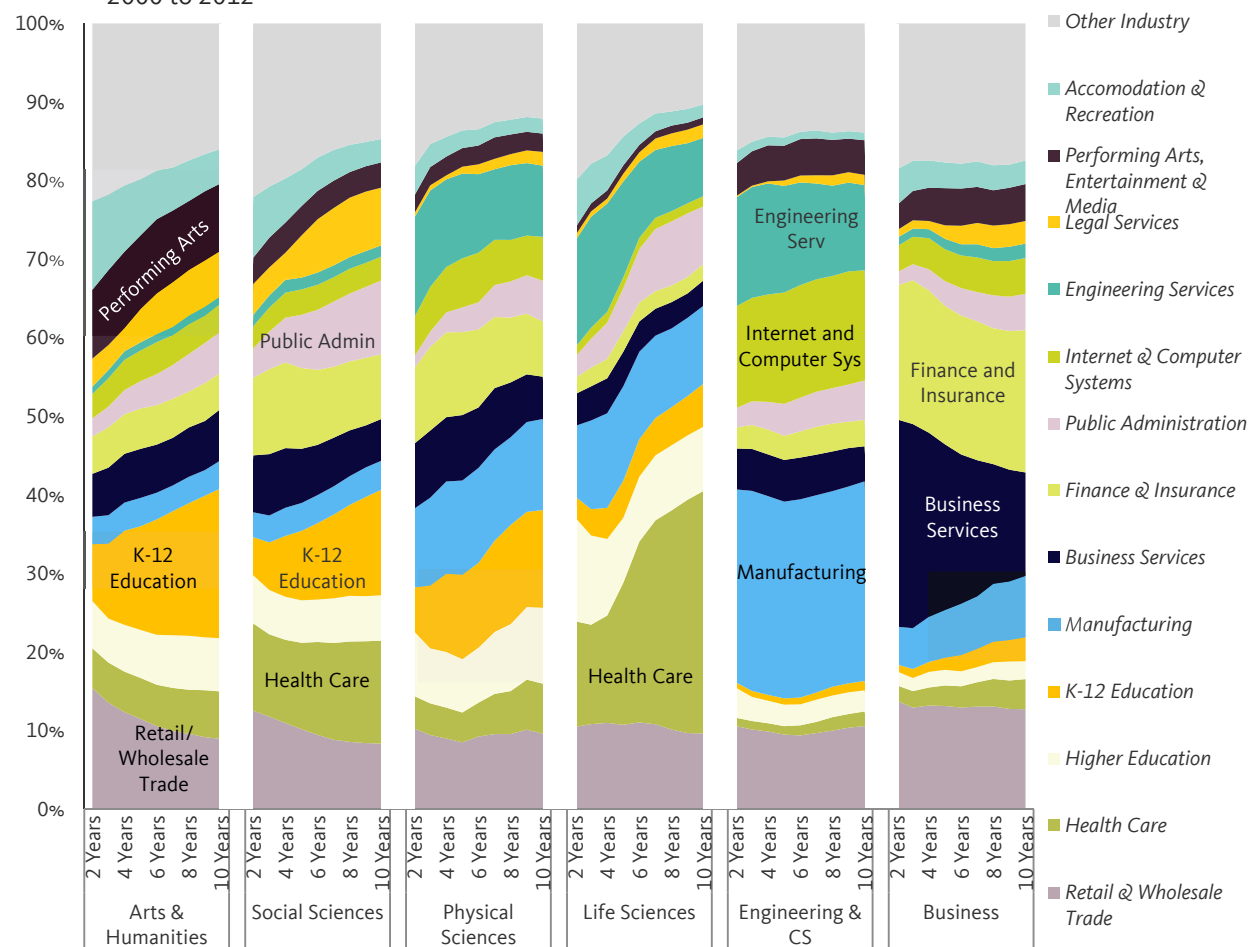
One-third of all undergraduate degrees UC awarded in 2011–12 were in science, technology, engineering and math (STEM) fields compared to about one-quarter at AAU public and private comparison institutions.

Indicator 1.1.2 shows the share of degrees UC awarded in the state of California.

### 4.3 OUTCOMES

## Bachelor's degree recipients work across diverse California industries, particularly health care, education, engineering and manufacturing.

**4.3.5** Industry of employment of UC bachelor's graduates, by years after graduation  
UC Universitywide  
2000 to 2012



Source: California Employment Development Department and UC Corporate Student System

Bachelor degree graduates often begin their working careers in positions within the retail and wholesale trade sectors, but they move on to high-skilled industries such as education, health care, engineering and manufacturing.

Around 20 percent of UC graduates go on to become educators within California's K-12 and higher education systems. While about 4 percent of UC graduates work in the state's K-12 education system directly after graduation, more than 10 percent go on to do so within ten years of receiving their UC degrees. UC graduates also populate the state's health care workforce in large numbers. At

ten years after graduation, more than 12 percent of them are working in health care (31 percent among life sciences majors).

Large numbers of graduates of UC's undergraduate STEM programs enter the state's engineering and high-tech workforce. More than 15 percent of UC engineering/computer science graduates employed in the state work in the internet and computer systems industry, while another 11 percent work in the engineering services industry. The manufacturing sector has been a consistent source of employment for large numbers of UC engineering and physical science graduates.





Students and faculty at UC Merced.

# Chapter 5. Graduate Academic and Graduate Professional Students

## Goals

The California *Master Plan for Higher Education* charges the University of California with the responsibility for preparing graduate academic and graduate professional students to help meet California's and the nation's workforce needs.

UC's goals with respect to graduate education are to offer the most outstanding degree programs, to support research and teaching and to prepare a professional workforce across all disciplines. UC's graduate students teach and mentor its undergraduates. UC produces the teachers, artists, thinkers, innovators, scientists, inventors, professionals and leaders of the future; creates an environment of exploration and discovery that stimulates innovation and invention; and maintains the University of California's tradition of world-class graduate instruction. In this way, UC contributes to California's economy, allowing it to grow, create jobs, and offer its residents the standard of living for which the state is well known.

## Types of graduate degrees

UC awards both graduate academic degrees and graduate professional degrees.

**Graduate academic degrees** — These include academic doctoral, academic master's, and professional doctoral degrees in the physical sciences, social sciences, arts, humanities and engineering. The largest proportion of graduate academic degrees at UC is in the STEM fields — science, technology, engineering and math. In 2011–12 (the last year for which data are available), 50 percent of graduate academic degrees awarded were in STEM.

**Graduate professional degrees** — UC's professional degrees include professional masters and professional practice degrees in fields such as law, medicine, business, education, architecture, public policy and the arts. The graduate professional category includes professional master's degrees (M.B.A., M.Ed., etc.) and professional practice

degrees (J.D., M.D., etc.). In the field of medicine, UC offers the nation's largest instructional program in healthcare and health sciences.

Before 1994, graduate professional degree programs were supported in the same manner as were other graduate programs. 1994 saw the beginning of a marked decrease in state support and the University began charging professional degree supplemental tuition. Professional degree supplemental tuition is in addition to the base tuition paid by all students and allows professional schools to recruit and retain UC-quality faculty, provide an outstanding curriculum and attract high-caliber students. Since instituting professional degree supplemental tuition, both the number of professional degree programs that charge professional degree supplemental tuition, and the amount of supplemental tuition charged, have increased steadily.

## Recruitment and support of graduate students

Graduate education at UC is ranked at the highest levels among the country's leading universities. One of the keys to a successful graduate program is recruitment of outstanding students. Such recruitment is challenged by competition with fellow institutions for qualified individuals and in the amount of financial support UC can offer.

Academic graduate student support comes from a combination of fund sources including fellowships, on-campus appointments as a graduate student researcher (GSR) or teaching assistant (TA), other opportunities for earnings on or off campus, savings, family contributions and/or loans.

Full support throughout a doctoral program is the goal for both UC and its competitors. Increases in tuition and fees have challenged the University's ability to offer competitive support packages to its graduate students and have placed additional strain on the dwindling fund sources that cover those costs.

UC's financial support for its academic graduate students has lagged behind its competitors' offers for the last several years, though the gap narrowed between 2010 and 2013 (see indicator 5.2.2.) In 2013–14, the University maintained nonresident tuition at 2004–05 levels for all graduate and professional degree students. This should help improve the University's ability to compete for and enroll top international and out-of-state students.

Whereas nearly all support received by graduate academic students is in the form of fellowships and assistantships, students in professional degree programs rely primarily on loans to finance their education. Although fellowship support for professional degree students has increased — due in part to the one-third of tuition, fees and professional degree fees that are set aside for institutional aid — it has been outpaced by increases in student borrowing.

### Looking ahead

In addition to providing competitive graduate support, the University continues to develop programs and benefits designed to enhance the graduate student experience. UC's overall excellence rests on the strength and scope of its graduate programs. Unlike undergraduate enrollment planning, which is based on California's *Master Plan*, graduate enrollment planning is based on a number of factors, including assessment of state and national needs, faculty expertise,

program quality (which includes international competitiveness) and available financial support. Over the last 50 years, as the University accommodated California's burgeoning number of high school graduates, undergraduate enrollment growth far outpaced graduate enrollment growth. As a result, the proportion of graduate students to undergraduates on the general campuses has decreased from about 30 percent in the 1960s to about 16 percent today. Given the critical contributions of graduate students to the University's teaching and research mission, a 16 percent proportion of graduate students seems less than optimal and places UC well below its peer institutions.

### For more information

University of California Office of the President,  
Office of Research and Graduate Studies:  
[www.ucop.edu/graduate-studies/](http://www.ucop.edu/graduate-studies/)

#### Time-to-doctorate at UC:

[www.ucop.edu/institutional-research/\\_files/2011-uc-time-doctorate.pdf](http://www.ucop.edu/institutional-research/_files/2011-uc-time-doctorate.pdf)

#### Doctoral completion rates:

[www.ucop.edu/institutional-research/\\_files/uc-doctoral-completions.pdf](http://www.ucop.edu/institutional-research/_files/uc-doctoral-completions.pdf)

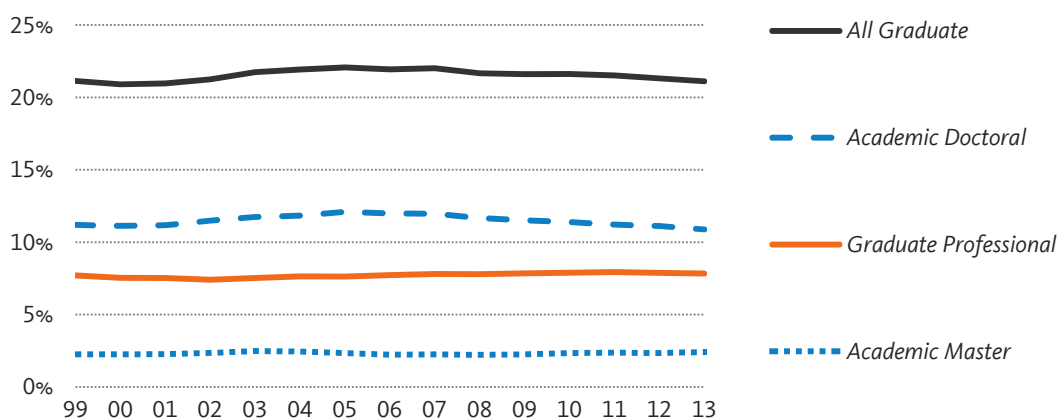
#### Doctoral education:

<http://regents.universityofcalifornia.edu/regmeet/no-v13/e1.pdf>

## 5.1 GRADUATE ACADEMIC AND GRADUATE PROFESSIONAL STUDENTS

### Graduate enrollment, as a share of UC's total undergraduate and graduate enrollment, has remained relatively steady over the past 14 years.

#### 5.1.1 Graduate enrollment share of total Universitywide Fall 2000 to fall 2013



Source: UC Corporate Student System<sup>1</sup>

Academic master's students include a small number of post-baccalaureate teaching credential students. The graduate professional category includes professional master's (M.B.A., M.Ed., etc.) and professional practice (J.D., M.D., etc.) degrees. Growth at UC has been distributed fairly evenly across academic master's, academic doctoral and graduate professional programs.

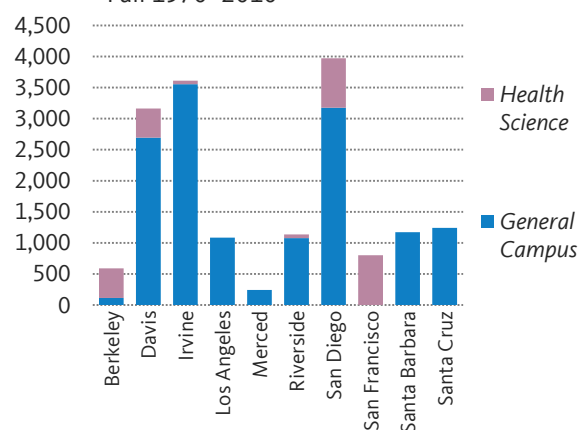
UC, with 21 percent graduate enrollment in 2012 including health science students, was lower than the average for non-UC AAU public institutions, at 27 percent, and the average for AAU private institutions, at 53 percent.

<sup>1</sup> A list of the institutions in the AAU comparison groups can be found in the appendix.

## 5.1 GRADUATE ACADEMIC AND GRADUATE PROFESSIONAL STUDENTS

**Graduate student enrollment growth has varied over time and by campus. These differences reflect the diversity and size of academic programs as campuses mature over time.**

**5.1.2** Graduate enrollment growth  
UC campuses  
Fall 1970–2010



The increase in graduate students at UC over the past 40 years has been distributed unevenly across the campuses, as chart 5.1.2 shows. Davis, Irvine and San Diego have increased the most, while the oldest campuses (Berkeley, Los Angeles and San Francisco) have not grown as much.

Source: UC Corporate Student System and UC Statistical Summary of Students and Staff. Includes both graduate academic and graduate professional students.

Academic doctoral students are critically important to the University because they directly contribute to teaching and research. They are also important to the workforce, and their education and training is part of UC's responsibility under California's Master Plan for Higher Education. In 2012–13, UC employed 25,493 graduate students as research assistants, teaching assistants, readers or tutors, about equally divided between research and teaching assignments.

In fall 2013, the proportion of academic doctoral students varied across the general campuses, from 5 percent at Merced to 16 percent at Berkeley. At San Francisco, an exclusively graduate health-sciences campus, academic doctoral students made up 27 percent of fall 2013 enrollments.

Percent and number of fall 2013 students who are academic doctoral

Campus	Percent	Number
San Francisco	27%	821
Berkeley	16%	5,663
Los Angeles	12%	4,698
San Diego	11%	3,174
Davis	10%	3,334
Santa Barbara	10%	2,303
Irvine	9%	2,570
Riverside	9%	1,841
Santa Cruz	7%	1,245
Merced	5%	315
<b>Universitywide</b>	<b>11%</b>	<b>25,964</b>

Source: UC Corporate Student System

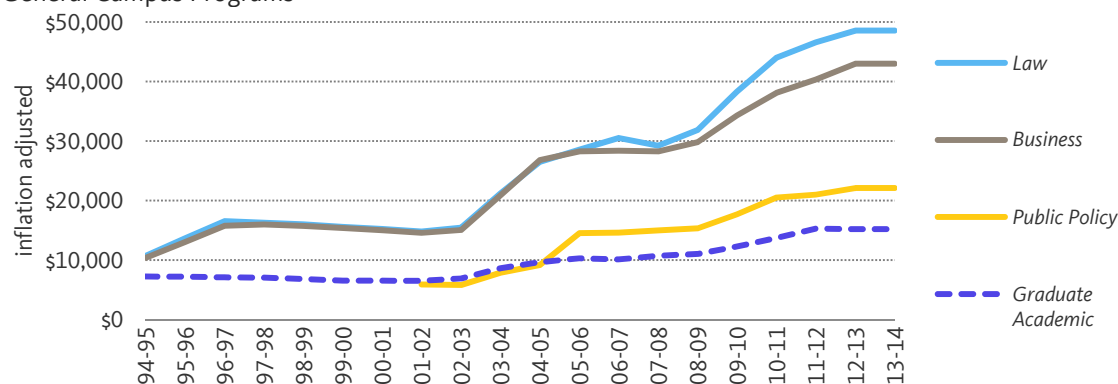


## 5.2 GRADUATE ACADEMIC AND GRADUATE PROFESSIONAL AFFORDABILITY

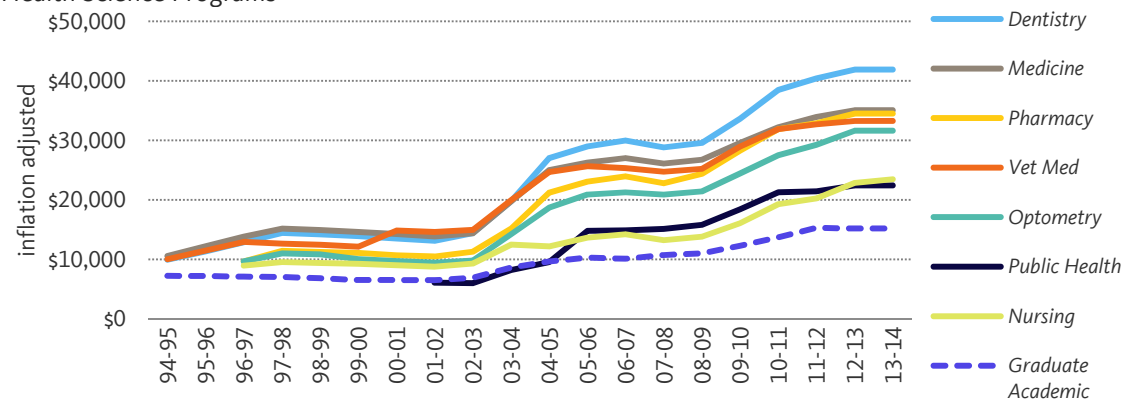
Since 1994, when the University began charging supplemental fees for students participating in professional degree programs, the fees have grown considerably.

### 5.2.1 Graduate academic and graduate professional average student charges Universitywide 1994-95 to 2013-14

#### General Campus Programs



#### Health Science Programs



Source: UC Budget Office<sup>1</sup>

The Board of Regents approves professional degree supplemental tuition levels. Considerations in setting these rates include the tuition level of peer programs, availability of financial aid, proposed use of the additional fees and other factors. The full Regents' policy on professional degree supplemental tuition is at [www.universityofcalifornia.edu/regents/policies/3103.html](http://www.universityofcalifornia.edu/regents/policies/3103.html).

The graphs show average total charges for selected professional degree programs. They also show the average charge, including health insurance, for a graduate academic student who does not pay professional degree supplemental tuition. Nonresident tuition is excluded.

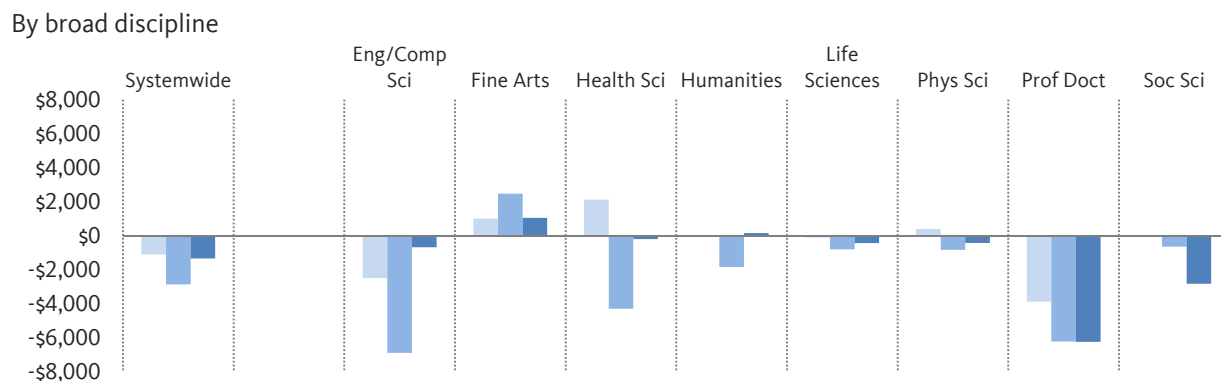
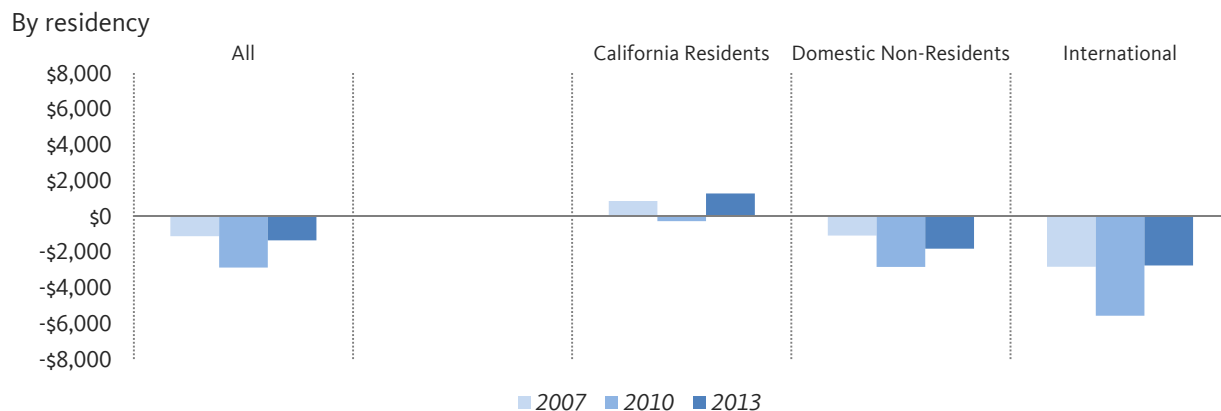
<sup>1</sup> Includes mandatory systemwide tuition, health insurance, campus-based fees, and professional degree and supplemental tuition charges. Not all programs are shown. Averages are simple averages based on campus amounts; the number of students in each program is not taken into account.



## 5.2 GRADUATE ACADEMIC AND GRADUATE PROFESSIONAL AFFORDABILITY

### UC net stipends remain below competitive offers, but the gap decreased between 2010 and 2013.

**5.2.2** Average net stipend offered to graduate academic doctoral students admitted to UC compared with their first-choice non-UC schools Universitywide 2007, 2010 and 2013



Source: UC Graduate Student Support Survey. [http://www.ucop.edu/student-affairs/\\_files/regents\\_1213.pdf](http://www.ucop.edu/student-affairs/_files/regents_1213.pdf)

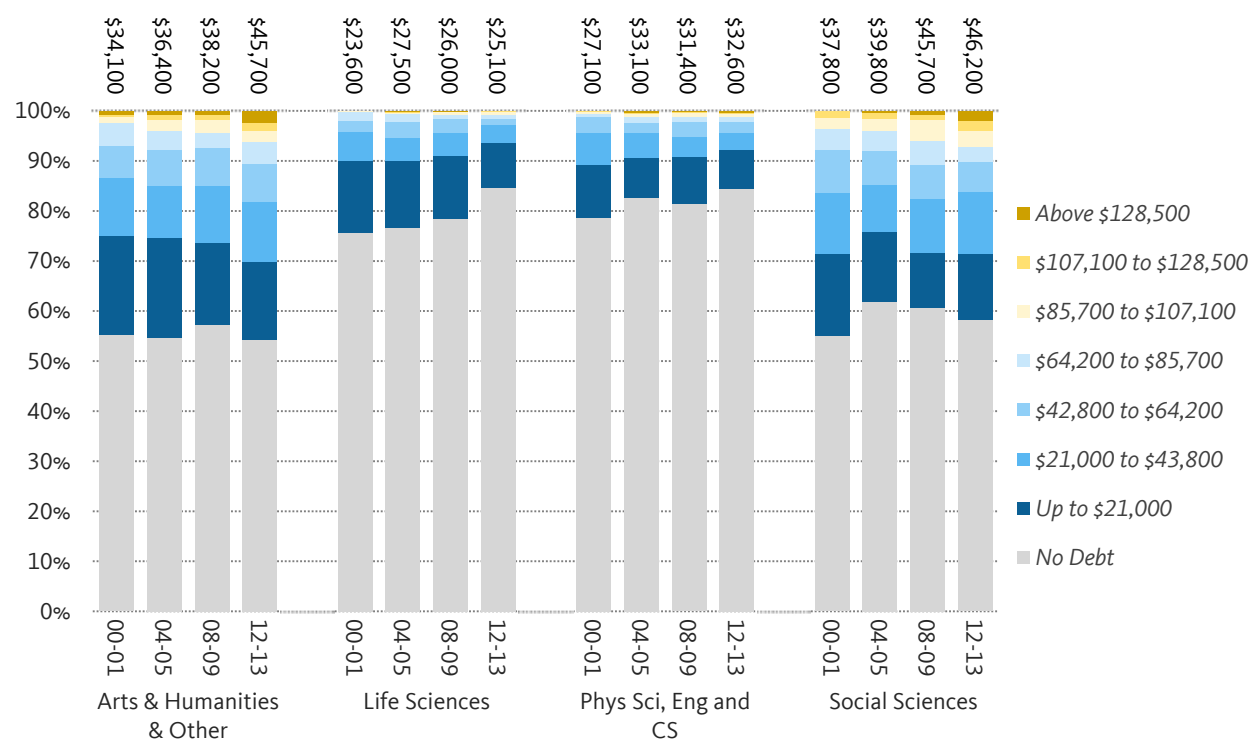
Doctoral students are crucial to a university’s research enterprise and instructional programs. To attract the most highly qualified applicants, universities offer an aid package that includes tuition and stipends. Net stipend is the amount of aid that students have for living expenses after tuition and fees are paid. It is calculated by

subtracting total tuition and fees from a student’s support package (which includes gift aid and teaching or research assistantships). It does not include any loans that the student may be offered. The “stipend gap” varies by discipline as shown in the chart above.

## 5.2 GRADUATE ACADEMIC AND GRADUATE PROFESSIONAL AFFORDABILITY

**More than half of doctoral students graduate without debt. Doctoral students in the physical and life sciences have seen smaller increases in debt over the past 12 years, and graduate with less average loan debt than those in the social sciences and arts & humanities.**

### 5.2.3 Academic doctoral students' graduate debt at graduation by discipline, domestic students Universitywide Graduating classes of 2001, 2005, 2009 and 2013 (average debt for those with debt shown at top of bar)



Source: Corporate Student System<sup>1</sup>

Depending on the field, between 85 percent (life sciences) and 54 percent (social sciences) of UC doctoral students take on no additional debt during graduate school.

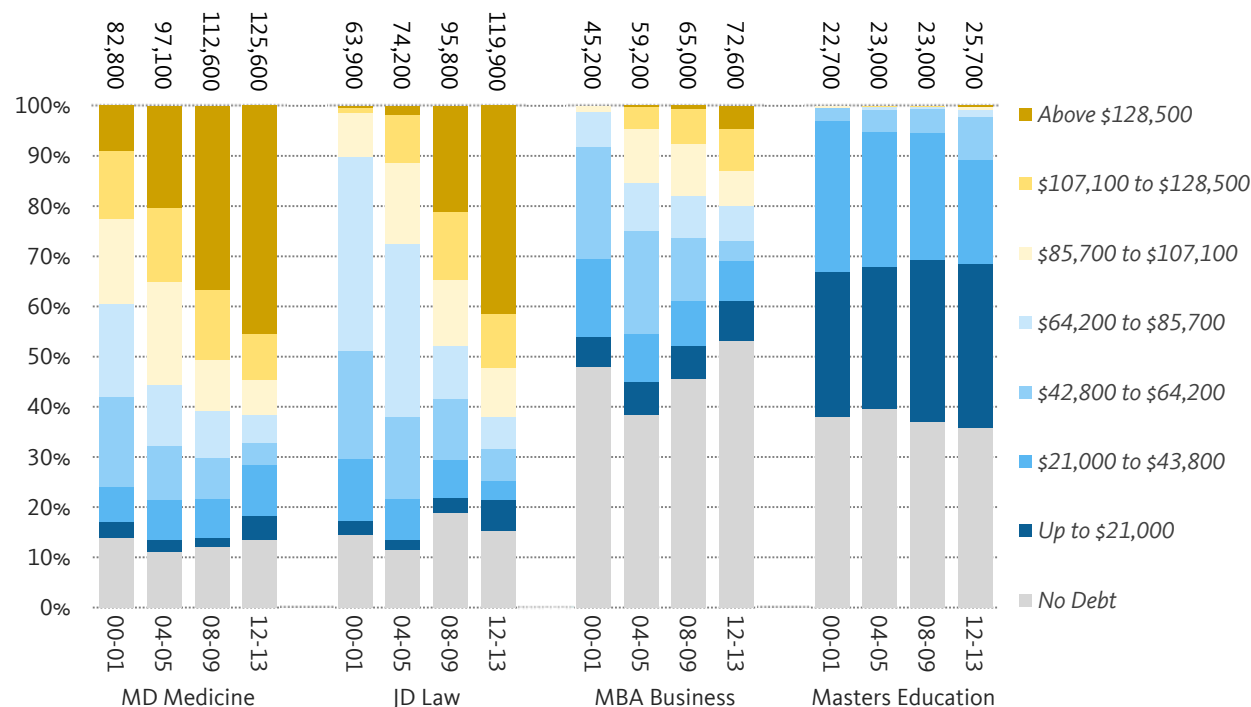
Several factors account for the difference in debt burden between doctoral students in the physical and life sciences and those in other disciplines. Physical and life science students are more likely to be supported by research grants. They also take less time on average to complete their degrees than do doctoral students in the social sciences or arts and humanities.

<sup>1</sup> Debt categories are inflation-adjusted in 2012 dollars using CA CPI-W. Other includes interdisciplinary and professional fields. Life sciences include health sciences.

## 5.2 GRADUATE ACADEMIC AND GRADUATE PROFESSIONAL AFFORDABILITY

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

**5.2.4** Graduate professional degree student debt at graduation, by discipline  
Universitywide  
Graduating classes of 2001, 2005, 2009 and 2013 (average debt for those with debt shown at top of bar)



Source: UC Corporate Student System<sup>1</sup>

On average, about two-thirds of the aid awarded to graduate professional degree students comes in the form of loans rather than as fellowships or grants. By comparison, loans constitute only 8 percent of the aid awarded to graduate academic students. Graduate funding models allow greater reliance on loans for professional degree students as their programs are of shorter duration and many fields offer potential for higher incomes after graduation.

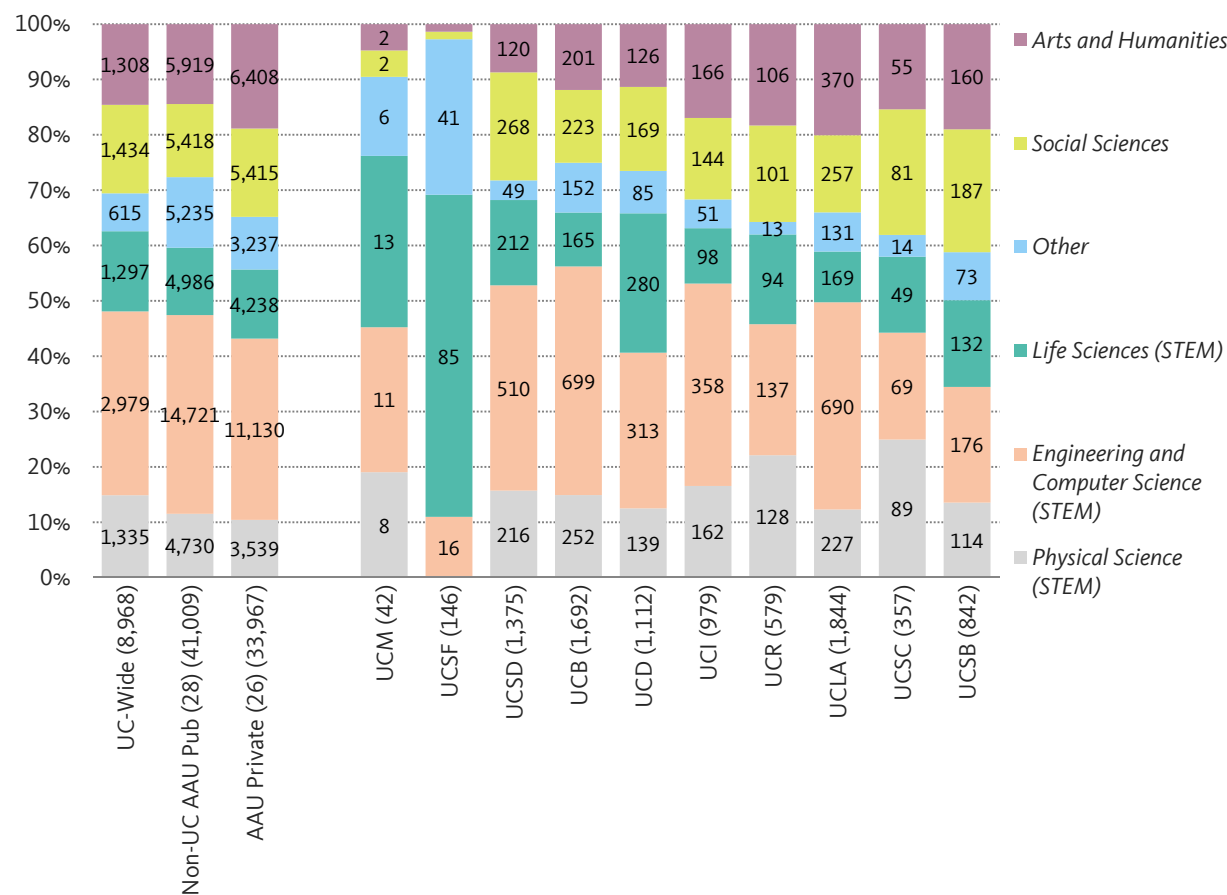
Most graduate professional degree students finance part of their education by borrowing. The increases since 2000–01 in average inflation-adjusted debt levels of graduating professional degree students vary considerably — from \$3,000 in education to \$56,000 in law. Increases in graduate debt result from a combination of factors, including steady growth in tuition and greater student reliance on federal student loan programs.

<sup>1</sup> Data are for domestic and international students. Average debt is for graduates with debt. Debt categories are inflation-adjusted in 2012 dollars using CA CPI-W.

### 5.3 OUTCOMES — GRADUATE ACADEMIC STUDENTS

## Like other AAU universities, a high proportion of UC’s graduate academic degrees are awarded in science, technology, engineering and math (STEM) fields.

### 5.3.1 Graduate academic degrees awarded, by discipline UC and comparison institutions 2011–12



Source: IPEDS<sup>1</sup>

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

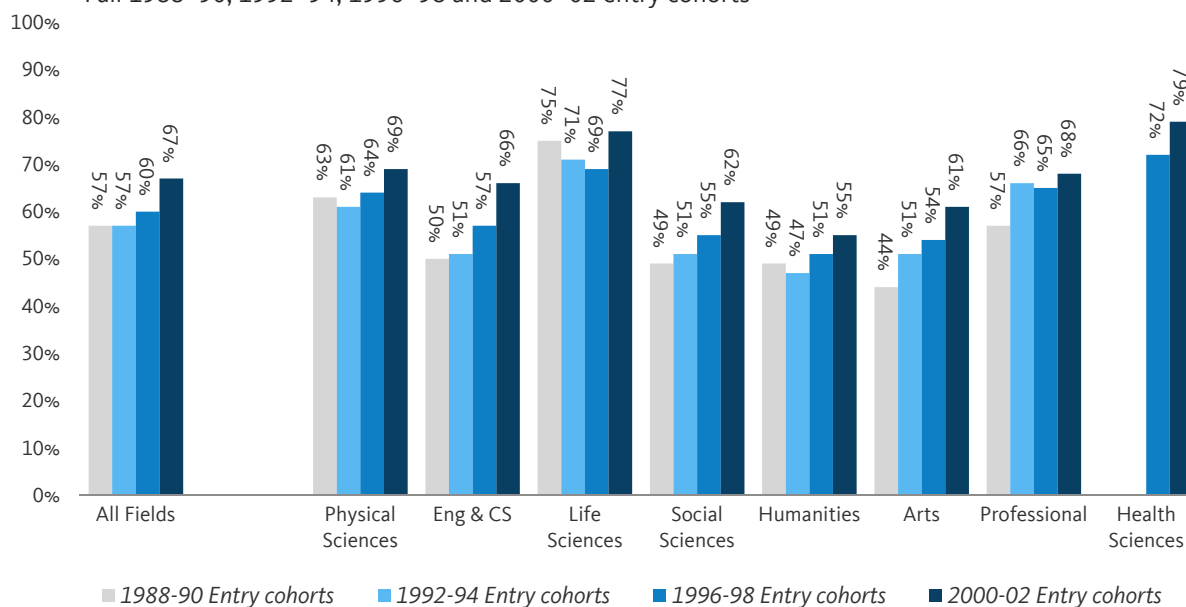
More than 20 UC Ph.D.’s have been awarded Nobel Prizes.

<sup>1</sup> “Other” are interdisciplinary and others.

## 5.3 OUTCOMES — GRADUATE ACADEMIC STUDENTS

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

#### 5.3.2 Doctoral completion rates after ten years, by broad field UC Universitywide Fall 1988–90, 1992–94, 1996–98 and 2000–02 entry cohorts



Source: UCOP Institutional Research and Academic Planning

The systemwide ten-year doctoral completion rate across all fields for the fall 2000–02 entering cohorts was 67 percent. This is an increase from the 60 percent completion rate reported in the previous study. Among broad disciplines, Life Sciences and Health Sciences continue to have the highest completion rates. Humanities and Arts showed the lowest rates, owing to the longer normative time in those fields, although both experienced an increase compared to previous cohorts.

The overall improvement in ten-year completion rates may be attributed to a number of factors. First, there has been a shift in the student demographics to a larger percentage of international students, who, as a group, have a higher ten-year completion rate than the overall cohort's rate. Second, the percent of students pursuing doctoral degrees in Life Sciences, Physical

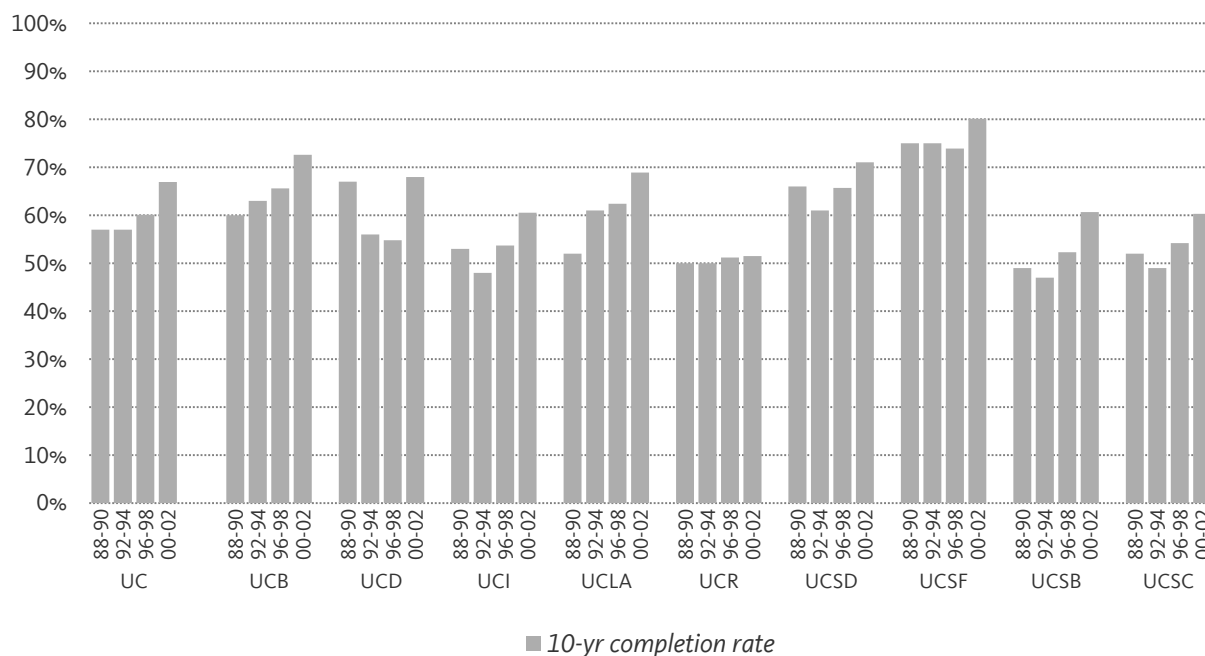
Sciences and Math, and Engineering and Computer Science fields increased 5 percentage points between the 96–98 and 00–02 cohorts; students in these fields have a higher completion rate than do students in other fields.

Additionally, at least two graduate tuition policy changes during the last decade may have affected the rate of ten-year completions by influencing students' decision to remain continuously enrolled and/or to progress toward a degree more quickly. The first such policy change is the Non-Resident Tuition Waiver (2006), which encourages international students to advance to candidacy more quickly in order to qualify for a nonresident tuition exemption. A more recent policy change is the 2009 implementation of the graduate in absentia policy, which aims to promote continuous enrollment for students temporarily conducting degree-related research away from UC.

## 5.3 OUTCOMES — GRADUATE ACADEMIC STUDENTS

### In general, completion rates have improved on UC campuses.

#### 5.3.3 Doctoral completion rates after ten years UC Campuses Fall 1988–90, 1992–94, 1996–98 and 2000–02 entry cohorts



Source: UCOP Institutional Research and Academic Planning

The proportion of STEM (science, technology, engineering and math) disciplines on a campus may play a role in its completion rates. The time spent in these degree programs is shorter than in arts and humanities, and therefore the ten-year completion rates of students in STEM fields tend to be higher than most other fields. In general, the UC campuses with larger proportions of STEM students also tend to have higher overall completion rates. Davis, San Diego and San Francisco have the highest percent of students in STEM fields, and they have shown some of the highest completion rates over the last four cohorts. Similarly, a larger percent of students at Riverside, Santa Barbara and Santa Cruz were enrolled in programs outside of STEM fields, and ten-year completion rates at those campuses are lower.

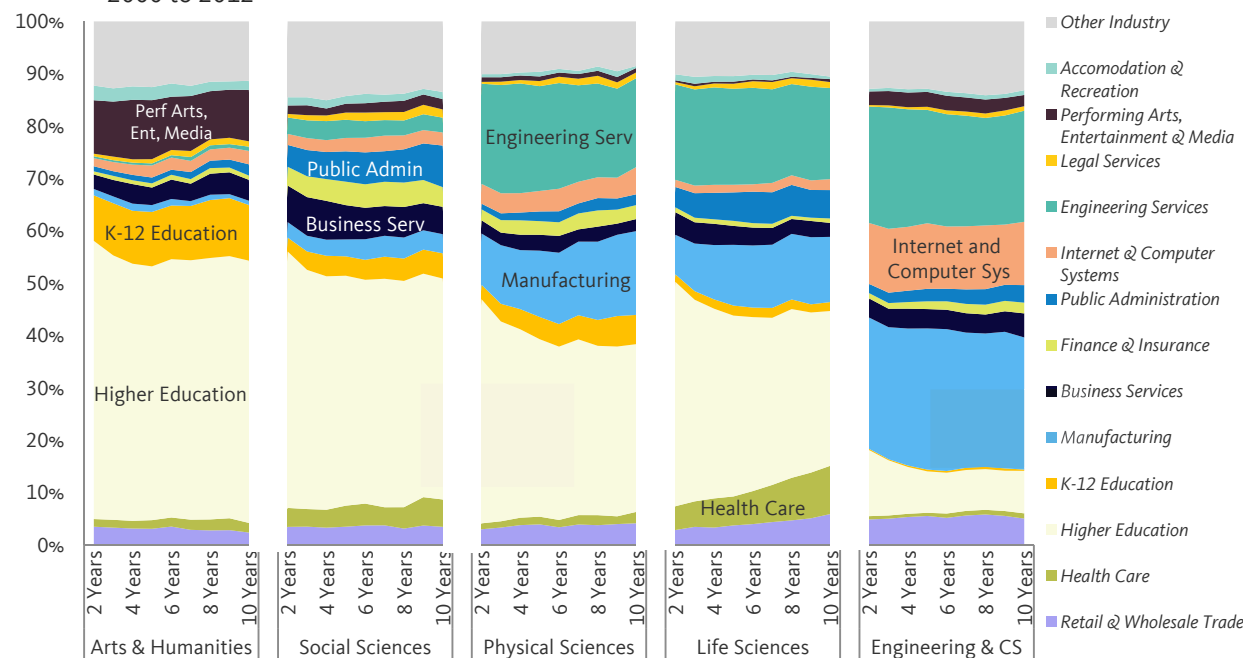
The elapsed time-to-doctorate (ETD) at UC is roughly the same as at other academic research universities. There was no change in ETD for UC and the comparison institution groups in the 2004–06 and 2007–09 cohorts in the Survey of Earned Doctorates. UC’s individual campuses compare favorably to the AAU and the traditional public and private comparison institutions. For the 2007–09 cohorts, most UC campuses had the same ETD measure as the broad comparison institution groups. The 2011 Time-to Doctorate Report is available at [www.ucop.edu/ir/documents/2011-uc-time-doctorate.pdf](http://www.ucop.edu/ir/documents/2011-uc-time-doctorate.pdf).



## 5.3 OUTCOMES — GRADUATE ACADEMIC STUDENTS

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

#### 5.3.4 Industry of employment of UC graduate academic students in CA, by year after graduation UC Universitywide 2000 to 2012



Source: California Employment Development Department and UC Corporate Student System<sup>1</sup>

The job market for doctoral recipients is nationwide, and those who leave California are not tracked here. More than 22,000 graduates of UC's academic Ph.D. and master's programs have entered the California workforce since 2000. Half of them have gone on to work in the state's higher education workforce, which includes all of the two-year and four-year colleges, both public and private. This highlights the critical role of UC's graduate academic programs in producing the cadre of faculty who teach California's future college-educated workforce, and conduct research that advances the state and national economies.

The contributions of UC's academic Ph.D. and master's graduates to the state workforce go beyond higher education. More than 23 percent of the employed graduates of UC physical sciences and life sciences programs work in the state's

manufacturing sector, while another 20 percent work in the engineering industry. This shows that the skills gained in UC's academic Ph.D. and master's programs are both applicable and relevant to key high-tech industries.

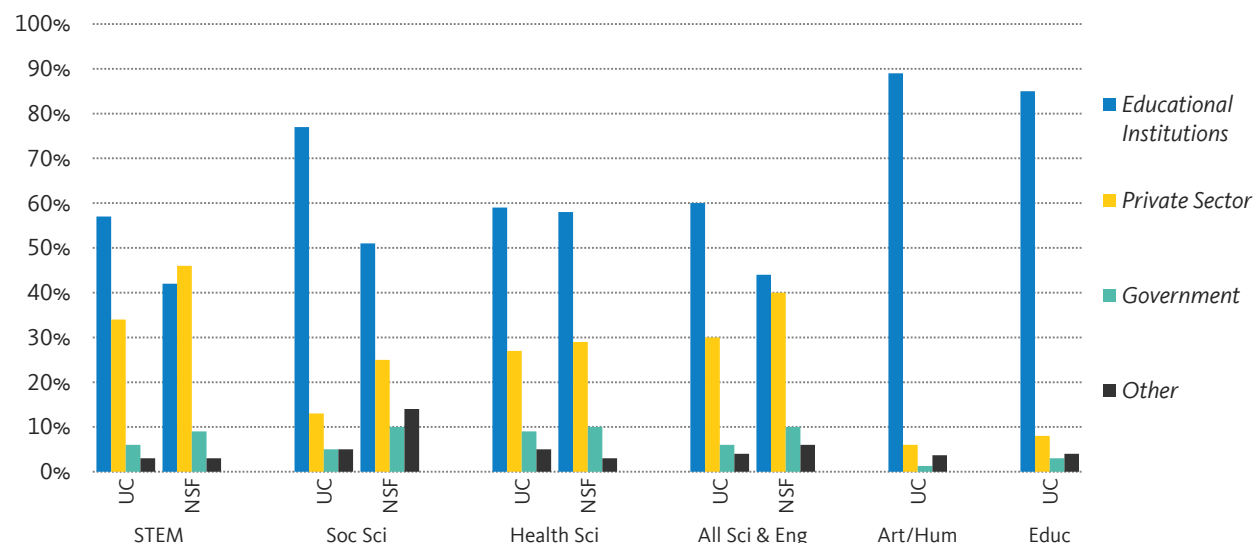
UC's graduate academic programs in engineering and computer science supply workers to the state's high-skilled and high-tech industries. Since 2000, 13,000 graduates of these programs have entered the California workforce, with 30 percent working in the manufacturing sector and 25 percent working in engineering services. Another 16 percent go on to work in the state's fast-growing Internet and computer services industry. About 14 percent of these graduates go on to teaching and research positions in the state's college and university systems.

<sup>1</sup> Includes very small numbers of graduate professional students, which do not affect the overall picture.

### 5.3 OUTCOMES — GRADUATE ACADEMIC STUDENTS

## Compared with the national average, a greater proportion of UC doctoral graduates find employment in educational institutions.

### 5.3.5 Academic Doctoral Degree Recipient employment sectors, all graduates since 1969 UC and national comparison 2013 (UC) and 2008 (NSF)



Source: UC Graduate Alumni Survey and NSF Survey of (Science and Engineering) Doctoral Recipients.<sup>1</sup>

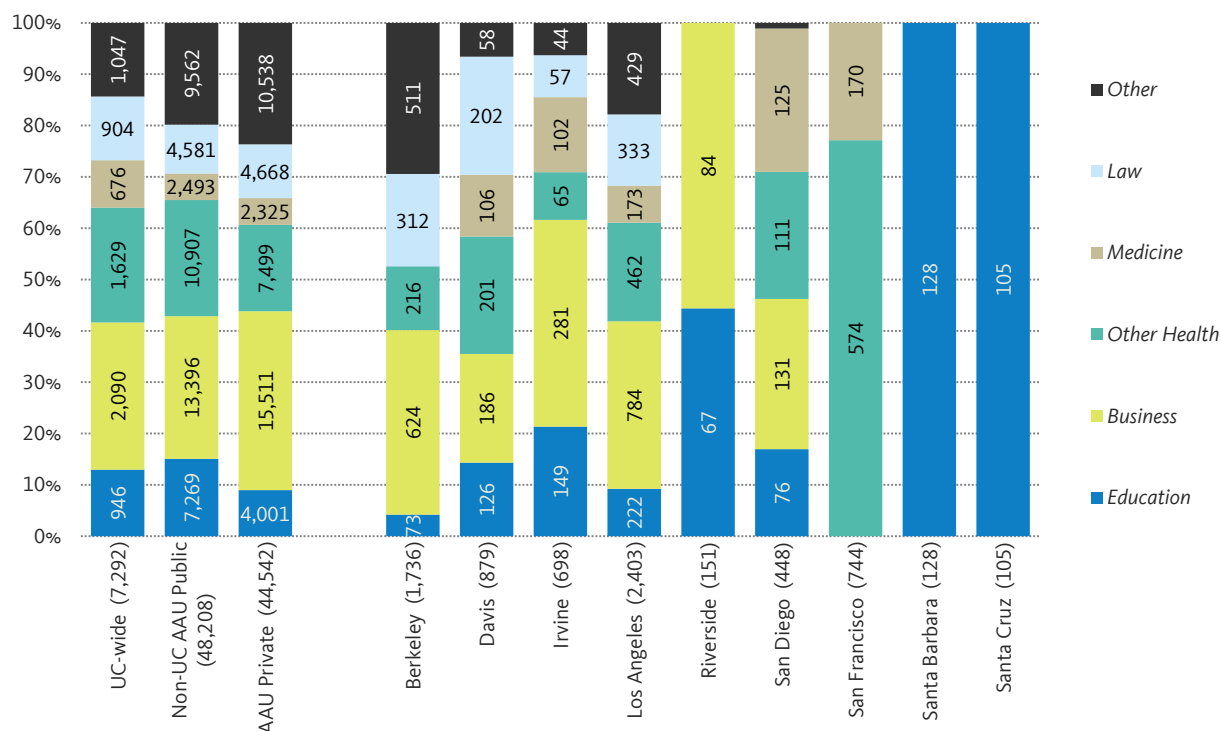
The proportion of UC doctoral degree recipients who find employment in educational institutions is higher than the national average for the broad disciplinary groups tracked by the National Science Foundation (NSF). California’s colleges and universities depend on UC Ph.D.’s to teach their students: One out of five UC and CSU faculty members has a UC doctoral degree.

<sup>1</sup> NSF comparisons are only available for certain disciplines and not available for arts/humanities and education.

## 5.4 OUTCOMES — GRADUATE PROFESSIONAL DEGREE STUDENTS

**UC awarded 7,292 professional degrees in 2011–12: 32 percent in medicine and other health sciences, 29 percent in business, 13 percent in education, 12 percent in law and 14 percent in other areas.**

### 5.4.1 Graduate professional degrees awarded, by discipline UC and comparison institutions 2011–12



The number and size of graduate professional degree programs varies by campus, with UCLA awarding the greatest number of degrees in 2011–12.

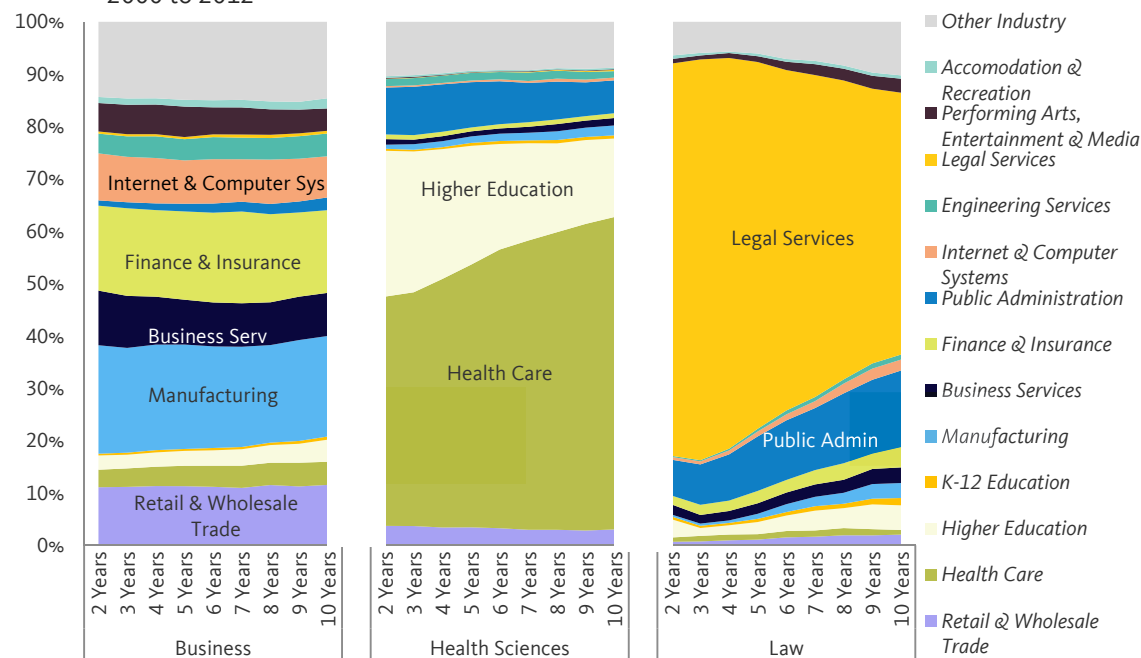
Source: IPEDS<sup>1</sup>

<sup>1</sup> UC Merced has no professional degree students.

## 5.4 OUTCOMES — GRADUATE PROFESSIONAL STUDENTS

### UC's professional programs prepare graduates for related careers.

#### 5.4.2 Industry of employment of UC graduate professional students in CA, by year after graduation UC Universitywide 2000 to 2012



Source: California Employment Development Department and UC Corporate Student System<sup>1</sup>

Graduates of UC's Master of Business Administration (MBA) programs go on to work in high-skilled and high-tech industries in the state. The 14,000 UC MBA graduates who have entered the California workforce since 2000 have worked in a wide array of industries, including manufacturing (20 percent), finance and insurance (15 percent), retail and wholesale trade (12 percent), and Internet and computer systems (10 percent).

Nearly 12,000 graduates of UC's health science professional practice programs (e.g., M.D., D.D.S., Pharm.D., etc.) have gone on to work in California since 2000. The majority of these graduates (55 percent) go on to work in the state's health care sector. This highlights UC's role, per the Master Plan, as the state's sole public provider of many health science professional practice degrees and validates UC's success in fulfilling that role. UC health science graduates also play key roles in other

areas of public service in the state, including 27 percent who go on to work in the state's higher education system and 8 percent who work in state government.

UC's law school graduates go on to work in two main areas — legal services and government. Of the 7,500 UC law school graduates who have worked in California since 2000, more than 50 percent work in the legal services industry. Another 20 to 25 percent have gone on to work in the public sector, including as government prosecutors, as public defenders, and in other public agency roles. A large percentage of law school graduates start off in legal services initially after receiving their degree (75 percent), but by ten years after graduation this percentage has fallen to about 45 percent. The percent of UC law school graduates in government rises from 8 percent to 25 percent over the same period.

<sup>1</sup> Includes a very small number of graduate academic students (e.g., Ph.D. Business) that do not affect the overall picture.



*Research at UC San Francisco Medical Center.*



## Chapter 6. Faculty and Other Academic Employees

The quality and stature of the University of California are due to its distinguished faculty. UC faculty are a rich source of innovation, discovery and mentorship; they provide top-quality education to students, groundbreaking research and public service to society. President Napolitano has said, “We teach for California ... [and] we research for the world.” No other public institution can claim as distinguished a group of individuals: UC faculty have won 60 Nobel prizes and 61 National Medals of Science. As of June 2013, UC faculty included 61 MacArthur “Genius” Grant recipients, 286 members of the National Academy of Sciences and 410 members of the American Academy of Arts and Sciences.

### Describing the academic workforce

This chapter describes how the composition of the UC faculty has evolved and continues to respond to changing disciplinary interests and demographic change, as well as an increasingly challenging environment for public higher education. Faculty are dedicated to a range of teaching, research, clinical service and public service functions in a vast array of disciplinary areas, including the health sciences. The demographic data in this chapter provide an outline of the composition of the UC faculty, a picture that only barely hints at the full scope of faculty activities and accomplishments and the environment of discourse and discovery sparked by a vibrant community of dedicated scholars and educators.

### The faculty renewal pipeline

UC’s academic workforce is changing. Each year a new round of recruitments replace faculty who retire or depart for positions elsewhere. For the past several years, the University has faced numerous challenges in relation to faculty renewal: sharply decreasing levels of state support, intense competition to recruit and retain top-quality faculty and researchers, and the difficulty of achieving a diverse academic workforce.

**Faculty reductions due to state budget cuts** — Since 2009, cuts in funding received from the state have resulted in a decrease in general campus faculty FTE, even as student enrollment has increased. In the health sciences, ladder-rank faculty FTE since 2009 has been almost flat; however, non-ladder-rank FTE has grown significantly due to the availability of clinical revenues as funding sources for faculty compensation.

**Renewal and recruitment** — The age distribution of ladder-rank faculty has become weighted toward an older cohort. In 2013, 14 percent of ladder-rank faculty were over 55, compared with 4 percent in 1998. As these faculty retire, UC will need to recruit high-quality faculty to replace them.

**Competitiveness of faculty salaries** — Faculty salaries at UC still trail those at comparison institutions. UC compares its faculty salaries against the average of salaries at four public and four private institutions. UC and the state set a goal for UC salaries to be at the midpoint between these two averages, but UC salaries have lagged behind this benchmark for the last 13 years.

**Diversity** — Data comparing U.S. doctoral degree recipients and UC’s new faculty hires show that UC lags behind in hiring women and members of underrepresented groups. The share of new assistant professors from underrepresented groups remains below the share in the national pool of available candidates. To address these challenges, the Office of the President is working with campuses by tracking faculty recruitment data to identify opportunities to diversify the faculty; by sharing best practices in faculty mentoring and professional development; and by enhancing programs to foster work-life balance.

### For more information

The UC Academic Senate and UCOP’s Academic Personnel unit:

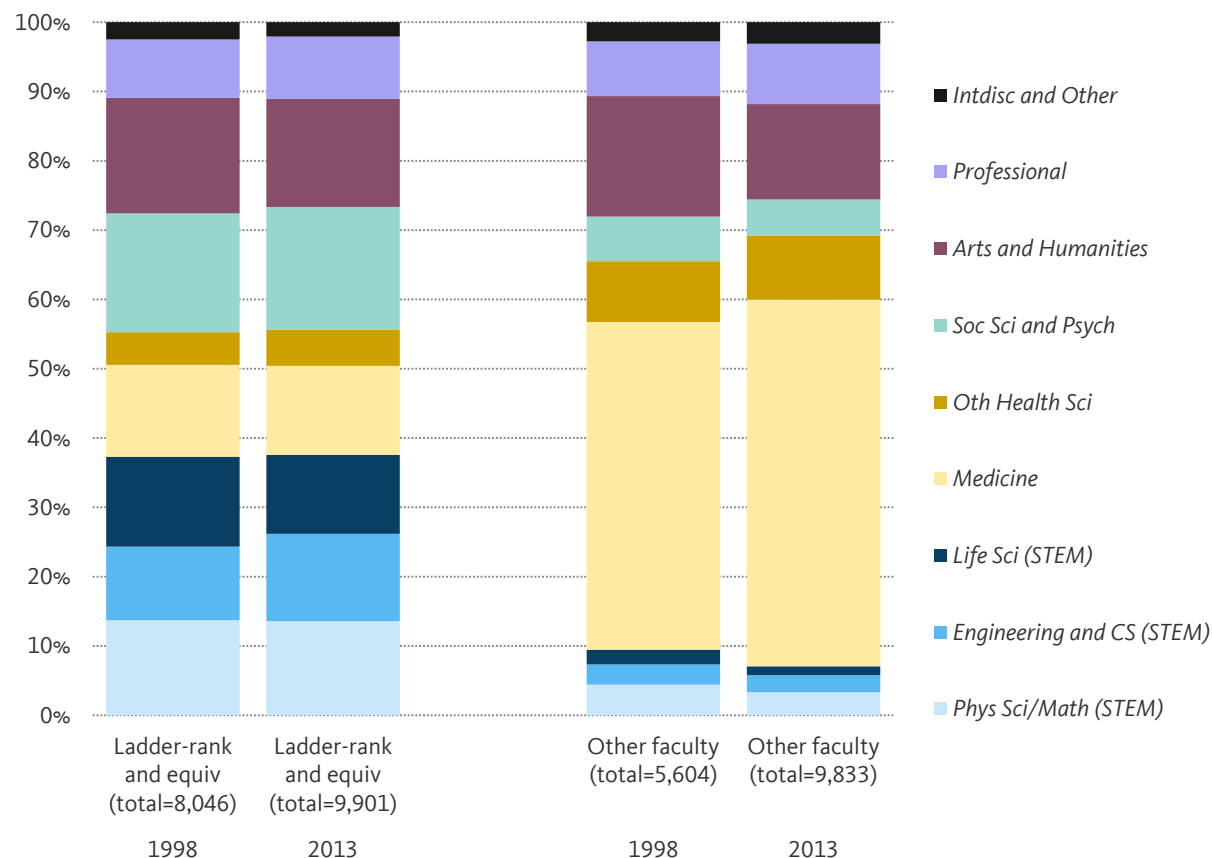
[www.universityofcalifornia.edu/senate](http://www.universityofcalifornia.edu/senate) and  
[www.ucop.edu/acadpersonnel](http://www.ucop.edu/acadpersonnel).



## 6.1 ACADEMIC WORKFORCE

**More than half of ladder-rank and equivalent faculty are in STEM (science, technology, engineering and mathematics) and health sciences disciplines. The largest (and growing) percentage of non-ladder-rank faculty is employed in the health sciences.**

### 6.1.1 Faculty by discipline Universitywide Fall 1998 and fall 2013



Source: UC Corporate Personnel System<sup>1</sup>

The growth in faculty FTE over the last 15 years has not been evenly distributed across academic disciplines. Among ladder-rank and equivalent faculty, the most significant change over the past 15 years has been a shifting emphasis in the STEM disciplines. The largest growth has been in engineering and computer science — not a surprising development given the dramatically increased demand among students for training in this fast-growing sector of the economy.

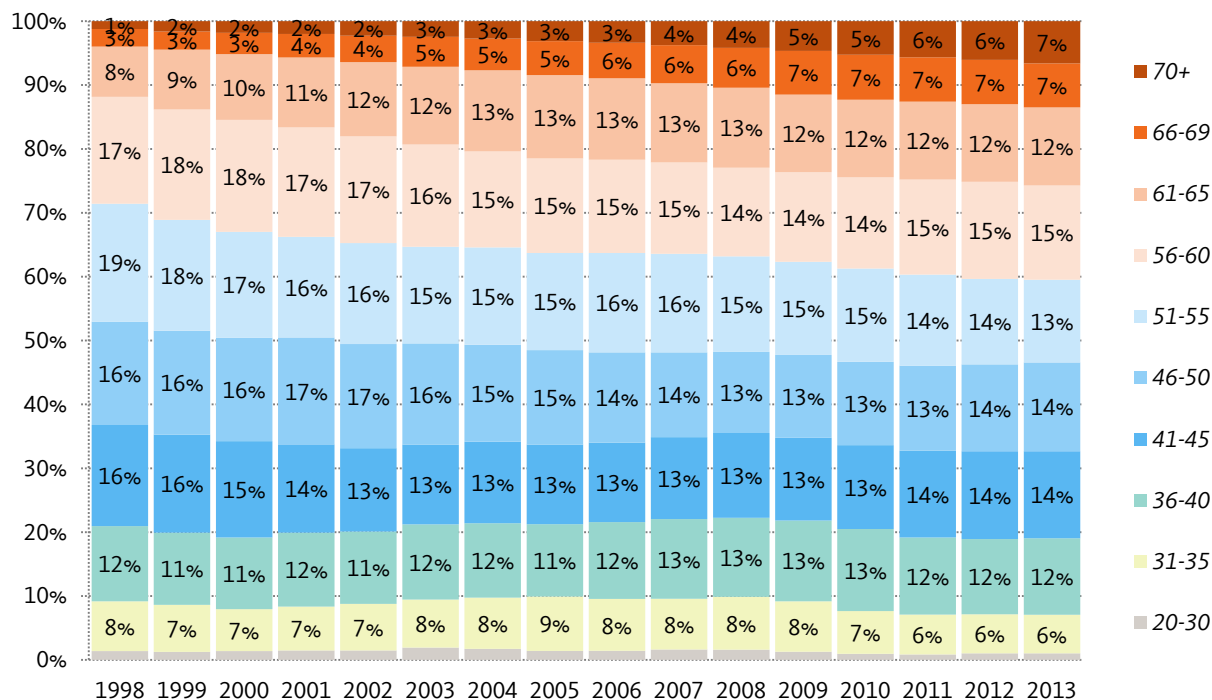
FTE in other faculty series has increased by more than 4,200 (about 75 percent) since 1998 — a much greater increase than in the FTE of ladder-rank and equivalent faculty (about 1,850, or 23 percent). The most significant increase in non-ladder faculty has been in medicine.

<sup>1</sup> Data shown are headcount numbers for all faculty members. “Other faculty” includes lecturers, visiting and adjunct faculty, instructional assistants and the clinical faculty series. Other health sciences include nursing, dentistry, pharmacy, optometry and veterinary medicine.

## 6.2 ACADEMIC WORKFORCE DEMOGRAPHICS

### The faculty workforce was older in 2013 than it was in 1998.

#### 6.2.1 Age distribution of ladder- and equivalent-rank faculty Universitywide Fall 1998 to 2013



Source: UC Corporate Personnel System<sup>1</sup>

Within the next five years, more than half of UC's ladder faculty will be eligible to retire. (UC's minimum retirement age is 50 for career employees with at least five years of service). Many UC faculty continue to serve well past the minimum retirement age; The average age of faculty retirement is 64, and a growing number of full-time faculty are 70 and older. However, current trends indicate that the University will continue to see growing numbers of faculty retirements in coming years. Replacing these experienced faculty with academics of equivalent potential may prove challenging if UC is unable to provide competitive compensation.

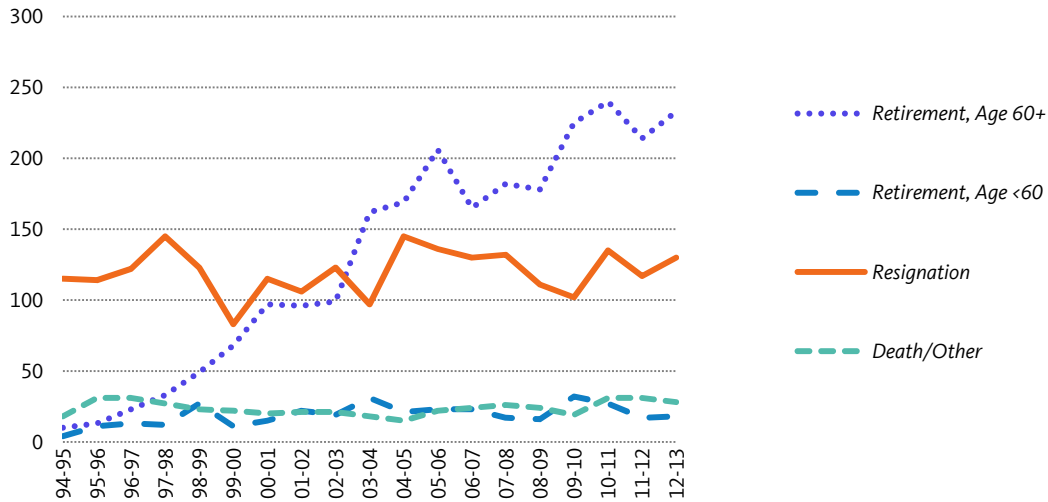
As indicator 6.3 demonstrates, faculty compensation at UC continues to lag behind the private institutions that compete with UC for the best and brightest teachers and researchers.

<sup>1</sup> Excludes emeriti and recall faculty.

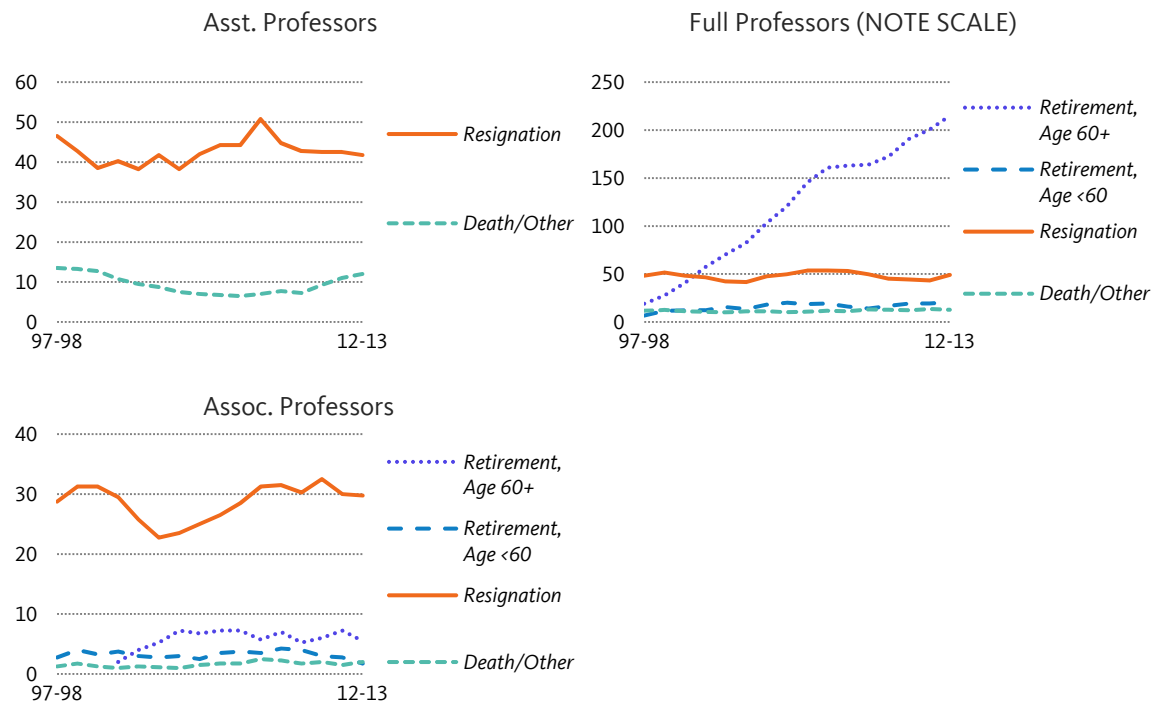
## 6.2 ACADEMIC WORKFORCE DEMOGRAPHICS

The number of faculty who have retired at age 60 or above has grown in the past 15 years; departures for other reasons have remained constant.

**6.2.2** Departure reasons of faculty  
Universitywide, all faculty  
1994–95 to 2012–13



Departure reasons by rank  
Moving four-year average, 1997–98 to 2012–13



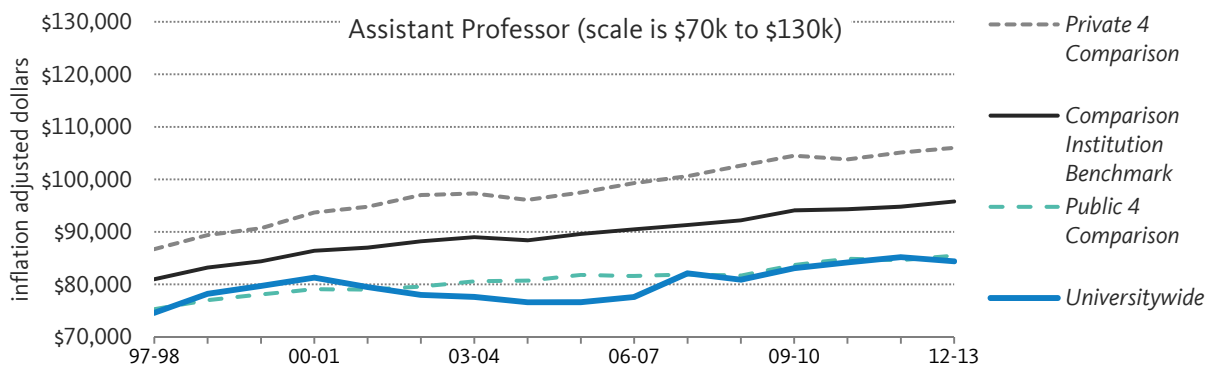
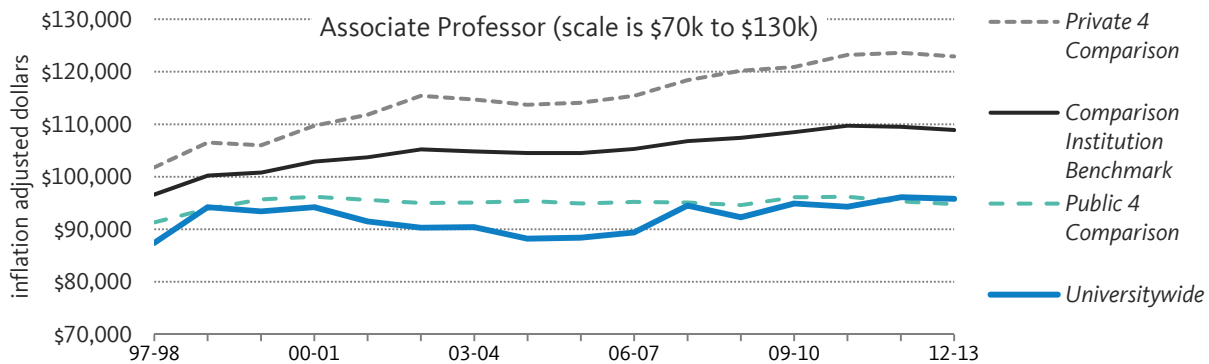
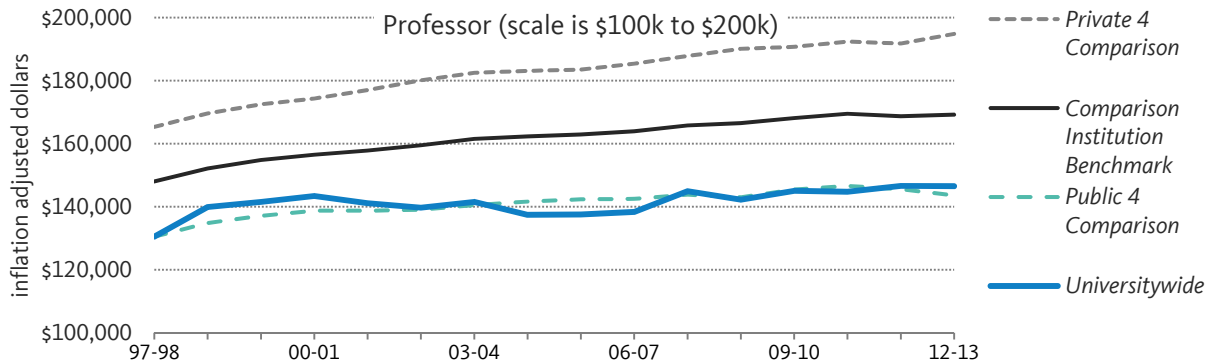
Source: UCOP Office of Academic Personnel and Program Administration<sup>1</sup>

<sup>1</sup> “Other” reasons include faculty whose appointments ended or who were discharged. The data shown are the average of the past four years. For example, the figure for 10–11 is the sum of departures from 07–08 to 10–11 divided by four.

## 6.3 ACADEMIC WORKFORCE COMPETITIVENESS

**UC faculty salaries are currently below the benchmark that UC has historically employed to assess competitiveness. This affects the University's efforts to recruit and retain high-quality faculty.**

### 6.3.1 Average faculty salaries, by rank UC and comparison institutions 1997–98 to 2012–13



Source: UC Corporate Personnel System, AAUP

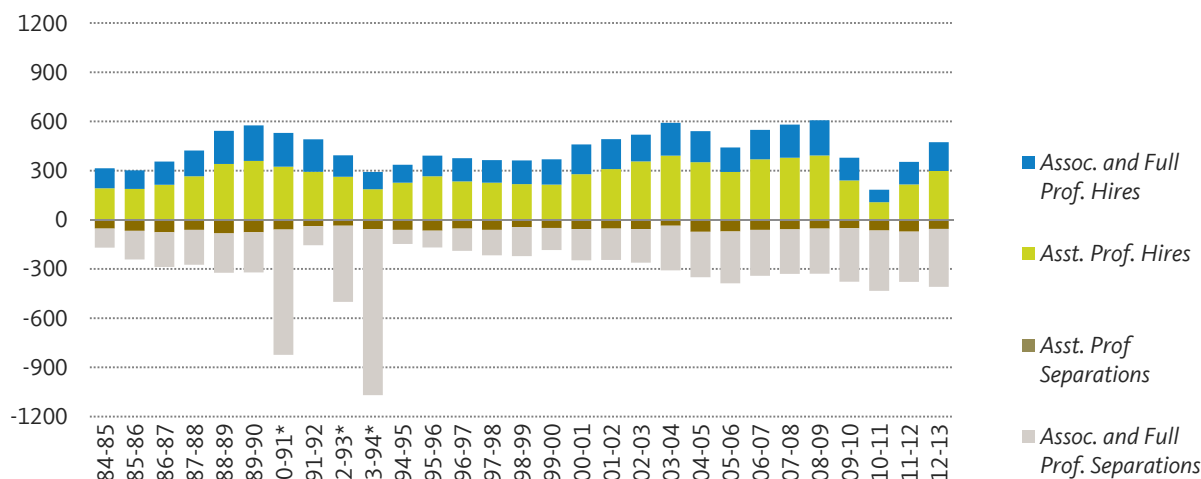
UC historically has used eight universities — four public and four private — against which to benchmark its faculty salaries. The benchmark is the midpoint between the averages of the public and private institutions. The four public institutions are Illinois, Michigan, University at Buffalo and

Virginia; the four private institutions are Harvard, MIT, Stanford and Yale. UC's faculty salaries fall significantly below those of the comparison four private institutions and are just keeping pace with the four public institutions.

## 6.4 ACADEMIC WORKFORCE RENEWAL

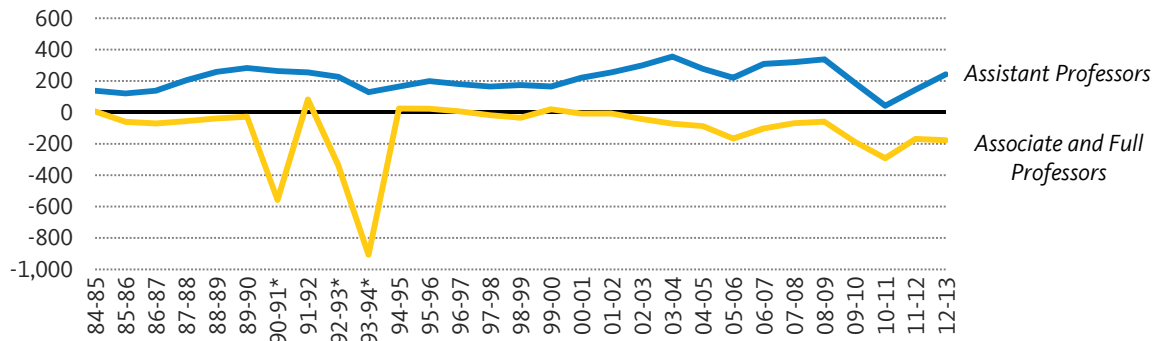
In the past few years, as a consequence of state budget cuts, hiring of new faculty has not kept pace with departures. As a result, the number of ladder-rank faculty has fallen.

### 6.4.1 New hires and separations of ladder-rank and equivalent faculty Universitywide 1984–85 to 2012–13



Source: UCOP Office of Academic Personnel and Program Administration<sup>1</sup>

### 6.4.2 Net change in ladder- and equivalent-rank faculty Universitywide 1984–85 to 2012–13



Faculty hiring decreased significantly from 2009 to 2011 in response to fiscal constraints. However, there was an uptick in new hires during 2011–12 and 2012–13. Since 2003–04, faculty separations

have exceeded 300 per year. At the same time, undergraduate enrollment has seen marked increases. One of the consequences of this imbalance is greater teaching workload for faculty.

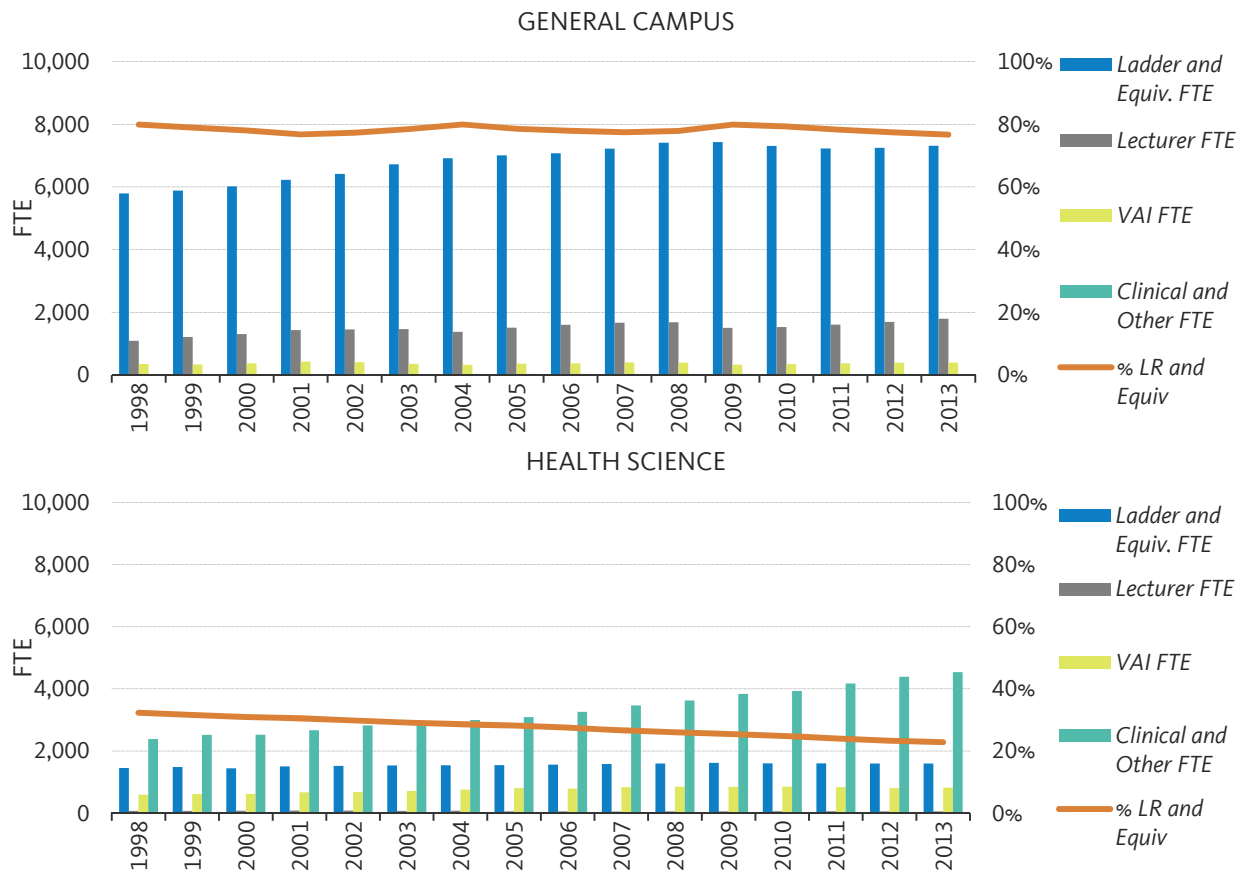
<sup>1</sup>Associate and full professors shown here are tenured faculty; assistant professors are nontenured tenure-track faculty. A very small number of lecturers with security of employment are included in the assistant category.

\*Years with Voluntary Early Retirement Incentive Program (VERIP).

## 6.4 ACADEMIC WORKFORCE RENEWAL

### Ladder-rank and equivalent faculty constituted 54 percent of UC FTE in fall 2013.

#### 6.4.3 Faculty workforce FTE Universitywide Fall 1998 to fall 2013



"VAI" are "Visitors, adjuncts and instructional assistants (non-students). Source: Corporate Personnel System October snapshots and UC DSS — Earned in October, paid through November.<sup>1</sup>

Since 2009, ladder- and equivalent-rank faculty numbers have declined from 9,037 to 8,939 in FTE as campuses reduced hiring to address budget shortfalls. Lecturer<sup>1</sup> titles tend to be more common in general campus departments. Lecturers increased by 61 percent in FTE from 1998 to 2013 (from 15 percent to 19 percent of the total general campus faculty FTE). "Visitors, adjuncts and instructional assistants" includes other types of faculty who do not have tenure or security of employment. Student assistants, such as teaching

assistants, are excluded. The "clinical and other faculty" category includes clinical faculty and professors in residence. Although there are exceptions, these faculty are generally employed at campuses with health science schools. They are mostly supported by non-state dollars, e.g., clinical revenues. This category has grown substantially in contrast to the decreases in ladder-rank and equivalent faculty.

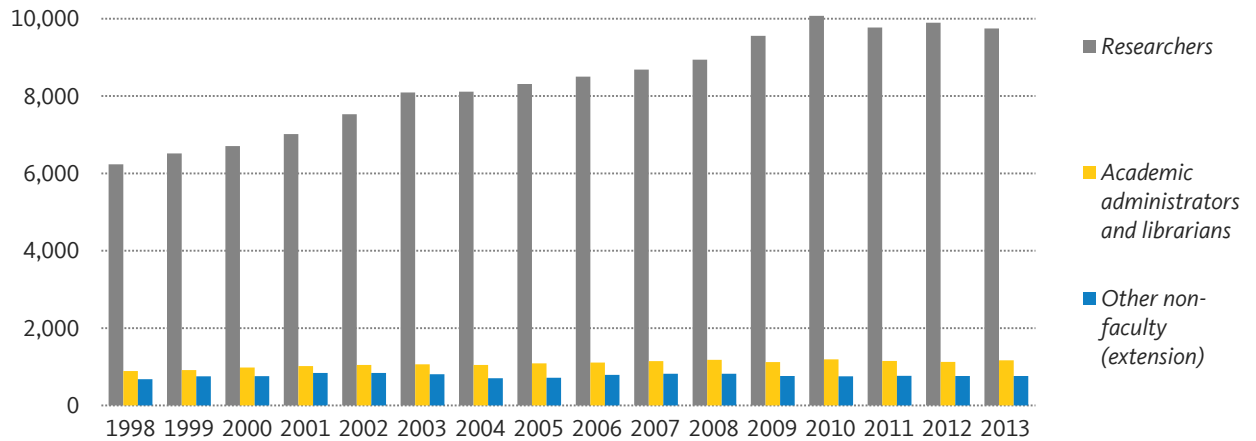
<sup>1</sup> Health Sciences includes FTE in departments of Medicine, Dentistry, Nursing, Optometry, Pharmacy, Public Health and Veterinary Medicine. General campus includes FTE in all other departments. Lecturers are also known as "Unit 18 Lecturers" – they are mostly part-time and most are eligible to be represented by a union ("Unit 18"). UC also employs "lecturers with security of employment" and "Lecturers with Potential Security of Employment", of which there are fewer than 200 systemwide. "Lecturers with security of employment" are members of the Academic Senate and they are included in the "ladder- and equivalent-rank faculty" category throughout this report.



## 6.4 ACADEMIC WORKFORCE RENEWAL

**With the exception of researchers, there has been relatively little change since 1998 in the number of non-faculty academic appointees at UC.**

### 6.4.4 Non-faculty academic workforce Universitywide Fall 1998 to fall 2013



Source: UC Corporate Personnel System

The increasing number of researchers shown on this page reflects continued growth in federal and other external funding for research, including special augmentations in 2010–11 made through the American Recovery and Reinvestment Act (ARRA).

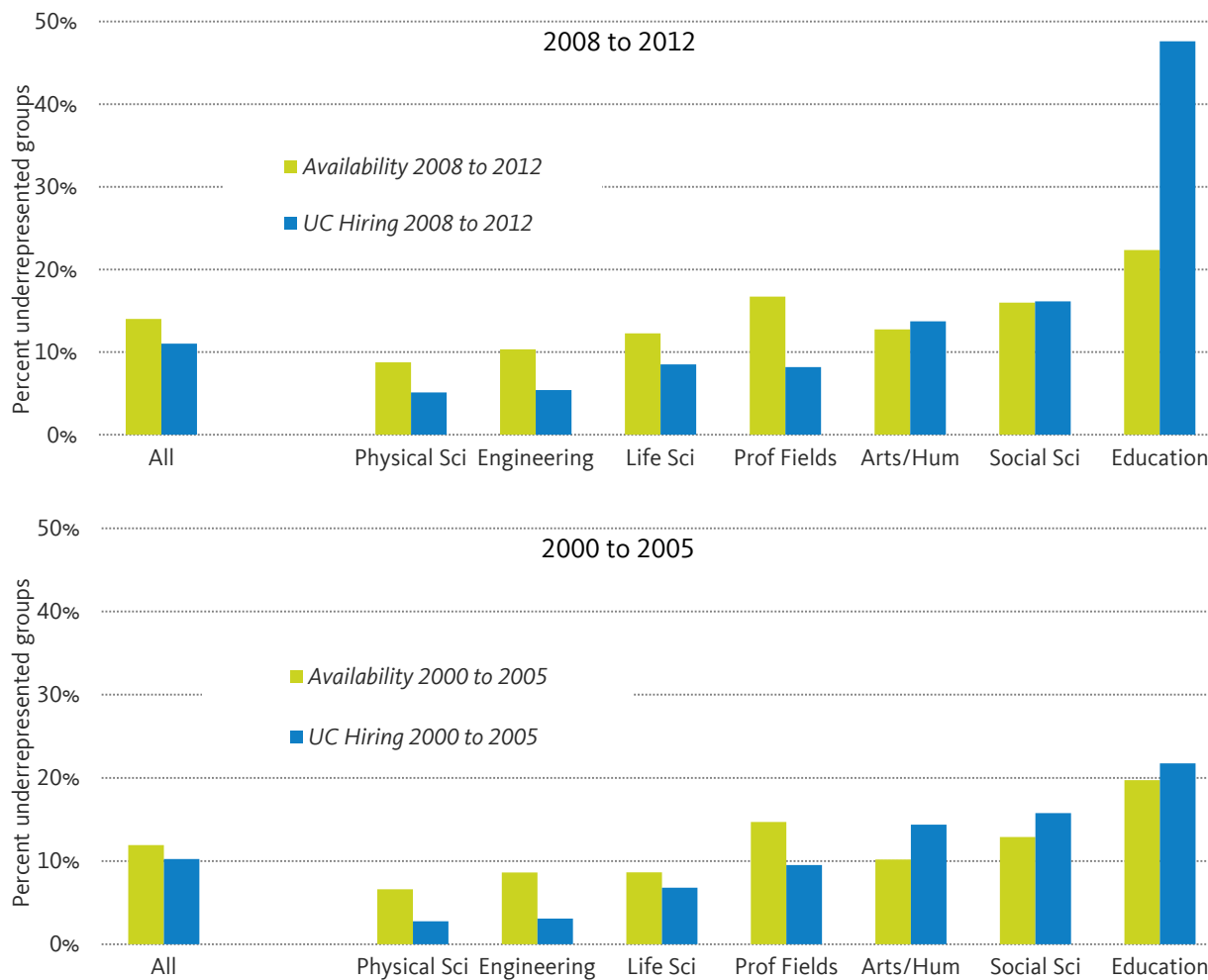


*Jagveer Singh, a staff member of the R.M. Bohart Museum of Entomology at UC Davis, talks with visiting school children about California insects.*

## 6.5 ACADEMIC WORKFORCE DIVERSITY

### The representation of minority scholars among UC hires continues to lag behind their representation among Ph.D. recipients.

**6.5.1** New assistant professors compared with national availability for underrepresented minorities, by discipline  
Universitywide  
2000 to 2005 and 2008 to 2012



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

The University is committed to building a more diverse faculty, one that is inclusive of underrepresented racial and ethnic populations in the U.S.

Between 2008 and 2012, underrepresented minorities accounted for 14 percent of the pool of nationwide doctoral degree recipients and 11 percent of UC's new assistant professors.

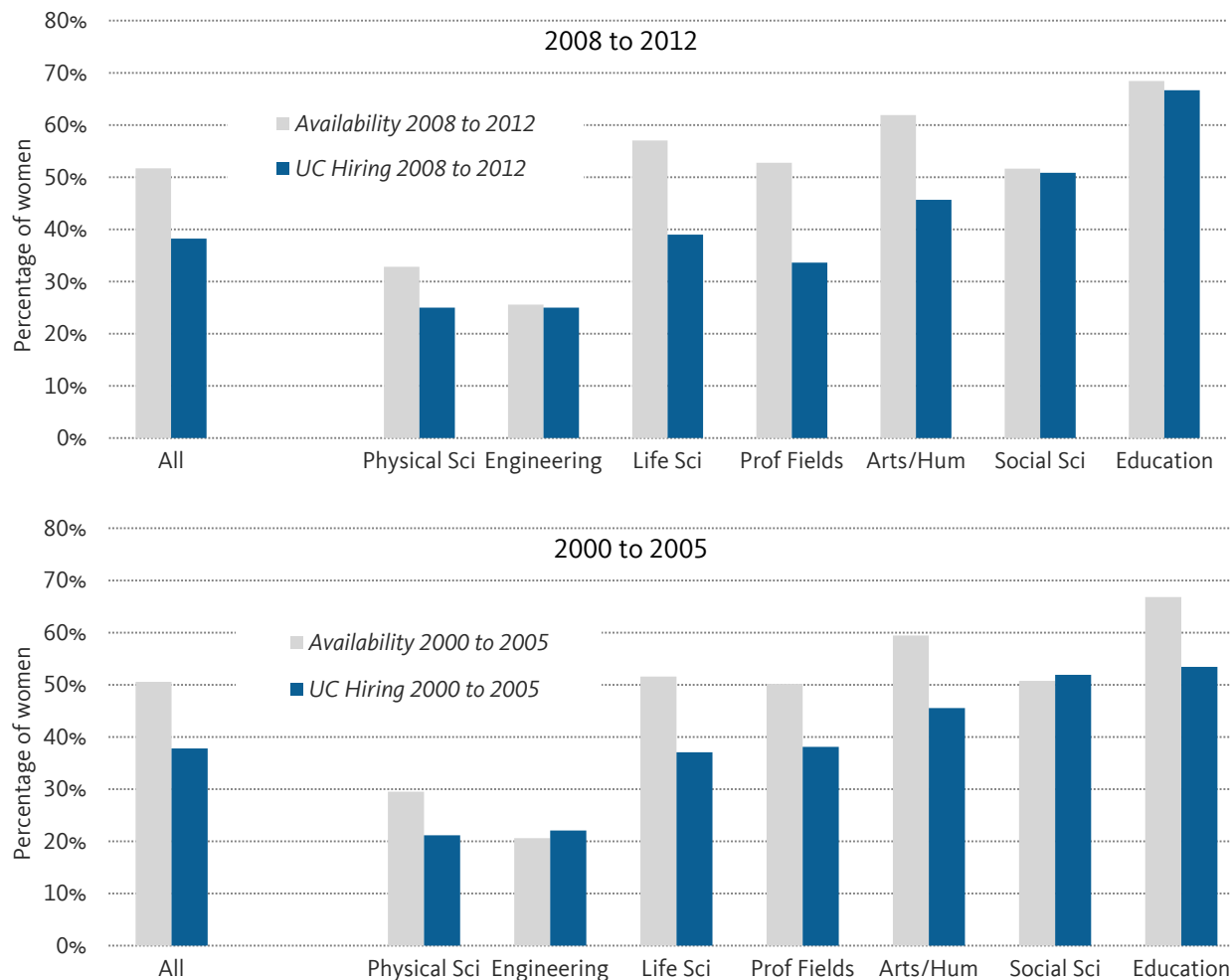
## 6.5 ACADEMIC WORKFORCE DIVERSITY

### UC's hiring of women faculty lags behind the national availability in every broad discipline group.

#### 6.5.2 New assistant professors compared with national availability, by gender and discipline

Universitywide

2000 to 2005 and 2008 to 2012



Source: UC Academic Personnel and Program Administration and Survey of Earned Doctorates<sup>1</sup>

Between 2008 and 2012, women constituted more than half of the nationwide pool of new doctoral degree recipients, but less than 40 percent of UC's new hires. At a time when the nation's pool of doctoral degree recipients is showing increasing numbers and percentages of women, outreach and recruitment efforts at UC are not generating faculty hires that are fully reflective of changes in national availability pools.

UC ADVANCE PAID, a program sponsored by UC Office of the President and the National Science Foundation (NSF), aims to recruit, retain and advance more women and underrepresented minority women faculty in the fields of science, technology, engineering and mathematics (STEM). For more information, visit [www.ucop.edu/ucadvance/index.html](http://www.ucop.edu/ucadvance/index.html).

<sup>1</sup> This analysis follows the campus practice required for federally mandated affirmative action plans; UC is required by Proposition 209 to satisfy federal reporting requirements in this area. See the appendix for additional details.

## Chapter 7. Staff

### Workforce demographics

Like all universities, UC has both academic and non-academic employees. The academic employees (teaching faculty, researchers, librarians, academic administrators, etc.) constitute about one-quarter of UC's workforce; non-academic employees (staff) constitute about three-quarters of the workforce. This chapter describes UC's non-academic workforce in demographic terms: size and structure, age distribution and compensation relative to market levels.

Reflecting growth in the size and complexity of the University, the number of UC staff has grown over the past nine years, by 11 percent at the general campuses and by 34 percent at the medical centers. As of fall 2013, UC employed 136,000 non-academic staff (or 100,000 FTE) across a wide range of occupational categories, including doctors, nurses and other health care staff; research administration and laboratory staff; student services staff; food and auxiliary services staff; maintenance and physical plant staff; and management and clerical staff.

Funding sources and the structure and composition of the staff workforce have changed significantly over the past decade. Hospital and health science funds, for example, contribute an increasingly large proportion of staff salaries; while general funds, which consist primarily of funds from the state of California, together with student fees and tuition, constitute a shrinking proportion. Growth in staff personnel has been driven primarily by expansion in teaching hospitals, with additional staff growth due to increases in research activity and auxiliary enterprises, such as residence halls and food service. Consistent with an increase in UC's complexity and the dramatic proliferation of technology, the proportion of highly skilled professional staff also has increased — a shift that aligns with national trends.

### Workforce strategies related to staff

In 2010, UCOP Human Resources created a Human Resources Strategic Plan directed towards staff

(non-academic employees). The areas of focus are employee relations, labor relations, compensation and benefits. The University is striving to construct programs that provide value and engage its employees. In the systemwide staff engagement survey, offering competitive compensation was highlighted. Recognizing that quality personnel are essential for maintaining excellence, one of the University's foremost concerns has been to achieve market-competitive total compensation for its employees. The goal of offering competitive compensation was adopted by the Regents in 2005 as part of a ten-year plan to bring compensation and benefits to market levels.

(<http://regents.universityofcalifornia.edu/minutes/2005/fin905.pdf>) Although the University was able to fund staff salary increases in fiscal years 2005 to 2007 and in 2011, 2013 and 2014, implementation of the Regents' broader plan to achieve market-comparable pay for staff was delayed by the 2007-09 recession and the state fiscal crisis in 2012. A new area of emphasis for UC is Talent Management, a new department focused on hiring, development, deployment and retention.

### Looking forward — staff renewal challenges

Inconsistencies in delivering an annual salary program have put pressures on UC's competitive position in various employment markets. While in recent years the frequency of annual increase programs has improved, UC is still experiencing the effects of past years where an increase program could not be funded. These challenges are likely to increase, particularly as the economy recovers and as other educational institutions, as well as non-higher education employers, are in a position to recruit away UC's top performers. The staff turnover rate (which, at 8.9 percent in 2011-12, was near its lowest level in a decade) is also expected to increase as the economic recession ends and employment opportunities in California improve. Additionally, more than one-third of UC staff is age 50 or older and will reach retirement age within the coming decade. This too will add to the talent management and staff challenges facing the University and its multi-generational workforce.

## For more information

**Statistical Summary of Students and Staff:**  
[www.ucop.edu/ucophome/uwnews/stat/](http://www.ucop.edu/ucophome/uwnews/stat/)

**UC's Strategic Plan:**

[http://ucop.edu/human-resources/\\_files/hr-strategic-plan.pdf](http://ucop.edu/human-resources/_files/hr-strategic-plan.pdf)

**Staff Workforce Profile:**

[http://ucop.edu/institutional-research/\\_files/workforce-profiles/workforce-profile-2012.pdf](http://ucop.edu/institutional-research/_files/workforce-profiles/workforce-profile-2012.pdf)

**Academic and Non-Academic Personnel Growth  
FY 1997–98 to FY 2011–12**

[www.ucop.edu/institutional-research/\\_files/academic-non-academic-personnel-growth.pdf](http://www.ucop.edu/institutional-research/_files/academic-non-academic-personnel-growth.pdf)

**UC Regents Diversity Policy, 2007:**

<http://regents.universityofcalifornia.edu/governance/policies/4400.html>

**Staff Engagement Survey Results:**

[www.ucop.edu/staff-assembly/resources/2012-staff-engagement-survey-results.html](http://www.ucop.edu/staff-assembly/resources/2012-staff-engagement-survey-results.html)

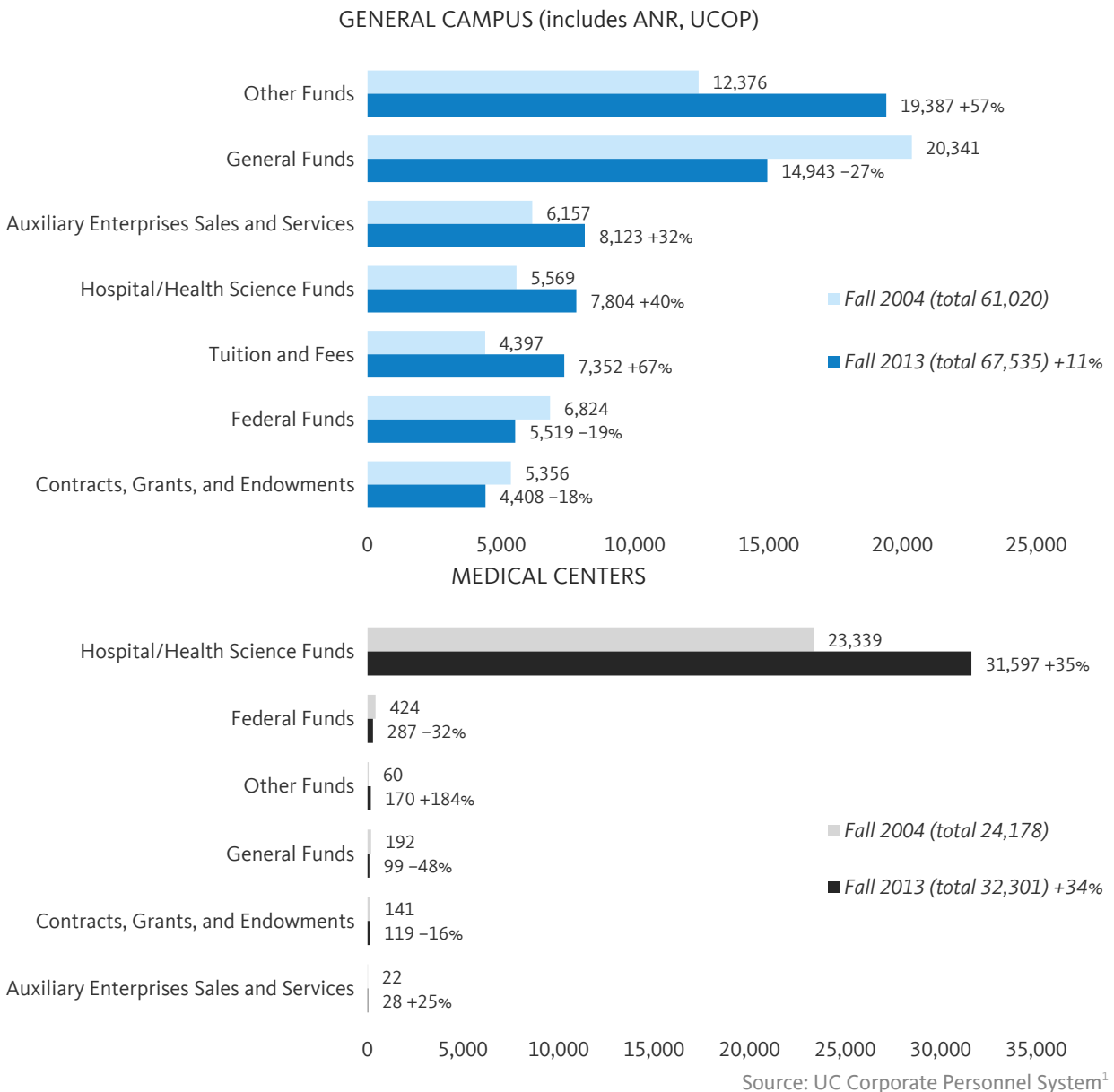


*Chad Justice, left, and Tom Kohnke ready a geotechnical centrifuge at the UC Davis Network for Earthquake Engineering Simulation site. The centrifuge is the largest in the U.S. and among the largest in the world.*

## 7.1 STAFF WORKFORCE

Since 2004, the number of staff supported by general funds has fallen as state funding for the University has decreased. At the same time, staff funded by hospital and health science sources has increased.

**7.1** Staff FTE (full-time-equivalent) workforce, by fund source  
General Campus and Medical Centers  
Fall 2004 and 2013



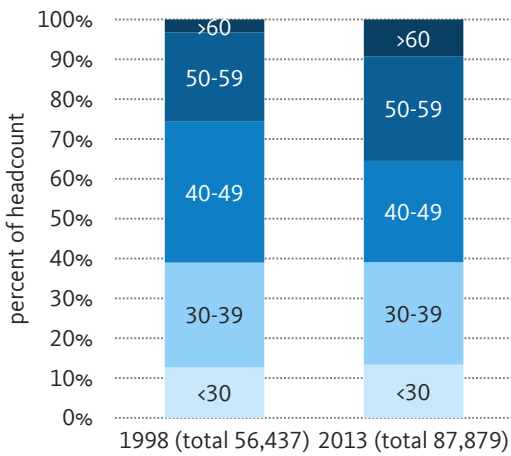
<sup>1</sup> FTE numbers include student employees. Individual staff members may be split-funded on different sources. These data reflect the funding for staff base pay FTE (with 100 percent FTE corresponding to a regular 40-hour workweek). Excludes Lawrence Berkeley National Laboratory, Hastings School of Law and Associated Students UCLA. "Other Funds" are restricted gifts, endowment funds income and other educational activity. Other educational activity refers to funds generated and paid from activities related to dental clinics, neuropsychiatric hospitals and medical/dental compensation plans.



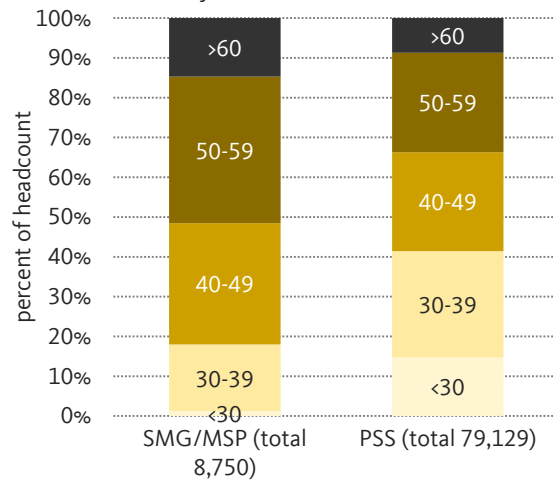
## 7.2 STAFF RENEWAL

**Overall, the average age of the UC staff career workforce was higher in 2013 than in 1998. In 1998, 26 percent of career staff were age 50 or older; in 2013, 36 percent of career staff were age 50 or older.**

**7.2.1** Age distribution of career staff  
Universitywide  
Fall 1998 and 2013



**7.2.2** Age distribution of career staff, by personnel program  
Universitywide, Fall 2013



Source: UC Corporate Personnel System<sup>1</sup>

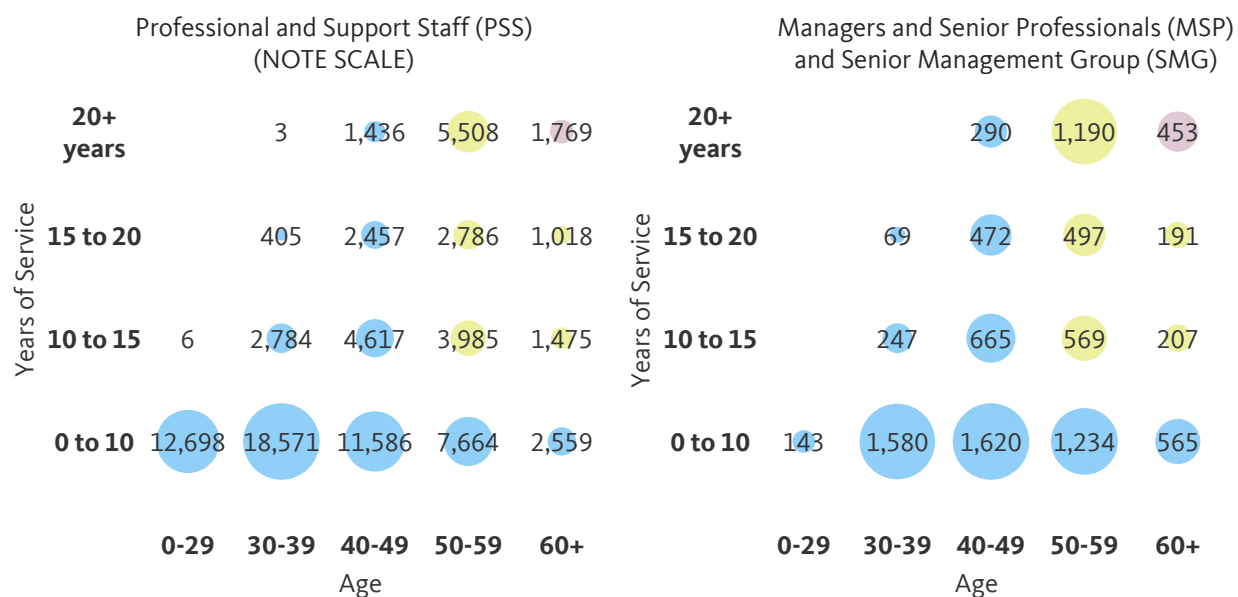
The Senior Management Group (SMG) and the Managers and Senior Professionals (MSP) group have higher average ages because positions in these personnel programs generally entail a higher level of experience and responsibility. The Professional and Support Staff (PSS) group contains a lower proportion of senior staff personnel. Within the PSS group, there is no significant difference in age distribution between union-represented and non-represented staff.

<sup>1</sup> See notes for Indicator 7.1.1 for more details.

## 7.2 STAFF RENEWAL

### Less than 5 percent of staff are eligible to retire with maximum benefits.

#### 7.2.3 UC retirement program active career staff headcount, by age and years of service (YOS) Universitywide (excludes Lawrence Berkeley National Laboratory) Fall 2013



Source: UC Retirement System

#### LEGEND

**BLUE** Not eligible to retire and/or not eligible to retire with health benefits (under age 50 and/or <10 YOS)

**GREEN** Eligible to retire with reduced age factor and/or less than maximum UC retiree health benefit contribution (age 50-59, 10-19 YOS)

**RED** Eligible to retire with maximum age factor and maximum UC retiree health benefit contribution (age 60+, 20+ YOS)

UC Retirement Plan benefits are designed so that highest benefits commence at age 60. Actual benefits depend on total years of service and highest average compensation. To be eligible for the maximum UC contribution for retiree health benefits, a retiring employee must have 20 years of service.

UC monitors the number and proportion of staff nearing or at retirement age because replacing experienced staff is a critical component of managing staff resources. About 2 percent of PSS

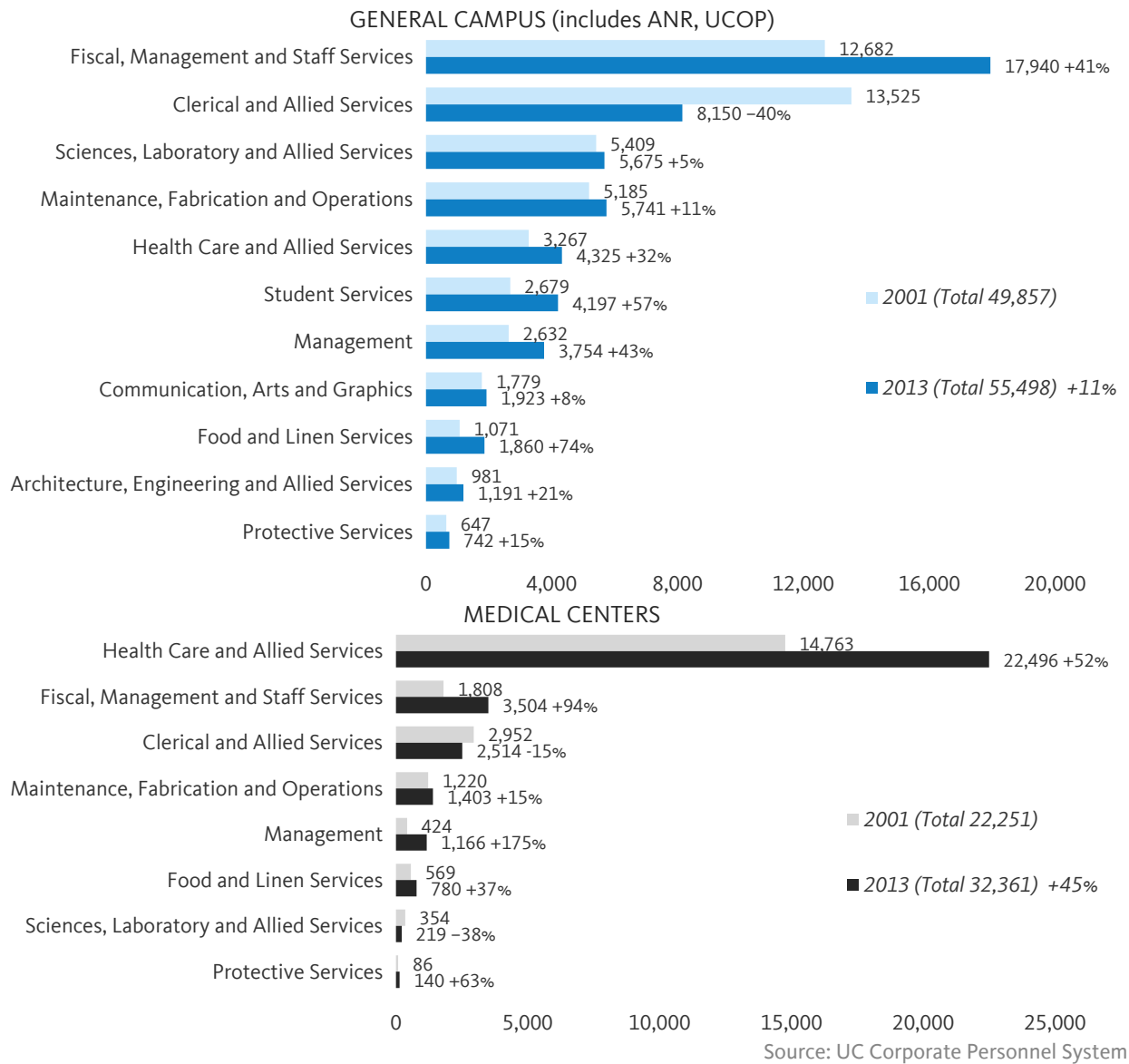
staff and almost 5 percent of management staff are age 60 or above with 20 or more years of service. This is somewhat higher than the ratios of nine years ago.

The proportion of staff that is eligible to retire but with less than the maximum age factor and/or eligibility for UC retiree health benefit contribution has grown slightly since 2004 (data online). It appears that the 2007-2009 recession did not change employee retirement behavior significantly.

### 7.3 STAFF OCCUPATIONS

Over the past 11 years, changing technology has led to a need for more staff with higher-level skills and less staff with lower-level skills.

#### 7.3.1 Career staff headcount, by occupation group Universitywide Fall 2001 and 2013



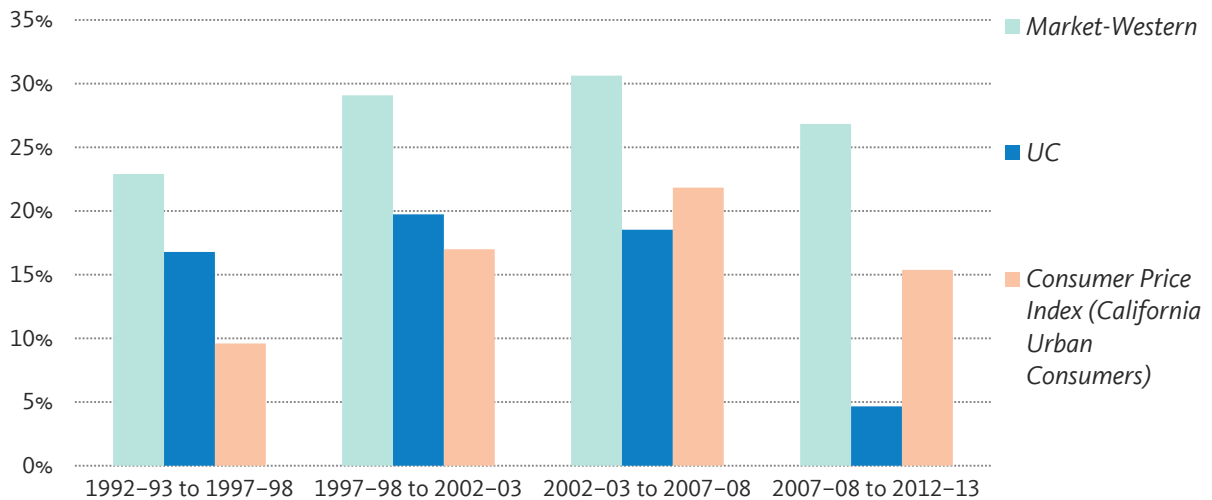
Technological advances have had a marked effect on staffing needs as computers increasingly perform tasks once requiring significant time and manual effort. This has led to a decrease in clerical staffing needs. Technology also has created a need for more staff with higher-level skills, such as information technology expertise and fiscal management experience.

The number of health care employees has grown faster than any other group, as the UC medical centers have grown and expanded. Health care staff in the medical centers are funded from revenues from patient services.

## 7.4 STAFF SALARY GROWTH

### Growth rates for staff salaries are below market rates in the “Western region” benchmark.

#### 7.4.1 UC base salary increases compared with inflation and market averages Universitywide 1992–93 to 2012–13



Source: UC Budget Office and CA Department of Finance<sup>1</sup>

The growth rate of staff salaries at UC is below the “Western U.S. Region” benchmark set by the *WorldatWork Salary Budget Survey* conducted by the WorldatWork Human Resources Association.

The chart above presents comparative data for cash compensation only.

In recent years, salary increases have generally kept pace with inflation but have not grown as fast as market salaries. Going forward, UC employees will be contributing more to health care costs and to the UC retirement system, which could further erode the competitiveness of UC compensation compared with the regional labor market.

<sup>1</sup>Excludes medical centers.



*The UCLA film archive.*



## Chapter 8. Diversity

### Goals

The University of California is dedicated to fostering a caring university community that provides leadership for constructive participation in a diverse, multicultural world. The University has a long history of supporting initiatives that foster an inclusive living, learning and working environment.

In 2014, UC issued the following statement titled *An Ethos of Respect and Inclusion*:

*“We seek to create and nurture in every corner of the University — in lecture halls and laboratories, in dormitories and dining halls, in work cubicles and maintenance shops, in our hospitals and other outposts of community engagement, in the public commons and the virtual meeting grounds of social media — an ethos of respect for others and inclusion of all.*

*Such an ethos need not undermine the spirit of free speech and acceptance of differing ideas and attitudes that have long been the University’s hallmark. Rather, respect and inclusion form the essential bedrock on which to build a community that cherishes and benefits from robust, constructive discourse and daily interactions among all its members.*

*An ethos of respect and inclusion won’t be achieved by any single pledge or policy handed down from leadership. It requires the constant attention and the enduring commitment of the entire UC community — every student, every professor, every administrator, every staff member, everybody, every day.”*

### Evaluating diversity and campus climate

UC’s assessment of diversity and campus climate can be evaluated a variety of ways: current demographic characteristics and trends of its students, faculty and staff; policies and activities that promote equity and inclusion; and survey data that reveal perceptions of campus climate, respect, and incidents of exclusionary behavior.

To that end, UC conducted a campus climate survey results across 13 locations: the ten UC campuses, Lawrence Berkeley National Laboratory, Agricultural and Natural Resources, and UC Office of the President. The survey, conducted by Rankin and Associates Consulting, gathered a wide range of data related to institutional climate, inclusion and work-life issues. The survey complemented many current and ongoing efforts to evaluate and improve climate.

On the UC campus climate survey website (<http://campusclimate.ucop.edu>), the UC system and each location provide information on recent efforts or initiatives aimed at promoting equity and inclusion.

### Assessing UC’s diversity

The indicators in this chapter present an overview of trends for incoming freshmen and transfer students, along with trends in graduate academic and professional programs. This information feeds into a broad overview of the University community — students, faculty and staff — by race/ethnicity and gender.

Trend data illustrate growing proportions of underrepresented and international students in the undergraduate population, more so for freshman than transfer entrants. Graduate academic students show slow and steady growth in underrepresented populations across disciplines, with growth in international students limited to physical science and engineering. Female students constitute the majority in all disciplines except for physical science and engineering. Graduate professional programs show similar growth patterns for underrepresented and international students, with variation by discipline. Education has a larger proportion of underrepresented students, and business and other professional programs have growing international populations. The proportion of female students is trending slightly downward but remains around 50 percent or higher for all disciplines except business.



For staff, the proportions of non-whites and females in Management & Senior Professional (MSP) and Senior Management Group (SMG) positions are smaller than their proportions in Professional & Support Staff (PSS) positions. The proportion of females among ladder-rank faculty is lower than proportions among other academic employee groupings.

### Surveying populations about campus climate

This chapter introduces two types of survey data: responses to the UC Undergraduate Experience Survey (UCUES), conducted every two years to all undergraduates; and the UC Campus Climate Survey, administered between 2012 and 2013 to all populations and across all locations.

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

UC Campus Climate Survey findings tended to be positive but also highlighted areas for improvement. Overall, 78 percent feel comfortable

or very comfortable with campus climate, but 24 percent reported experiencing exclusionary behavior (9 percent of whom indicated it affected their ability to work or learn).

### Looking forward

Each location is delving deeply into its campus climate survey data. The information will be presented to local groups and associations to elicit ideas for improvement. Based on this data and local feedback, each location head is expected to develop action plans and strategic initiatives to improve the overall campus climate. This information will be shared at a future Regents' meeting.

### For more information

The UC Campus Climate survey website, including the systemwide and each location report, can be found at <http://campusclimate.ucop.edu/>.

Also see the March 2014 *UC Campus Climate Regents Item* at <http://regents.universityofcalifornia.edu/regmeet/mar14/e2.pdf>.

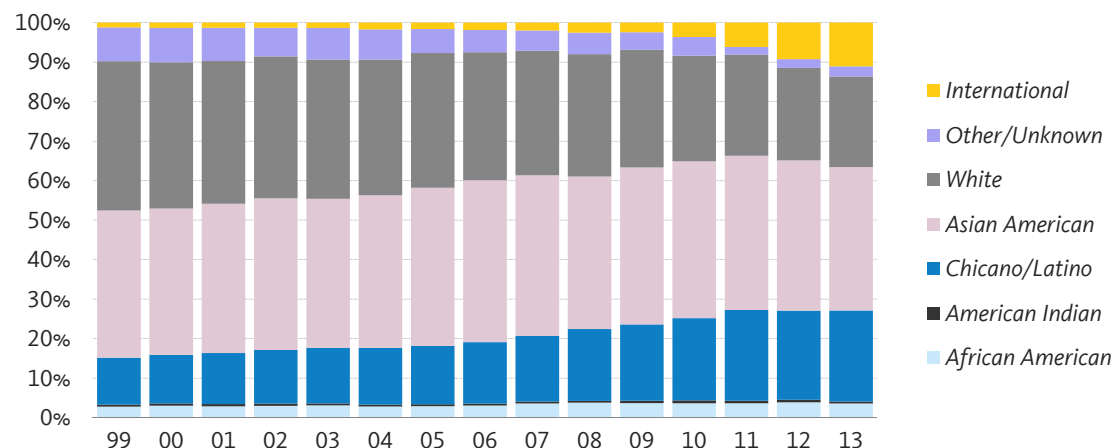
UC's response to the Moreno Report can be found at <http://www.ucop.edu/moreno-report/>.

## 8.1 UNDERGRADUATE DIVERSITY TRENDS

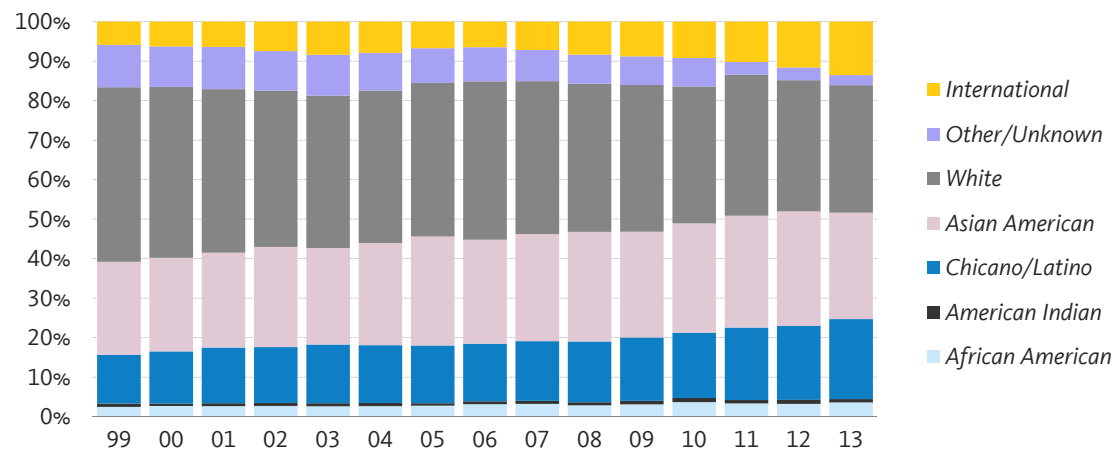
Each year, UC enrolls a growing number of undergraduates from underrepresented groups (African American, American Indian or Chicano/Latino); entering freshmen are more likely to be from an underrepresented group than entering transfer students.

### 8.1.1 Racial/ethnic distribution of new undergraduates Universitywide Fall 1999 to fall 2013

#### New freshmen



#### New transfer students



Source: UC Corporate Student System

A number of factors may help explain why entering freshmen are more diverse than entering transfer students. Among the population of high school graduates sufficiently prepared to qualify for UC, white students are more likely to be from high-income families and to choose private and out-of-state colleges, while Asian American and Chicano/Latino students are more likely to choose

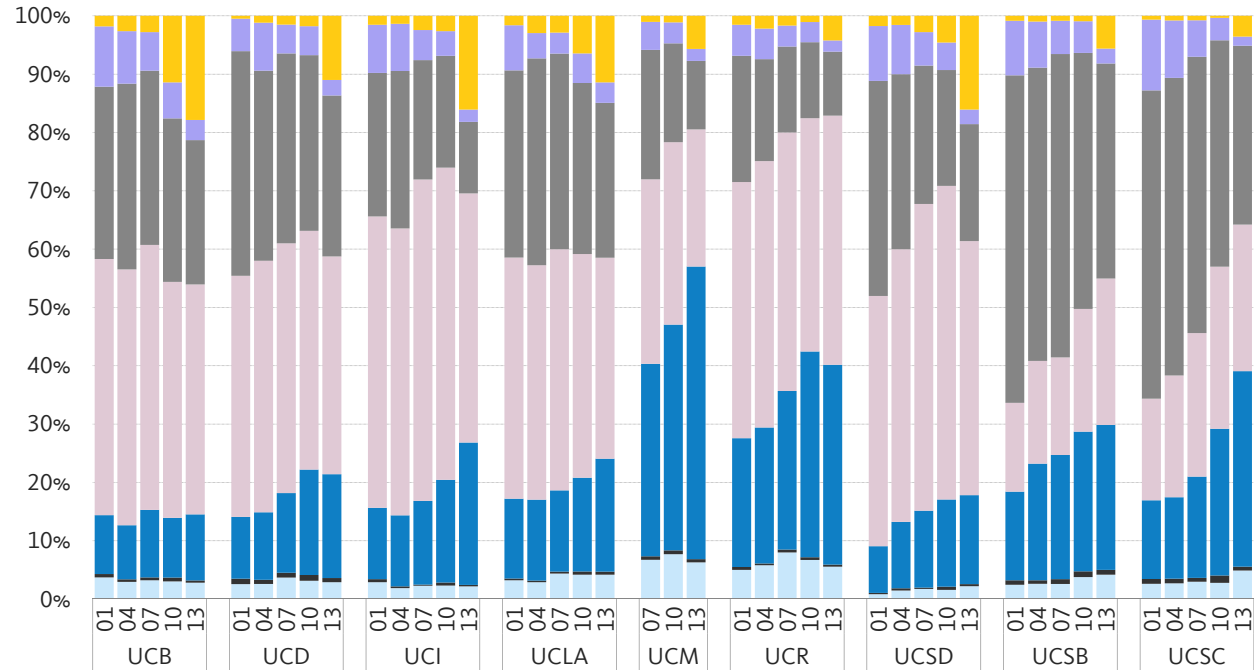
UC. Part of the Transfer Action Team initiative's charge is to look for opportunities to expand outreach to California community colleges with greater diversity of transfer-eligible students who currently do not apply to UC.

As shown on the next page, campuses vary in their racial/ethnic diversity.

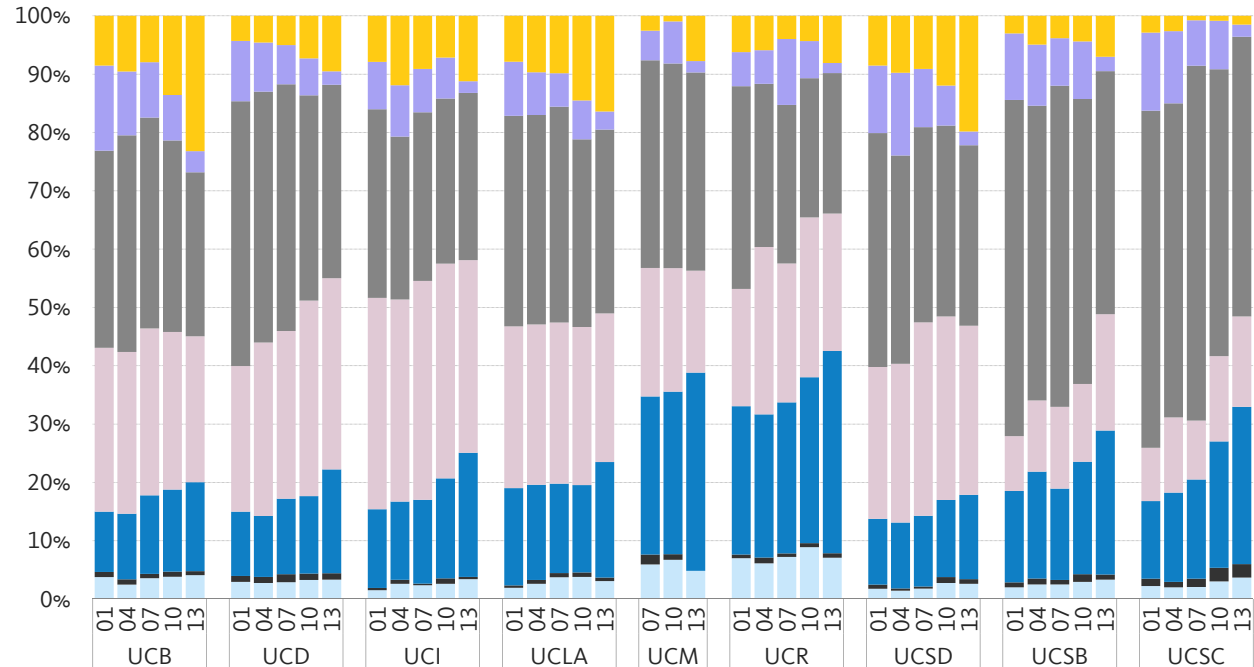
## 8.1 UNDERGRADUATE DIVERSITY TRENDS

Racial/ethnic distribution of new undergraduates  
 UC campuses  
 Fall 2001, 2004, 2007, 2010 and 2013

### New freshmen



### New transfer students

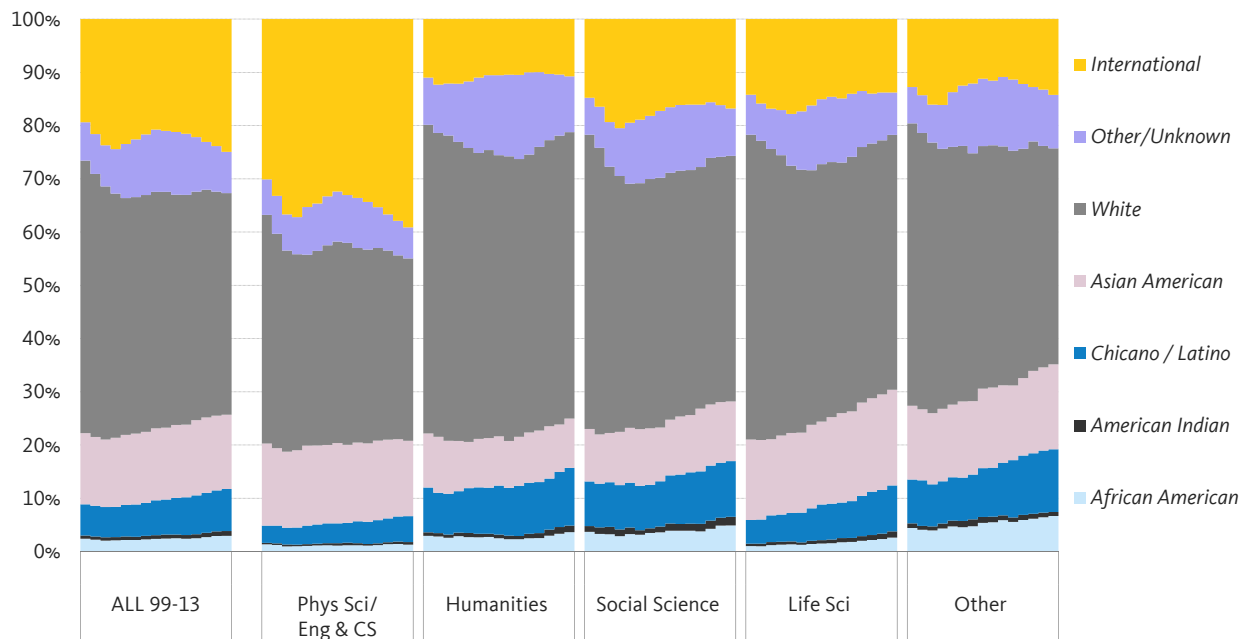


Source: UC Corporate Student System

## 8.2 GRADUATE STUDENT DIVERSITY TRENDS

### UC is making slow but steady progress in diversifying the racial/ethnic make-up of its graduate academic students.

#### 8.2.1 Racial/ethnic distribution of graduate academic students, by discipline Universitywide Fall 1999 to fall 2013



Source: UC Corporate Student System<sup>1</sup>

Enrollment of underrepresented race/ethnic groups (African American, American Indian and Chicano/Latino) in UC's graduate academic programs has grown over the past decade. In 2011–12, in most areas, UC awarded academic doctoral degrees to underrepresented racial/ethnic groups at greater percentage rates than did its peers. In areas where UC didn't lead, it awarded at a percentage rate equal to its peers.

#### Proportion of underrepresented racial/ethnic groups receiving academic doctoral degrees

2011–12	Other AAU		AAU
	UC	Public	Private
Social Sciences	15%	9%	9%
Arts & Humanities	13%	8%	9%
Life Sciences	8%	6%	8%
Physical Sciences	6%	4%	4%
Engineering & CS	5%	5%	5%

Source: IPEDS

UC's graduate programs draw students from across the nation and around the world, including its own undergraduate students. Because of this, UC's efforts to diversify its undergraduate students can also help to diversify its graduate academic population.

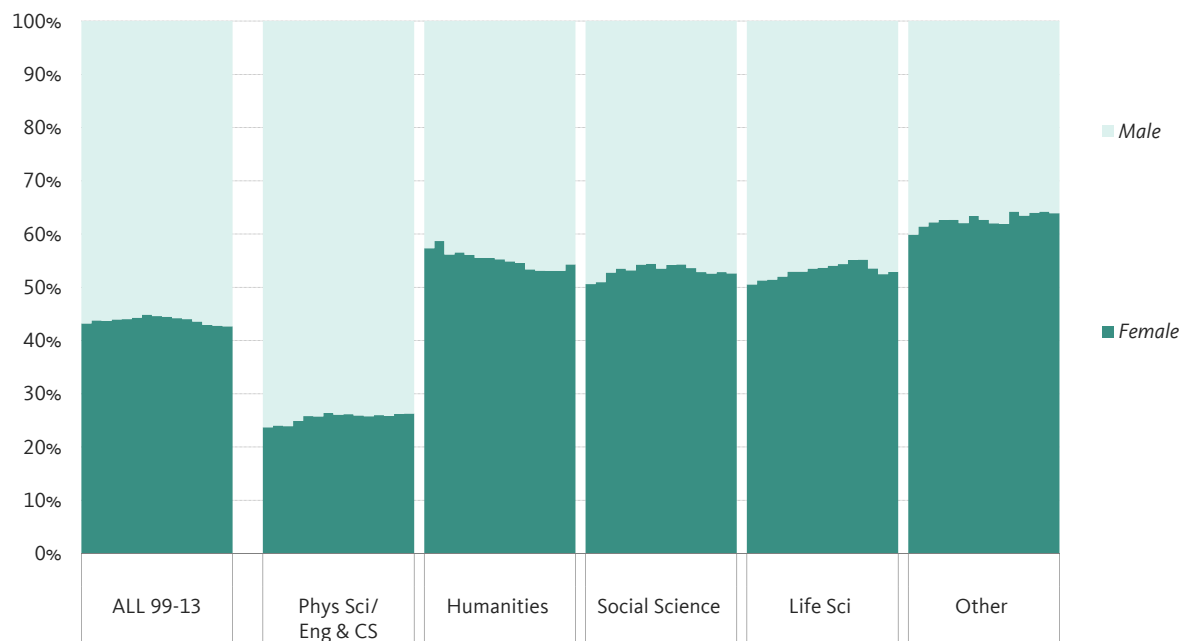
Because recent Ph.D.s constitute the pool for new faculty, a critical means for increasing the diversity of the faculty is to increase the diversity of the pool of doctoral degree recipients.

<sup>1</sup> "Other" disciplines represent about 12 percent of degrees awarded and include interdisciplinary areas (3 percent), academic degrees in professional fields such as a Ph.D. in education (4 percent) or health sciences (3 percent) and miscellaneous areas such as criminology.

## 8.2 GRADUATE STUDENT DIVERSITY TRENDS

**Overall, 43 percent of UC's graduate academic students are women, compared with 53 percent of its undergraduates.**

### 8.2.2 Gender distribution of graduate academic students, by discipline Universitywide Fall 1999 to fall 2013



Source: UC Corporate Student System<sup>1</sup>

The proportion of graduate academic students who are women varies by discipline. Half or more of the graduate academic students in the life sciences, social sciences and humanities are women, compared with about one-quarter in the physical sciences, engineering and computer science.

Overall, UC has not made much progress over the last 10 years in increasing the proportion of women in graduate academic programs. The proportion of degree recipients who are women by broad discipline group is comparable to UC's AAU peers.

### Proportion of women receiving academic doctoral degrees, 2011–12

	UC	Other AAU Public	AAU Private
Life Sciences	58%	55%	56%
Social Sciences	54%	57%	55%
Arts & Humanities	53%	55%	57%
Physical Sciences	31%	35%	33%
Engineering & CS	24%	22%	25%

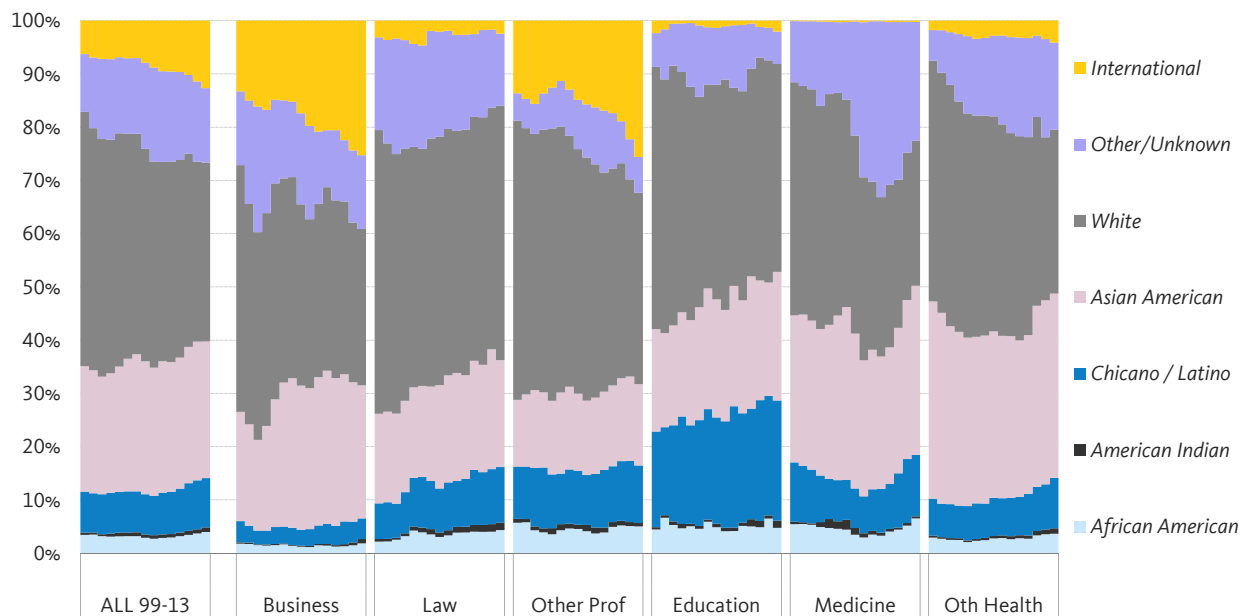
Source: IPEDS

<sup>1</sup> "Other" disciplines include interdisciplinary areas, miscellaneous fields such as criminology and academic degrees in professional fields such as a Ph.D. in business or law.

## 8.2 GRADUATE STUDENT DIVERSITY TRENDS

The proportion of students from underrepresented racial/ethnic groups enrolled in UC's professional degree programs varies widely — lowest in business and highest in education.

### 8.2.3 Racial/ethnic distribution of graduate professional degree students, by discipline Universitywide Fall 1999 to fall 2013



Source: UC Corporate Student System<sup>1</sup>

Overall, students from underrepresented groups constituted 14 percent of all professional degree students in fall 2013 compared with 12 percent in fall 1999.

UC awards a greater share of its education and other health science professional degrees to underrepresented students compared with its AAU peers, but a smaller share of its business degrees.

#### Proportion of underrepresented students receiving professional degrees, 2011–12

	UC	Other AAU Public	AAU Private
Education	23%	11%	18%
Law	14%	12%	14%
Other Health Sci	14%	9%	11%
Medicine	12%	10%	13%
Business	5%	8%	8%

Source: IPEDS

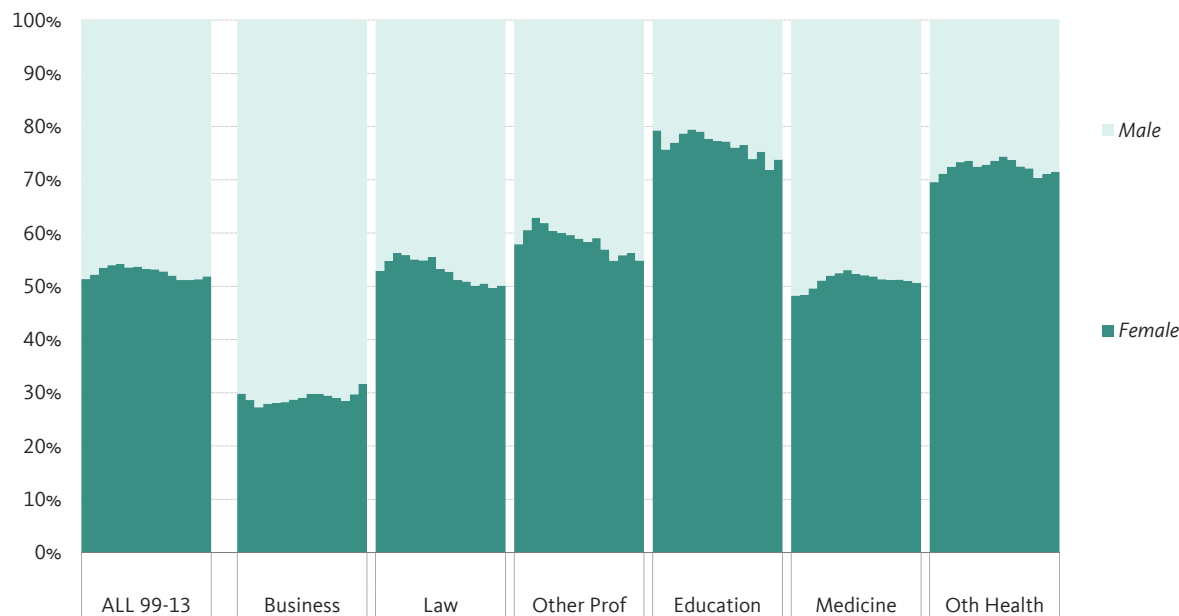
<sup>1</sup> "Other Health" includes dentistry, nursing, optometry, pharmacy, public health and veterinary medicine; "Other Professional" includes programs such as architecture, library and information science, public policy and social welfare, and other small programs. Medical residents are not included.



## 8.2 GRADUATE STUDENT DIVERSITY TRENDS

### The proportion of women enrolled in UC’s professional degree programs varies widely and is trending somewhat downward in nearly all fields.

#### 8.2.4 Gender distribution of graduate professional degree students, by discipline Universitywide Fall 1999 to fall 2013



Source: UC Corporate Student System<sup>1</sup>

The proportion of women enrolled in UC’s professional degree programs has trended downward slightly since 2003.

As shown in the table to the right, UC graduated roughly the same proportion of women in professional degree programs as the comparison groups — somewhat higher in law and non-medical health sciences and somewhat lower in business.

#### Proportion of women receiving professional degrees, 2011–12

	UC	Other AAU Public	AAU Private
Education	76%	74%	76%
Other Health Sci	73%	72%	73%
Medicine	51%	50%	49%
Law	49%	45%	45%
Business	29%	36%	33%

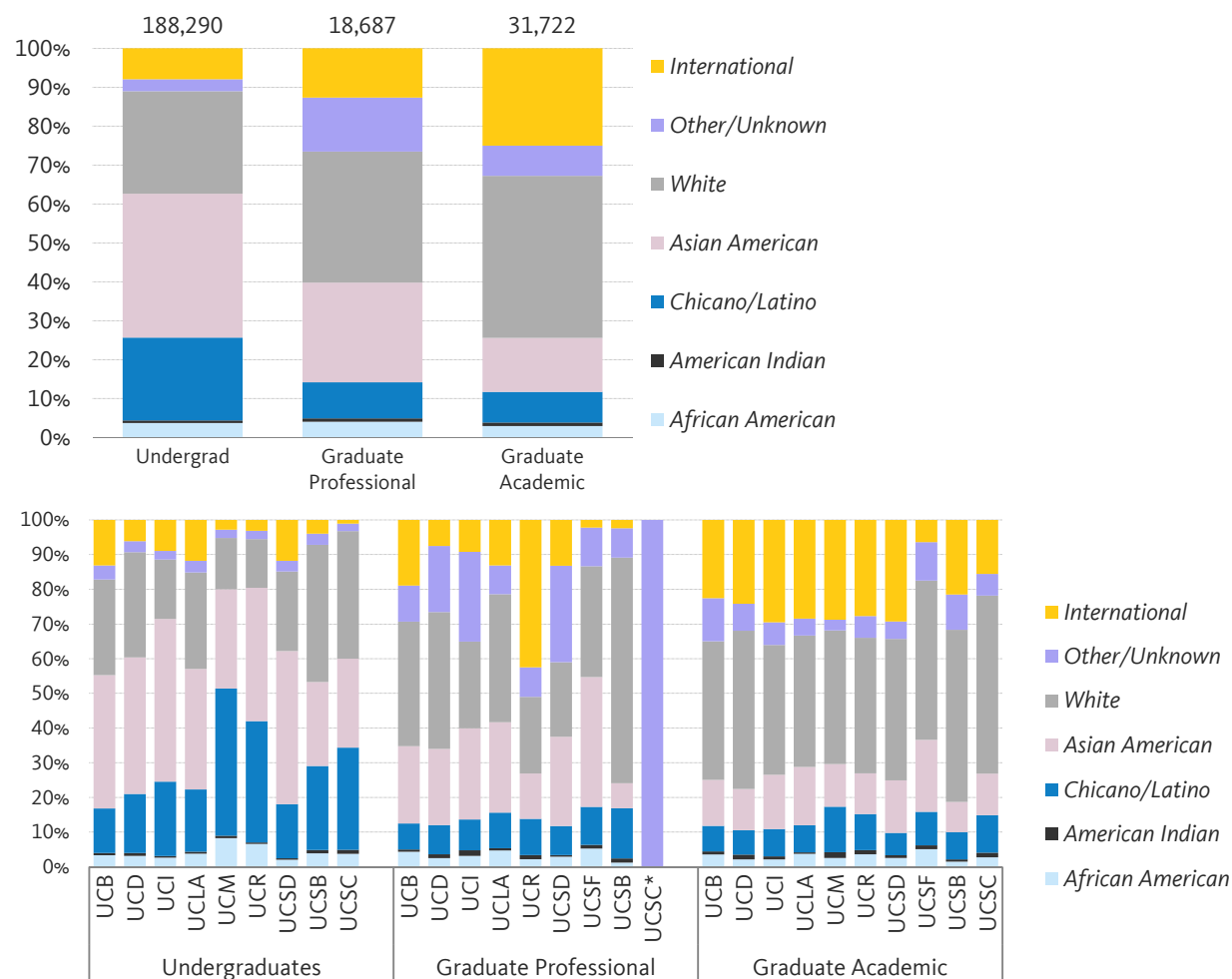
Source: IPEDS

<sup>1</sup> “Other Health” includes dentistry, nursing, optometry, pharmacy, public health and veterinary medicine; “Other Disciplines” include programs such as architecture, library and information science, public policy and social welfare.

### 8.3 DIVERSITY OF THE UNIVERSITY COMMUNITY

**Undergraduates have the highest proportion of underrepresented students, with great variation by campus. Graduate professional and academic populations are comparable for underrepresented groups but vary for international students.**

#### 8.3.1 Racial/ethnic distribution of students Universitywide and by campus Fall 2013



Source: UC Corporate Student System

\*Not shown due to small numbers. UC Merced does not have any graduate professional programs at this time. Undergraduates include approximately 300 postbaccalaureate teaching credential students.

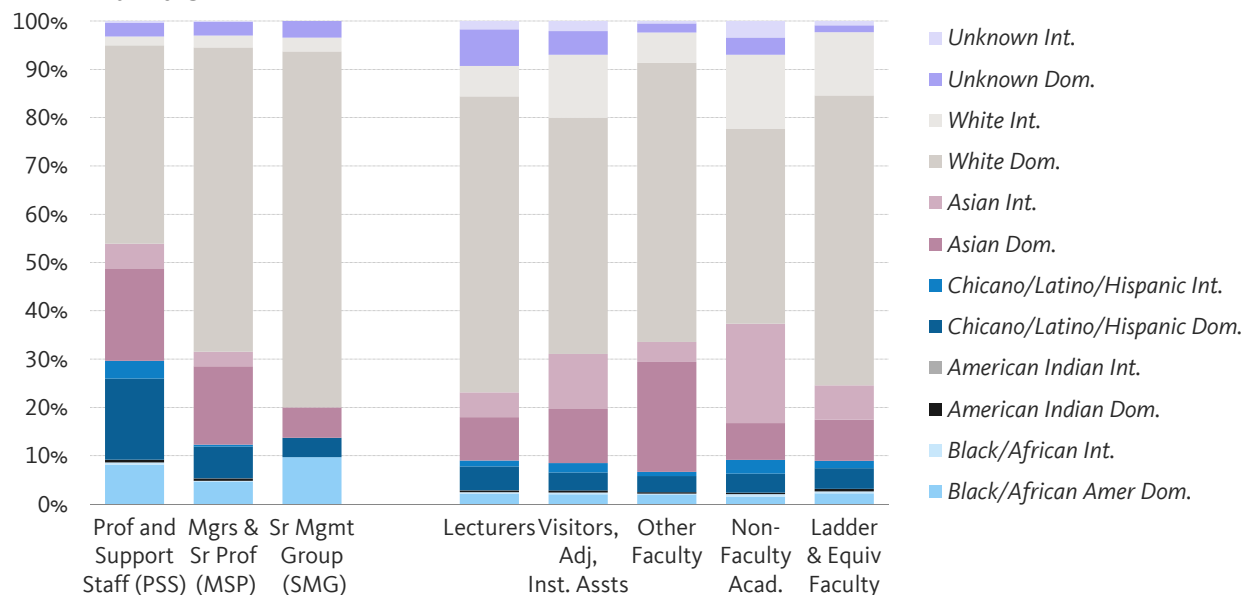
UC systemwide data shows that almost a quarter of undergraduate students are from underrepresented groups, with campus figures ranging from 17 to 18 percent to just over 50 percent. International students are about 8 percent systemwide, with a range of 1 to 13 percent by campus.

For graduate students, 12 percent of graduate academic and 14 percent of graduate professional students are from underrepresented groups. There is greater variation with regard to international students, who comprise 25 percent of graduate academic and 13 percent of graduate professional students.

### 8.3 DIVERSITY OF THE UNIVERSITY COMMUNITY

## The proportion of non-white staff is lower among more senior positions, and the proportion of non-white academics is highest among non-faculty academics.

### 8.3.2 Racial/ethnic distribution of staff, faculty and academic employees Universitywide Fall 2013



Source: UC Corporate Student and Personnel Systems<sup>1</sup>

UC values cultivating a work and learning environment inclusive of all communities. The University seeks to improve representation of domestic racial/ethnic groups that have been historically underrepresented. As shown below, UC is especially challenged in improving their representation in senior staff (MSP and SMG), academic and faculty positions.

International employees contribute to the diversity of the UC workforce. These employees bring educational backgrounds and experiences that differ from domestic employees. As shown below, the highest proportion of international academics is in the Non-Faculty Academics category, primarily due to high numbers of international postdoctoral scholars.

	Domestic		International
	Black/African American, American Indian, or Chicano/Latino/Hispanic	Asian	All races/ethnicities
PSS	25.5%	19.0%	11.6%
MSP	11.7%	16.2%	6.2%
SMG	13.7%	6.3%	2.9%
Lecturers	7.4%	9.0%	14.8%
Visitors/Adj/Inst Asst	6.2%	11.2%	28.9%
Oth Faculty	5.7%	22.7%	12.0%
Non-Faculty Acad	5.7%	7.6%	42.8%
Ladder and Equiv Faculty	7.0%	8.5%	23.0%

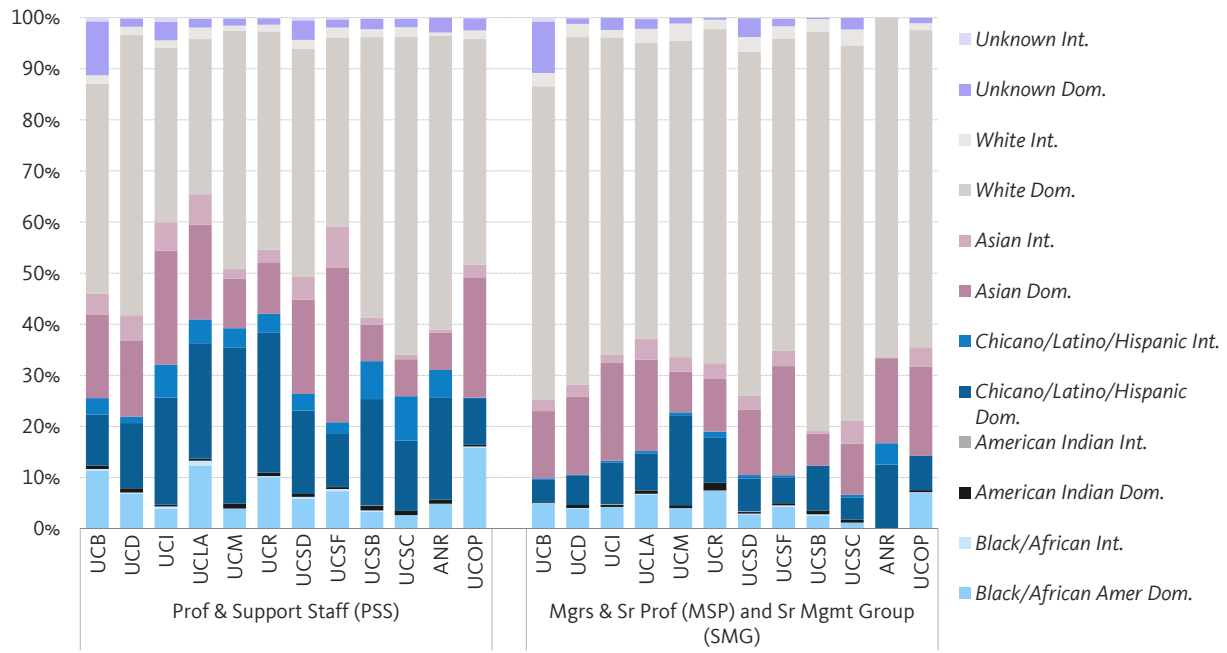
All percentages use the total (both domestic and international) as the denominator.

<sup>1</sup> International status for faculty and staff is based on citizenship status instead of IRS tax status, which was used in the 2012 Accountability Report. For more information, please see <http://regents.universityofcalifornia.edu/regmeet/jan13/e1.pdf>. The "other faculty" group includes professors in residence, professors-clinical and health science clinical faculty. The "other academics" group includes only nonstudent employees and comprises many positions (e.g., librarians and administration categories) as well as academic researchers. Students are excluded in all groups.

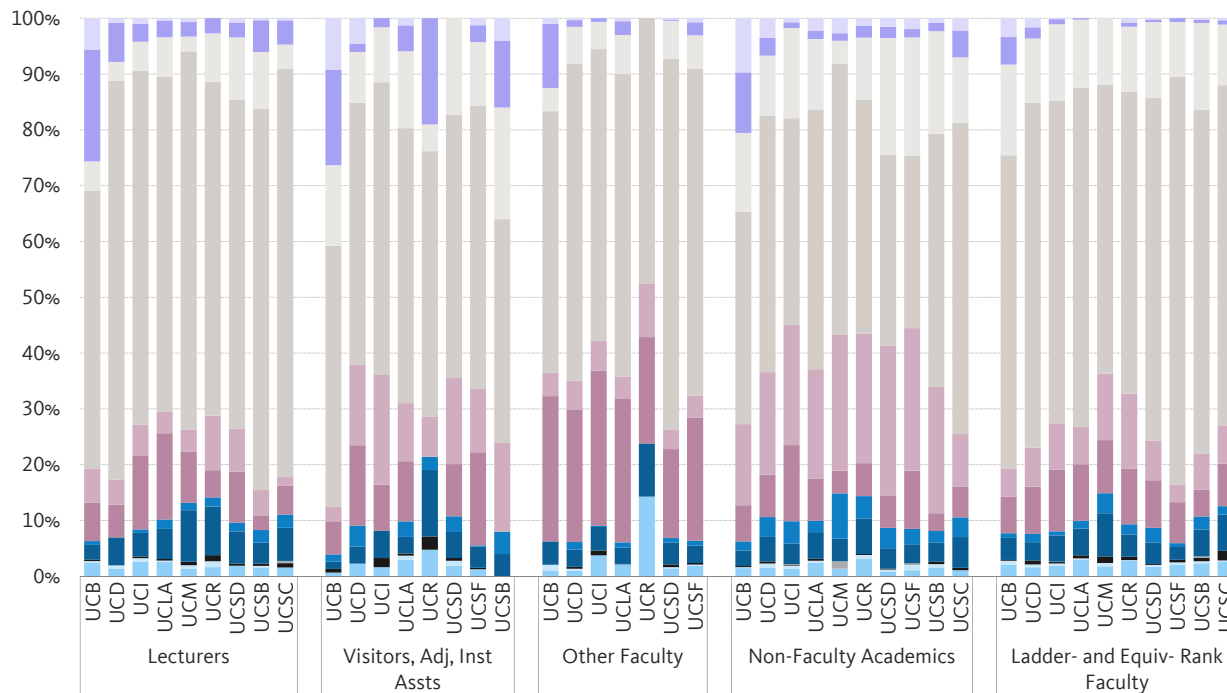
### 8.3 DIVERSITY OF THE UNIVERSITY COMMUNITY

#### 8.3.2 Racial/ethnic distribution of staff, faculty and academic employees By campus Fall 2013

##### Non-student staff



##### Non-student faculty and academics

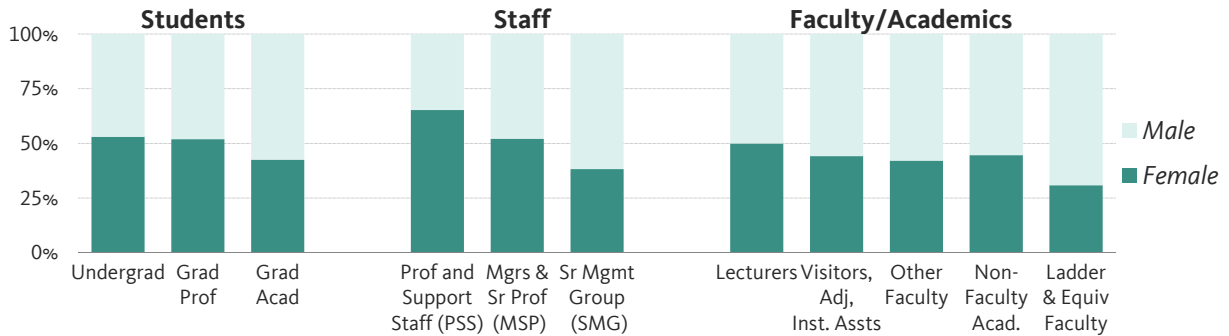


Note: ANR stands for Agriculture and Natural Resources.

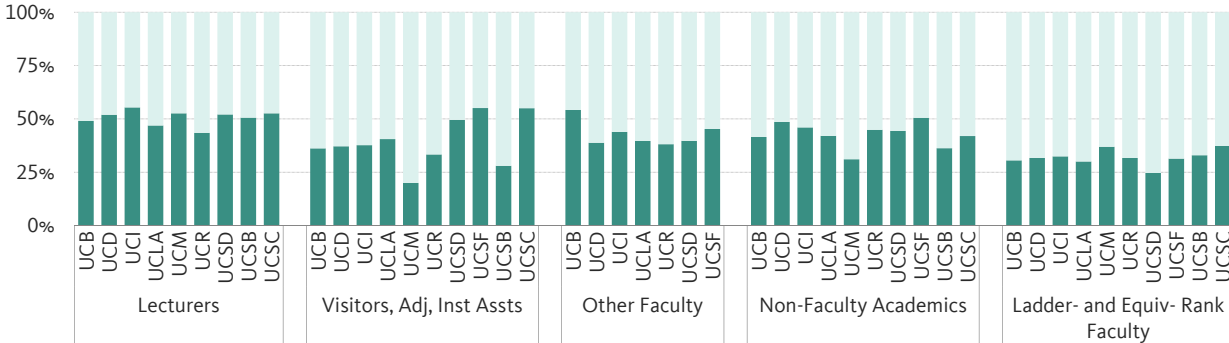
### 8.3 DIVERSITY OF THE UNIVERSITY COMMUNITY

## Women constitute 40 percent or more of all student, staff and academic employee groups, except for ladder-rank faculty and senior managers.

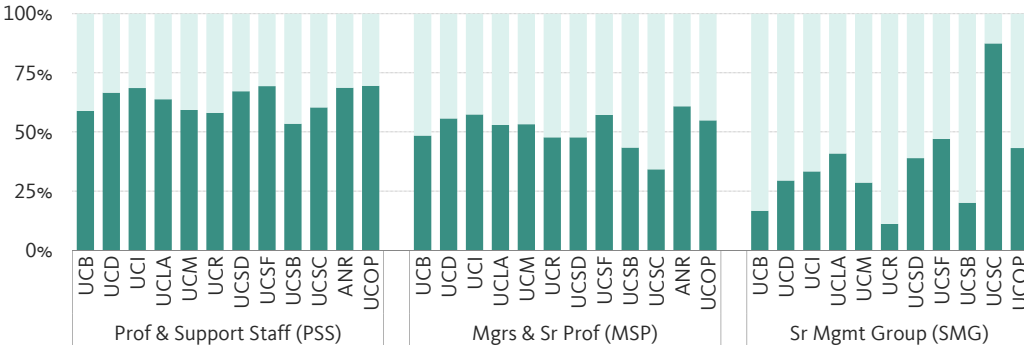
### 8.3.3 Gender distribution of the University community Universitywide and by campus, Fall 2013



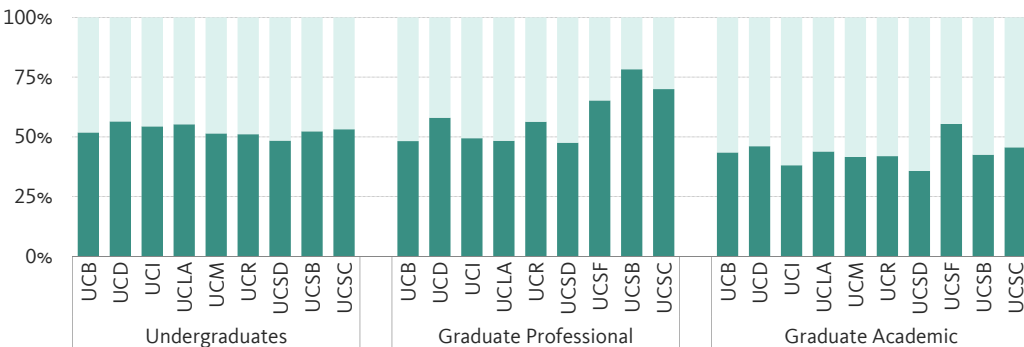
### Faculty and other non-student academic employees



### Non-student staff



### Students

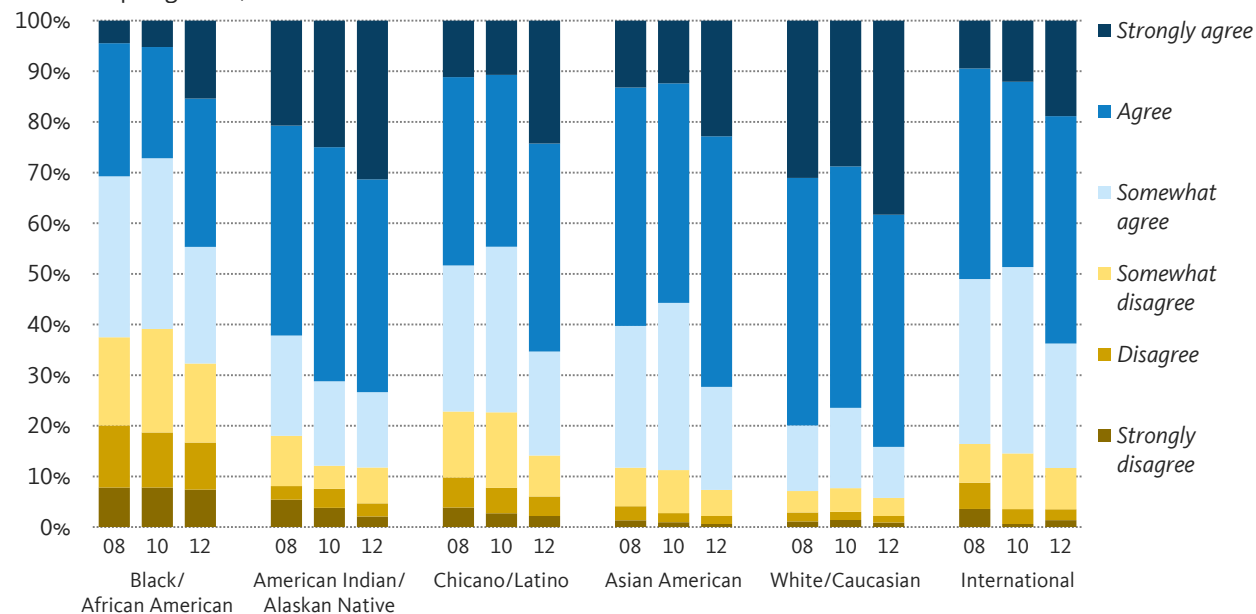


Source: UC Corporate Student and Personnel Systems. See note on 8.1.1 for more details.

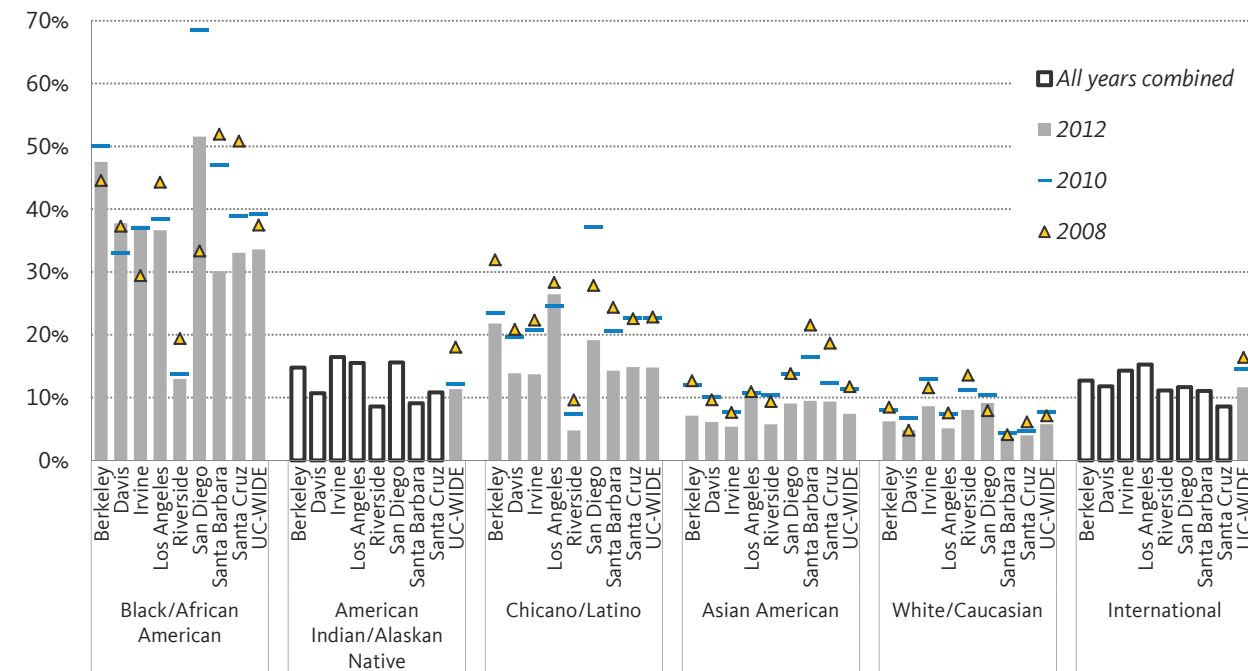
## 8.4 UNDERGRADUATE CAMPUS CLIMATE

Surveys show that most undergraduates feel that students of their race/ethnicity are respected on campus, but the proportion of African Americans who report feeling respected is lower.

### 8.4.1 Response to “Students of my race/ethnicity are respected on this campus” Universitywide and UC campuses Spring 2008, 2010 and 2012



### Percentage that **somewhat disagree, disagree or strongly disagree**



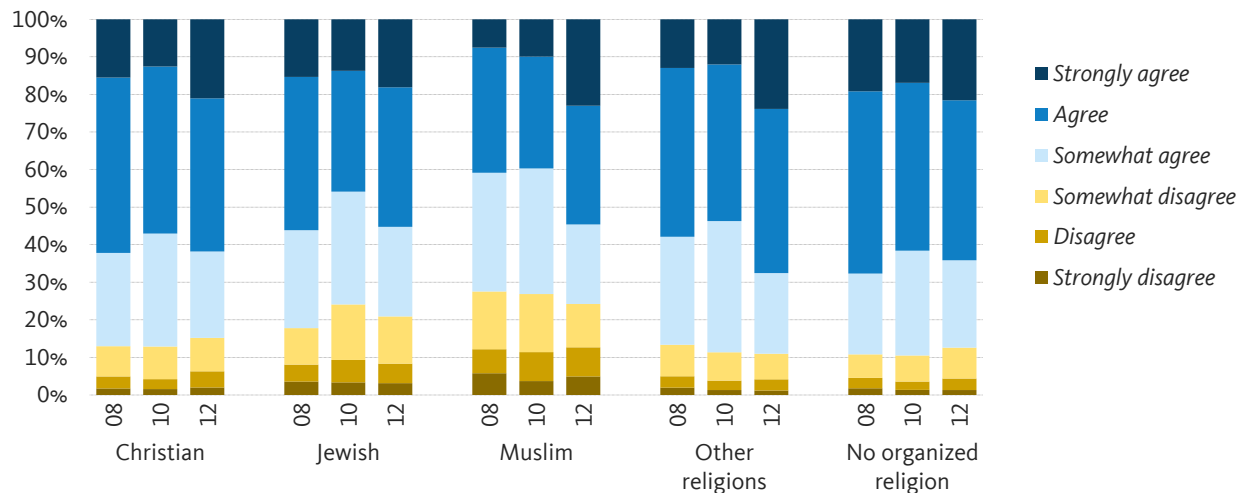
Source: UCUES. Years combined for groups with small sample sizes.



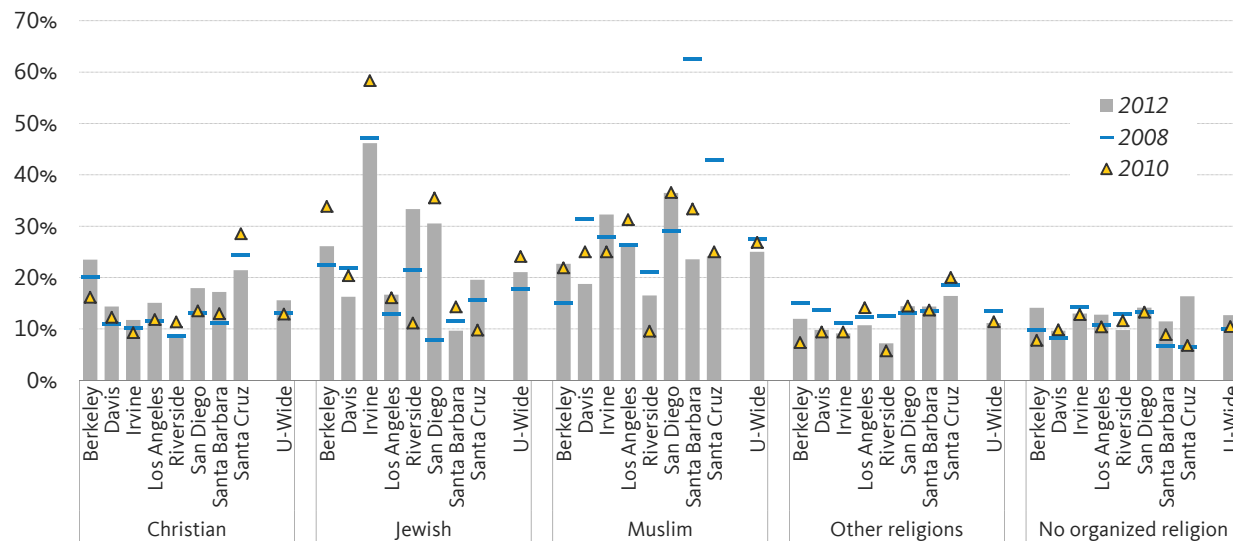
## 8.4 UNDERGRADUATE CAMPUS CLIMATE

### More than 70 percent of students from major religious groups feel that students of their religions are respected.

**8.4.2** Response to “Students of my religion are respected on this campus”  
Universitywide and UC campuses  
Spring 2008, 2010 and 2012



Percent that **somewhat disagree, disagree or strongly disagree**



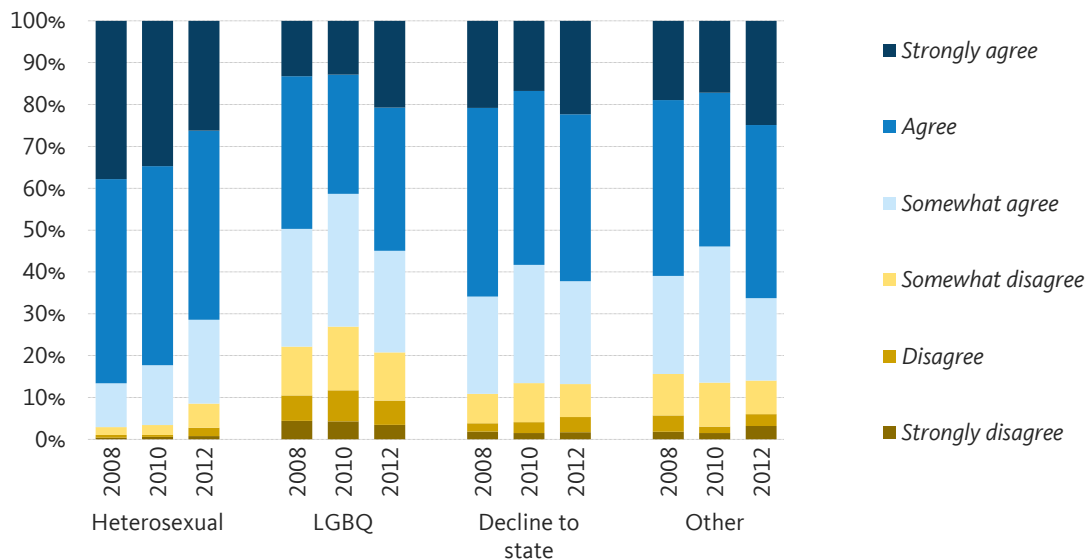
Source: UCUES

The University's goal is to assure that all students are respected on campus, regardless of religious affiliation.

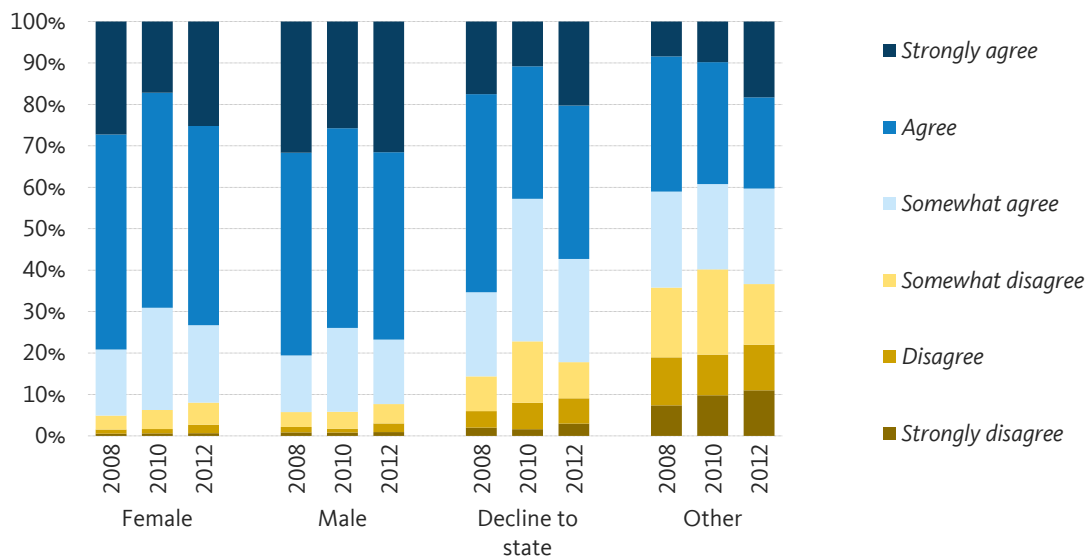
## 8.4 UNDERGRADUATE CAMPUS CLIMATE

### Undergraduates who identify as heterosexual or as male or female are more likely to feel respected on campus than are students with a different gender or sexual orientation.

#### 8.4.3 Response to “Students of my sexual orientation are respected on this campus” Universitywide Spring 2008, 2010 and 2012



#### 8.4.4 Response to “Students of my gender are respected on this campus” Universitywide Spring 2008, 2010 and 2012



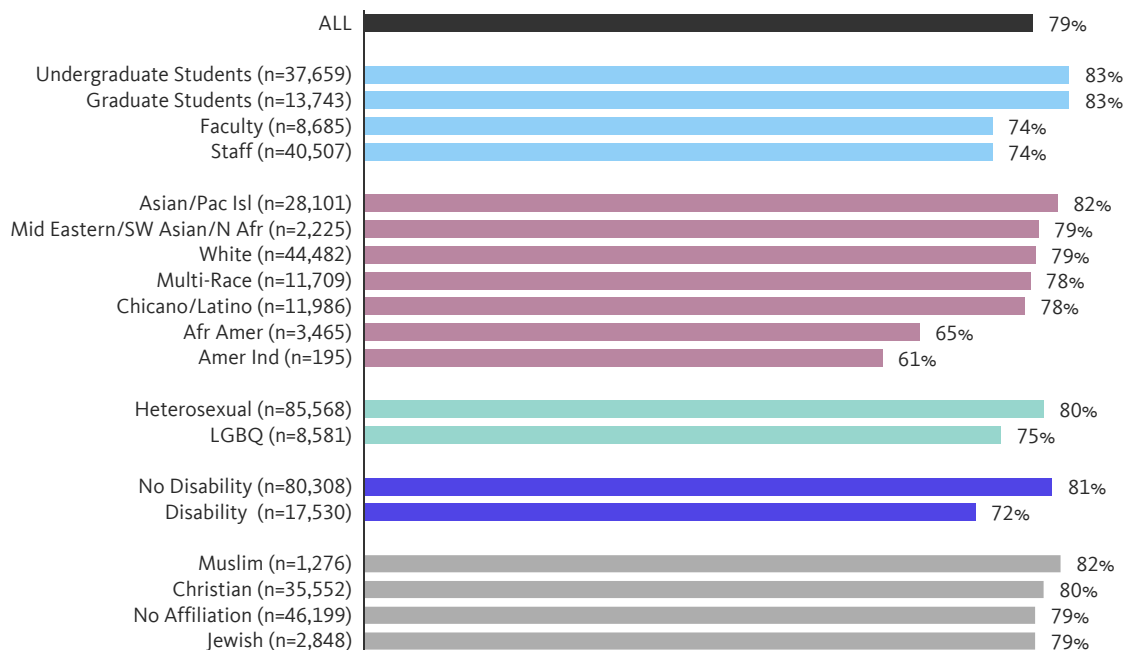
Source: UCUES<sup>1</sup>

<sup>1</sup> The LGBQ category includes: Gay/Lesbian, Bisexual, Self-identified Queer and Questioning/Unsure. The Other category is its own category in UCUES; the data shown here do not include any other responses. Because the numbers for some of the groups are small, campus data are not reported separately.

## 8.5 CLIMATE SURVEY

### Overall, 79 percent of the UC community feel comfortable with the climate at their location, with some variation by positions and demographic groups.

#### 8.5.1 Percent “Comfortable” or “Very Comfortable” with climate on campus or at location Universitywide 2013



Source: UC Campus Climate Survey<sup>1</sup>

In recognition of the importance of gauging campus climate in order to create more inclusive and welcoming environments, in 2010, then-University of California President Mark G. Yudof formed a President’s Advisory Council on Campus Climate, Culture, and Inclusion, charged with monitoring campus progress and metrics, and examining campus practice and policy. Each of the chancellors at UC’s campuses and location heads at UCOP, LBNL and ANR created similar councils. In May 2010, the Regents created the Ad Hoc Committee on Campus Climate.

In 2012, the UC Office of the President commissioned a systemwide campus climate study across the ten UC campuses and three UC locations (Lawrence Berkeley National Laboratory, UC Division of Agriculture and Natural Resources, and UC Office of the President).

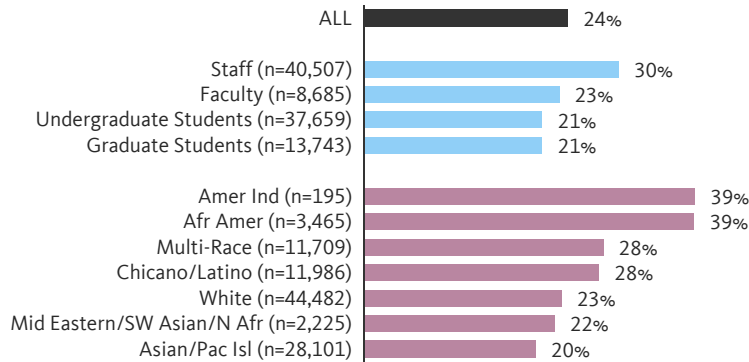
Seventy-nine percent of all respondents (n = 81,939) were “comfortable” or “very comfortable” with the climate at UC while 7 percent (n = 7,510) were “uncomfortable” or “very uncomfortable.”

<sup>1</sup> <http://campusclimate.ucop.edu/>

## 8.5 CLIMATE SURVEY

### About 24 percent of the UC community experienced exclusionary behavior within the last year.

#### 8.5.2 Percent experiencing exclusionary behavior within last year Universitywide 2013



Source: UC Campus Climate Survey

Twenty-four percent of respondents (n=25,264) experienced exclusionary behavior; 16 percent said it did not affect their ability to work or learn but 9 percent said it did. A greater percent of staff and respondents from underrepresented populations experienced this type of behavior.

Most commonly (nearly 50 percent) of the reported exclusionary behaviors were being “isolated,” “ignored” or “intimidated or bullied.”

# Chapter 9. Teaching and Learning

## Goals

The University of California seeks to provide its students with a distinctive learning environment created by faculty who are actively engaged in both teaching and academic research. UC strives to ensure that all students have an opportunity to take small classes, seminars and lab sections, and that they have access to faculty and others active in research. The ultimate goal is for students to develop critical thinking, writing and research skills, along with an in-depth understanding of their specific fields of study.

## Providing assessment

At UC, individual academic departments and degree programs are responsible for defining learning objectives and for assessing students' progress in meeting them. These objectives and assessments are subject to scrutiny by external reviewers during program reviews conducted at set intervals, e.g., five years. In recent years, academic objectives and assessments have become a major focus of reviews conducted by the Western Association of Schools and Colleges (WASC), as well as by many other professional accrediting and related bodies. Information about program learning objectives is available on departmental websites, and each campus posts materials related to accreditation.

## Educating students and the public

The indicators on the following pages illuminate aspects of the undergraduate teaching and learning experience, including student access to ladder-rank faculty, small classes and opportunities to participate in research. Using survey data, the indicators summarize students' reflections on their undergraduate education, e.g., the extent to which they have developed mastery in their chosen fields and improved their critical thinking and other skills. This chapter also describes faculty workload, including the amount of teaching engaged in by faculty and the number of doctoral degrees produced. In addition, the chapter considers the educational opportunities that UC provides

through its extension programs to hundreds of thousands of non-enrolled students, most of them in adult professional and continuing education.

## Looking forward

Over the last decade, the University of California has undergone considerable and rapid changes in its size and shape, and has faced substantial reductions in the level and source of funds dedicated to instruction. These changes have led not only to increases in tuition, but also to growth in average class size, reductions in course availability and limitations on faculty hiring. Some campuses are rethinking curricular requirements and exploring new modes of instructional delivery, including online instruction and better use of summer sessions.

In 2012–13, UC campuses and extensions offered approximately 2,600 online courses totaling over 90,000 student enrollments. More than 250 of these online courses were offered for credit in UC undergraduate and graduate degree programs. Of the courses offered to undergraduates, nearly 100 courses were offered during summer sessions and 25 were offered during the academic year. Next year, that number will grow to approximately 60 online course offerings available to undergraduate students during the academic year.

UC recognizes that online education is only one of many learning opportunities available to UC students; therefore, its strategy utilizes technology to expand student access and to improve teaching and learning in all courses.

## For more information

### Campus websites:

[www.universityofcalifornia.edu/uc-system/parts-of-uc](http://www.universityofcalifornia.edu/uc-system/parts-of-uc)

### Presentations to the Regents on online education:

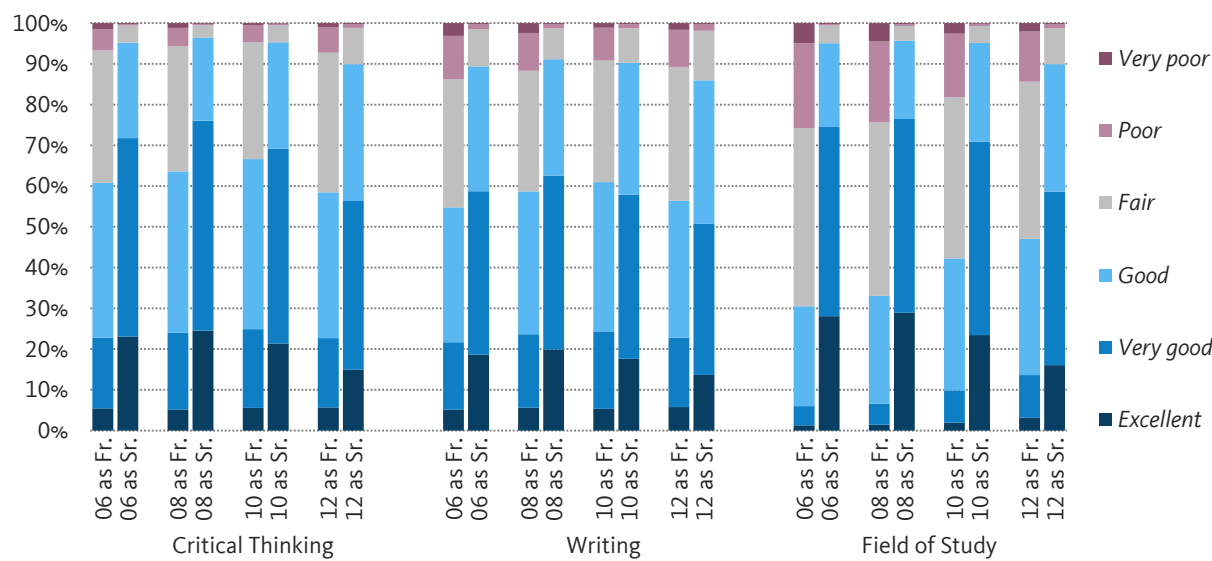
<http://regents.universityofcalifornia.edu/regmeet/jul13/e1.pdf> (July 2013)

<http://regents.universityofcalifornia.edu/regmeet/jan14/e3.pdf> (July 2014)

## 9.1 UNDERGRADUATE LEARNING OUTCOMES

### UC students report experiencing significant gains between their freshman and senior years in their critical thinking skills, writing skills and understanding of a specific field of study.

#### 9.1.1 Self-reported skill levels Universitywide Spring 2006, 2008, 2010 and 2012



Source: UCUES

The University of California Undergraduate Experience Survey (UCUES), conducted every two years, provides an invaluable source of information on how UC undergraduates view their educational experience. Comparing skill levels between their freshman and senior years, UC students self-report significant gains with respect to critical thinking ability, writing and understanding of their chosen field of study.

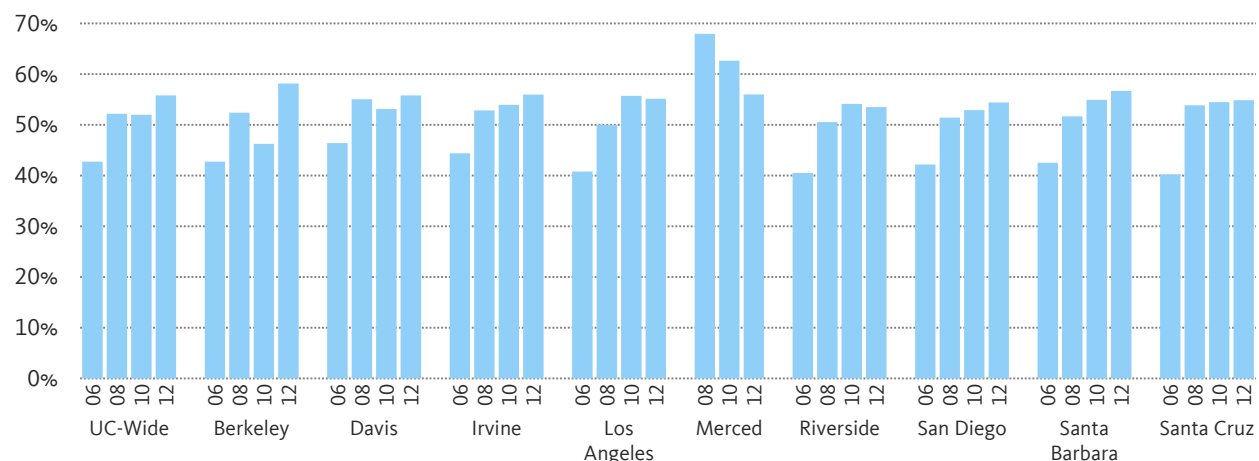
The spring 2010 and 2012 surveys, however, show smaller reported gains in learning outcomes than were shown in the 2006 survey. Nevertheless, 90 percent of 2012 students report good, very good or excellent outcomes for improvement in critical thinking skills; 85 percent for writing skills; and 90 percent for understanding their chosen field of study.



## 9.2 THE UNDERGRADUATE RESEARCH EXPERIENCE

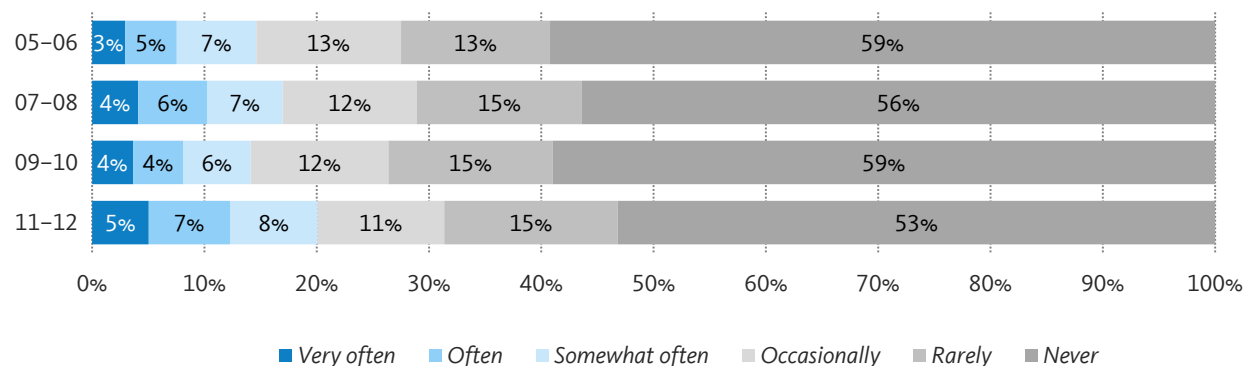
### The participation of undergraduate seniors in research has increased.

#### 9.2.1 Seniors who assisted faculty in research or a creative project Universitywide and UC campuses 2005–06, 2007–08, 2009–10 and 2011–12



Source: UCUES<sup>1</sup>

#### 9.2.2 Response by seniors to the survey question: “In this academic year, how many times have you taken a small, research-oriented seminar with faculty?” Universitywide 2005–06, 2007–08, 2009–10 and 2011–12



Source: UCUES

One of the benefits of attending an academic research university is the opportunity for upper-division students to conduct research and to participate in small research seminars led by faculty. The above indicators reflect an increase in such experiences between 2006 and 2012.

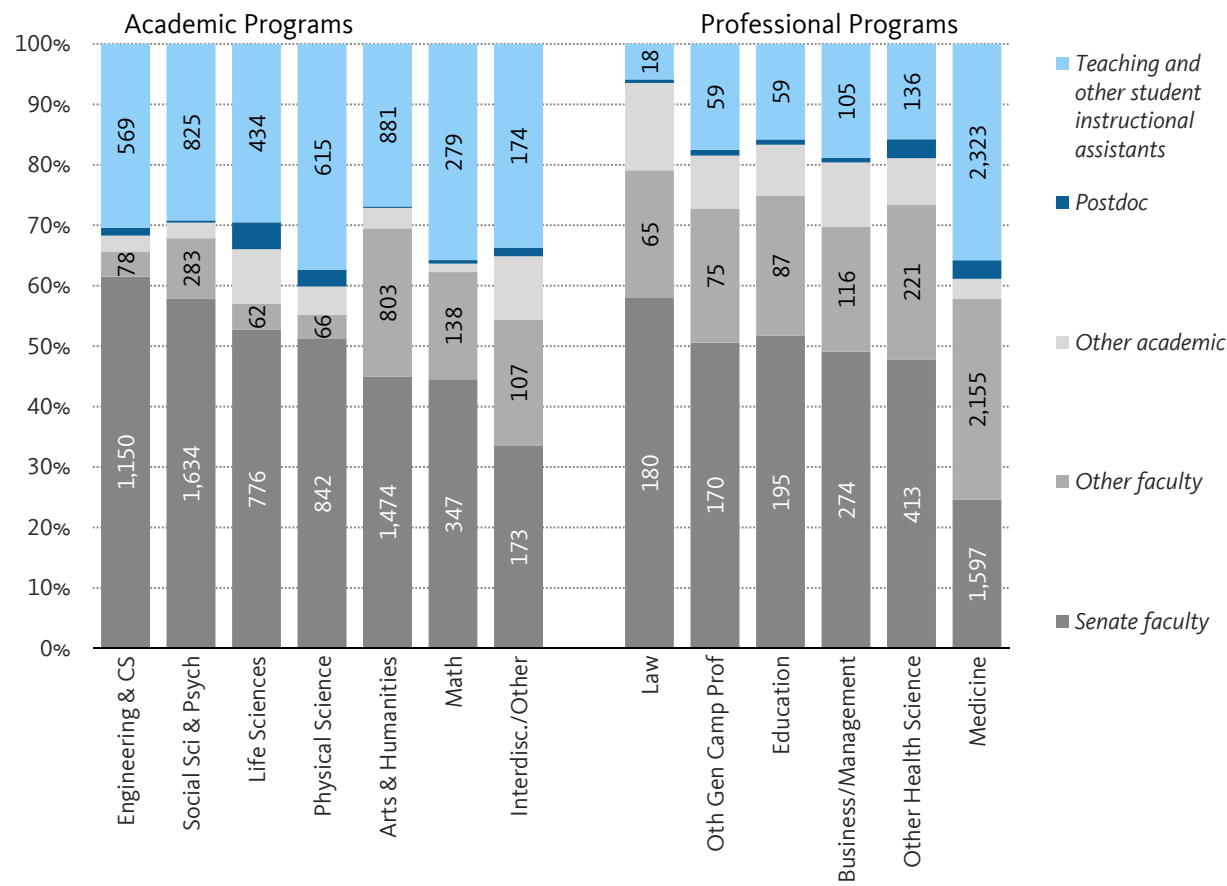
Although the data show that the increase in participation in the conduct of research was greater than the increase in participation in a research seminar, there have been steady advances in both measures.

<sup>1</sup> Research and creative projects statistics combine three items: “Assist faculty in research/creative project, with course credit,” “for pay without course credit” and “as a volunteer, without course credit.”

### 9.3 THE INSTRUCTIONAL WORKFORCE

## In most disciplines, Senate faculty constitute more than half of the instructional workforce.

### 9.3.1 Instructional workforce FTE composition, by employee type and discipline Universitywide 2012–13



Source: UC Corporate Personnel System<sup>1</sup>

Because the members of the UC Senate have demonstrable scholarship and research experience, instruction by a member of the Senate is a measure of a student’s learning experience. The more the student experiences instruction from a member of the Senate, the richer the student experience.

In most disciplines at UC, Senate faculty constitute more than half of the instructional workforce. There are two exceptions: Medical education relies more heavily for instruction on non-Senate faculty who also have clinical roles; and non-Senate faculty are

also found in greater proportions in disciplines such as math, writing and languages, which offer greater numbers of general education classes.

“Other faculty” includes clinical faculty, most lecturers, adjuncts, faculty in residence and visiting faculty. “Student instructional assistants” include students acting in supporting roles, such as teaching assistants, readers and tutors. They are more common in academic disciplines and mostly lead non-credit labs and discussion sections for large lecture courses.

<sup>1</sup> Academic support staff, such as clerical staff, administration and advisers, including students working in these titles, are excluded. The “Other academic” category includes administrators and researchers who have instruction functions. Data are for full-time-equivalent number of academic employees paid with instructional funds.

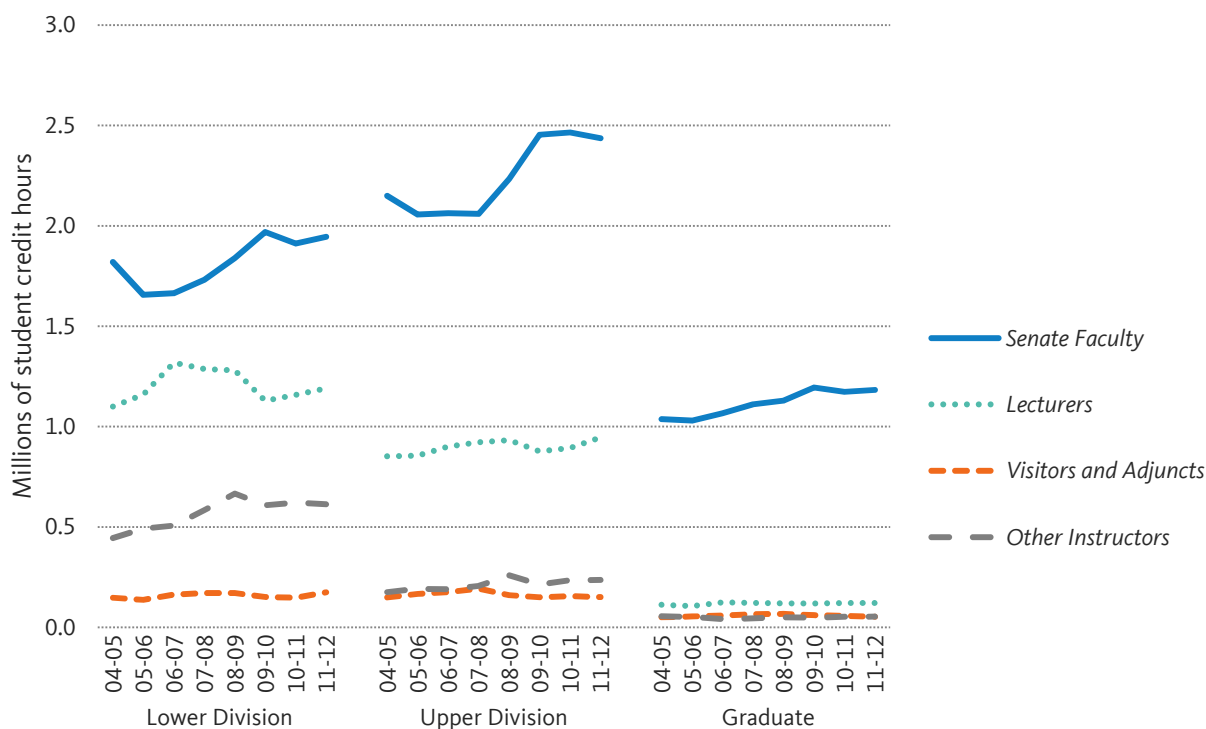


*Research conducted at UC Riverside.*

### 9.3 THE INSTRUCTIONAL WORKFORCE

## As a group, Senate faculty are teaching increasing numbers of student credit hours across all levels of students.

### 9.3.2 Student credit hours, by faculty appointment and class type Universitywide 2004–05 to 2011–12



Source: UC Faculty Instructional Activities dataset<sup>1</sup>

Student credit hours (SCH) — the number of student enrollments in a course multiplied by the number of credits available from that course — can be used to illustrate the relative distribution of teaching load among different types of instructors at different levels of instruction. For example, a 4-credit class with 50 students generates 200 SCH; a 2-credit class of 15 students generates 30 SCH.

Because of a combination of budget cuts, reductions in faculty numbers and increased undergraduate enrollment, the teaching load for all faculty has increased.

The student credit hour metrics in the above graph reflect this increase, which has an effect on student-faculty ratio and on the quality of instruction. This measure can also serve as a proxy for the types of instructors that students will come into contact with as they progress through their academic careers.

In lower-division courses, writing, language and other required courses are most often taught by lecturers; introductory courses to the major are most often taught by Senate faculty. In upper-division courses, those that are core to the student's major are more likely taught by Senate faculty.

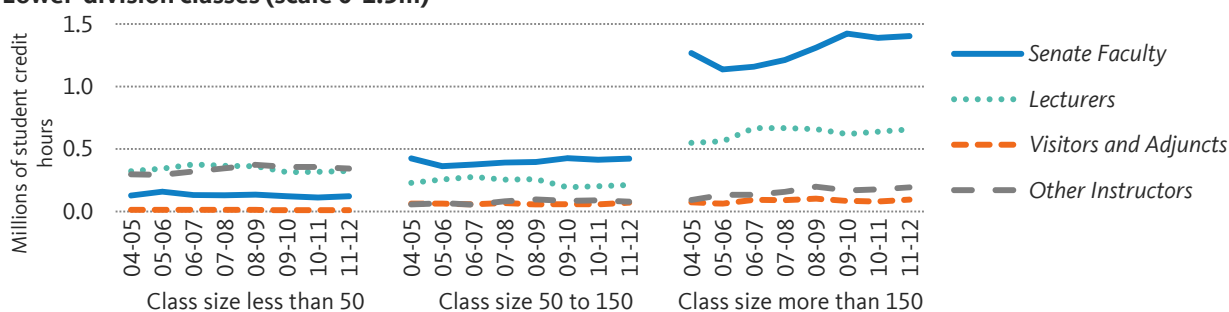
<sup>1</sup> Data are for general campus courses only. These data are submitted annually by UC campuses and contain information on all general campus courses taught in that year.

## 9.3 THE INSTRUCTIONAL WORKFORCE

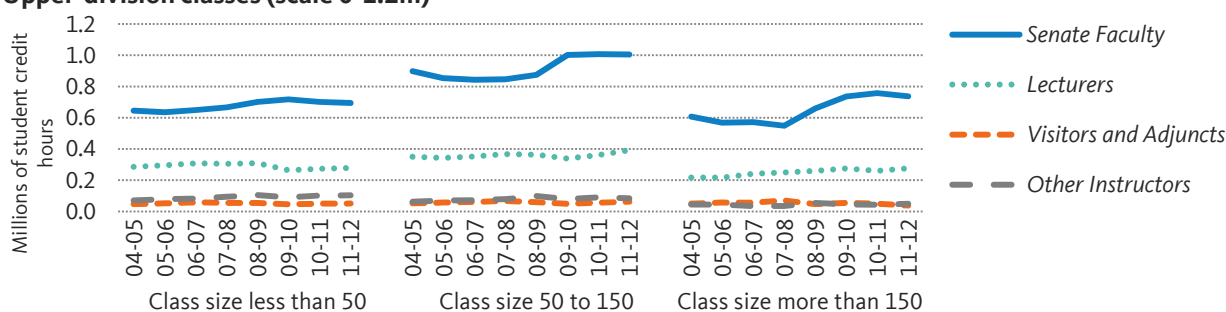
**In 2011–12, 20 percent of lower-division credit hours were earned in courses with fewer than fifty students, compared to 30 percent of upper-division credit hours.**

### 9.3.3 Student credit hours, by faculty appointment, class type and class size Universitywide 2004–05 to 2011–12

#### Lower-division classes (scale 0-1.5m)



#### Upper-division classes (scale 0-1.2m)



#### Graduate classes (scale 0-1.2m)



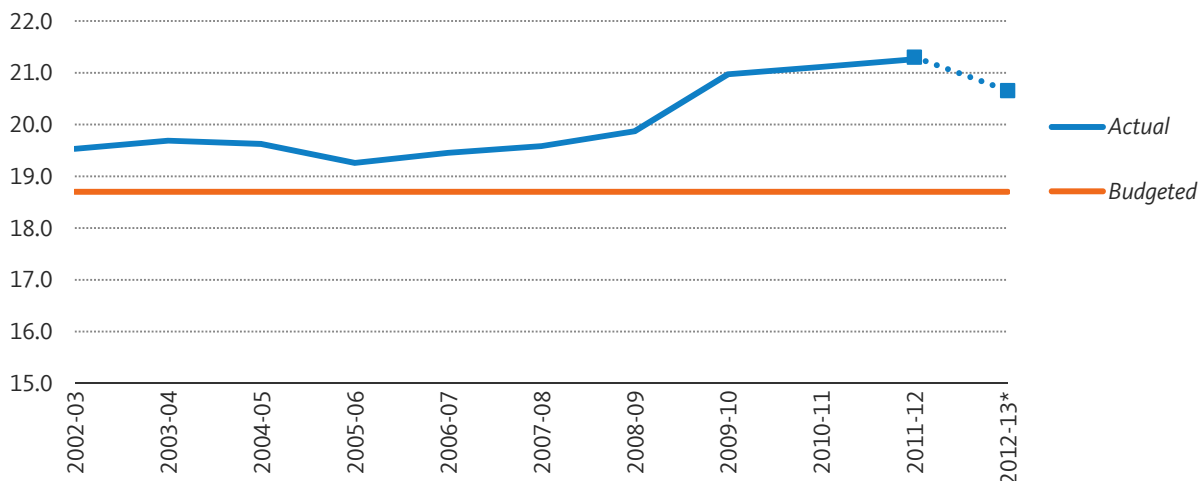
Source: UC Faculty Instructional Activities dataset

At the lower division, Senate faculty generally teach large lecture classes; non-Senate faculty, such as lecturers, generally teach lecture sections and smaller classes. At the upper-division, student contact with Senate faculty is fairly evenly distributed across classes of all sizes. Graduate academic students are almost uniformly taught by Senate faculty in classes with fewer than 50 students.

## 9.4 STUDENT-FACULTY RATIO

**The student-faculty ratio has increased because faculty hiring has not kept pace with the increase in student enrollment.**

### 9.4.1 General campus student-faculty ratio Universitywide and UC campuses 2002–03 to 2012–13



\*Beginning with 2012–13, UC began, in this ratio, to include faculty paid on all fund sources other than self-supporting program fees, rather than only faculty supported by core funds (comprised of State General Funds, UC General Funds, and Tuition and Fees). This change in methodology better reflects recent increased flexibility in use of fund sources to pay faculty.

Source: UC Budget Office

One widely used measure of academic quality is the student-faculty ratio. The lower the ratio, the better for the student in terms of focused instruction and faculty contact. The student-faculty ratio reflects resources available for instruction and the average availability of faculty members to every student. It varies considerably, as will a student's experience of it, by instructional level (lower-division, upper-division and graduate), and by degree and major.

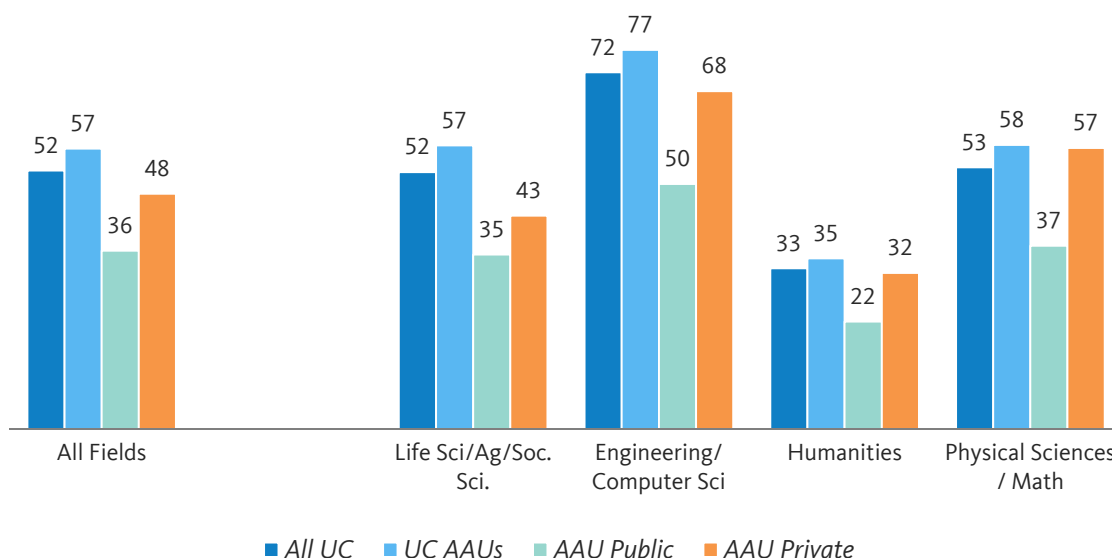
This ratio has risen at various times in the University's history, each time in response to significant budget cuts. The most recent recession was no exception, as campuses struggling to manage their budgets against the backdrop of uncertain funding were forced to delay faculty hiring or made decisions not to fill vacant faculty positions on a permanent basis. As the graph shows, the student-faculty ratio in 2011–12 was 21:1, while just three years earlier, before the economic impact of the recession, the ratio was just above 19:1.



## 9.5 DOCTORAL DEGREE PRODUCTION

**Overall, UC campuses confer more doctoral degrees per tenured and tenure-track faculty member than other non-UC AAU public institutions, and are on par with the AAU private institutions.**

### 9.5.1 Doctoral degrees awarded per 100 faculty (annual average) UC and comparison institutions 2007–08 to 2011–12



Source: IPEDS and 24 non-UC Public and 16 Private AAU Institutions<sup>1</sup>

Doctoral degree production is an important measure of an academic research university's strength in teaching and research. Doctoral degrees represent the transmittal of knowledge and the creation of original research, both of which contribute to the state and the nation's economy.

The current data reflect very favorably on UC faculty's role in producing doctoral degrees. Between 2007 and 2012, UC awarded 52 doctoral degrees per 100 faculty, as compared with AAU public universities, which awarded 36 degrees per 100 faculty, and as compared with AAU private universities, which awarded 48 degrees per 100 faculty. In engineering and computer science, UC awarded 72 doctoral degrees per 100 faculty, as compared with AAU public universities, which

awarded 50 degrees per 100 faculty, and with AAU private universities, which awarded 68 degrees per 100 faculty. The comparisons for the five AAU-member UC campuses are even greater.

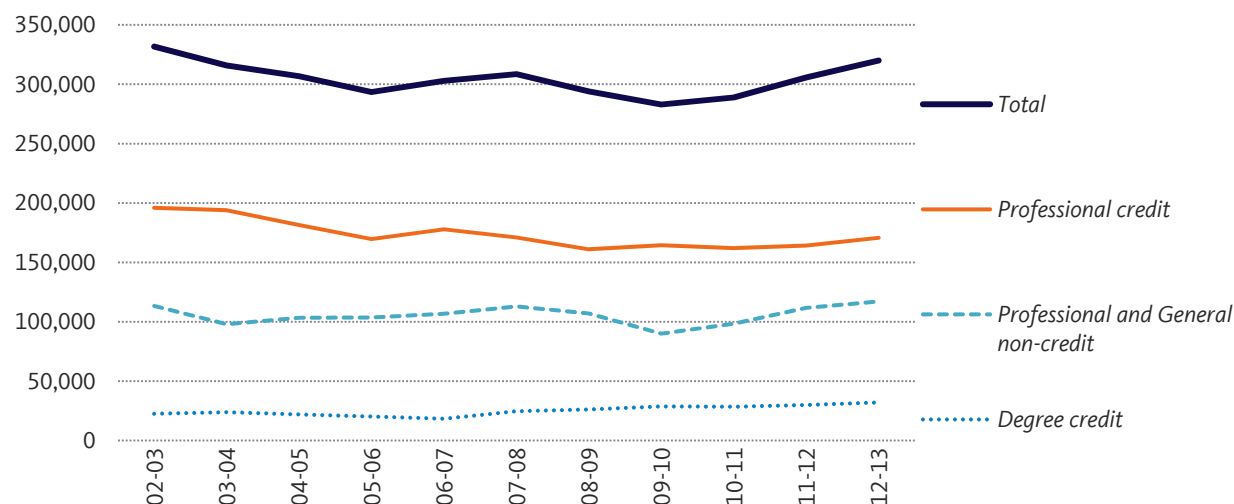
UC has proportionally fewer terminal master's degrees than other AAUs, meaning that UC faculty's graduate instruction is more concentrated on doctorates and on master's degrees leading to doctorates. These ratios may also reflect differences in the way institutions define and count faculty in the data they report nationally. The data were calculated based on tenured and tenure-track faculty headcount.

<sup>1</sup> UC Campus data excludes UC San Francisco, an exclusively graduate Health Sciences campus.

## 9.6 CONTINUING EDUCATION

### UC is a significant provider of post-college continuing education to Californians.

#### 9.6.1 Continuing education enrollments Universitywide 2002–03 to 2012–13



Source: UC Extension Financial Statements<sup>1</sup>

UC Extension offers programs to individuals who want to continue their education beyond their undergraduate studies, advance in their professions, change careers, engage in further academic pursuits and improve their skills in current or new endeavors. Extension’s highly diverse range of courses offers specialized programs of study, and provides certificates in both credit and non-credit programs. UC Extension is completely self-supporting. Each campus Extension division addresses particular educational needs in its geographic area. For example, UC Riverside Extension offers a Turfgrass Management Certification program; UC Davis Extension offers a Winemaking Certificate Program.

The above data show a decrease in Extension enrollment during the 2007–09 recession and enrollment numbers increasing since 2010–11. In 2012–13, UC Extension awarded over 8,000 certificates.

<sup>1</sup> “Degree credit” courses lead to formal UC degree credit, developed and presented in partnership with campus faculty and graduate degree programs. “Professional credit” courses provide Senate-approved academic credit but are not associated with a specific UC degree program. “Professional & General non-credit” courses are high-quality continuing education courses and workshops. These programs may satisfy continuing-education requirements of public agencies and professional associations but do not convey UC Senate-approved credit.

# Chapter 10. Research

## The broad scope of UC research

The California *Master Plan for Higher Education* designates the University of California as the primary state-supported academic agency for research. UC research contributes to the state and to the nation through discoveries that improve health, technology, welfare and the quality of life.

UC has more than 800 research centers, institutes, laboratories and programs, and spans ten campuses, five medical centers, three national energy laboratories<sup>1</sup> and numerous specialized research facilities. It has established an unparalleled international reputation for innovative, leading-edge research. All domains of intellectual inquiry are represented in the research enterprise, from the structure of proteins in living cells to the formation of distant galaxies; from the development of more drought-resistant crop varieties to the study of new materials for the next generation of computer processors; from the documentation of indigenous cultures to the analysis of the global impacts of social media. The extraordinary diversity and quality of research at UC are reflected in the uniformly high rankings assigned to UC campuses and programs by every published ranking of U.S. and worldwide universities (see Chapter 14).

## Evaluating the research enterprise

UC's performance in meeting its research goals may be assessed in a variety of ways: the quantity of research that is conducted, as reflected in research expenditures; the academic quality and impact of UC's research; the enhancement of the educational experience of UC students; the contribution to the public of research findings; and the economic and societal benefits that flow directly and indirectly from research activity and research results. This chapter focuses on quantitative measures of

<sup>1</sup> UC co-manages Los Alamos and Lawrence Livermore National Laboratories with Bechtel National, Babcock and Wilcox, and URS Corp. and, for Livermore only, also Battelle.

research activity and output, such as amounts received and spent, individuals employed, and books and journal articles published.

These measures, which are mostly fiscal, do not present a comprehensive account of UC's diverse research programs. They significantly underrepresent research in the arts, humanities, social sciences and theoretical scientific disciplines, because work in these fields leaves less of a direct fiscal footprint. However, as this chapter will show, some of the less tangible contributions that research makes to the quality of instruction at UC can be documented through surveys and employment data.

## Sources of research funding

One widely used indicator of research activity is the total dollar amount expended each year for research. Although an incomplete measure, research expenditures do provide a basis for charting research trends over time, within disciplines and across the system. Expenditure data also allow comparisons to levels of research activity at other private and public institutions, and they point to UC's very substantial contribution to academic research and development efforts nationwide.

The expenditure data reveal that research activity at UC nearly doubled over the last 15 years, to more than \$4.1 billion, and that most of this growth is fueled by federal funds. The University's own funds, from gifts, endowments, general funds and other internal sources, have consistently provided about 20 percent of the total. State and private sources of research funding also have increased. Notable research awards received during 2012–13 from private sponsors include a \$31 million grant from the Simons Foundation to create the Simons Institute for the Theory of Computing at UC Berkeley; a \$12 million contract with the Southern California Edison Co. to UC San Diego for a collaborative offshore geophysical survey; a \$10 million grant from the American Association for Cancer Research to UC San Francisco for prostate

cancer research; and a \$5.8 million award from the Microelectronics Advanced Research Corporation to UCLA for nanomaterial engineering research. Although private support provides a critical and growing component of UC's research enterprise, it still accounts for only about 15 percent of the total. This leaves UC's research enterprise highly susceptible to fluctuations in federal budgetary appropriations for research and development.

### Research activities

Research funding pays for supplies, equipment, utilities and various services but, principally, it pays for people's time. More than half of the research expenditures in 2012–13 went to salaries and benefits. Of this portion, only 18 percent went to faculty; the majority was paid to staff researchers, and nearly one-quarter went to students and postdoctoral researchers.

### Research results — enhancing instruction

One of the most important benefits of research at UC is the enhanced educational experience provided to students. Faculty research figures prominently in classroom instruction at all levels, and students' involvement in research forms an important and positive component of their UC educational experience. The 2012 UC Undergraduate Experience Survey found that 55 percent of seniors had been involved in research or other creative activities as part of their coursework.

Participation in research is a critical element in graduate education, and graduate student researchers make up a significant portion of the research workforce. In FY 2012–13, of UC's 50,000 graduate students, more than 14,000 were employed at least part-time as paid research assistants. UC also provides postdoctoral training to more than 6,100 scholars, who make significant contributions to the research enterprise.

### Research results — spurring the economy

The immediate economic benefit of UC's research enterprise to the state of California is significant, because the research activity itself brings money into the state, and this stimulates the economy

when it is spent. A recent study of UC's economic impact determined that for every dollar spent by UC, the state's economy increases by \$2.10. The \$4.1 billion spent by UC on research multiplies to nearly \$9 billion in statewide economic activity, adding jobs and promoting economic growth statewide.

Research frequently leads to innovative technologies and processes that can enhance industries, stimulate economies and even improve health and well-being worldwide. UC's technology transfer offices serve as a bridge between researchers and outside entities interested in developing and commercializing the results of academic research. Over the past two decades, UC has secured more licensable patents for its inventions than any other US research university. Since 1976, there have been more than 650 start-up companies founded around UC inventions, and 80 percent of them are based in California.

### Research results — diffusing knowledge

Perhaps the most visible and widely distributed results of UC research take the form of publications: the myriad journal articles, books and other research reports available through an ever-growing repertoire of print and electronic media. In this chapter, we analyze the vast Web of Science publication database, with the understanding that these compilations are highly selective and significantly underrepresent faculty research contributions in the arts, social sciences and humanities.

### Research results — improving global health

During 2012–13, more than 3,000 clinical trial research projects were under way at UC. Clinical trials occupy a unique position in the academic research enterprise. The great majority of projects involve basic, fundamental research aimed at increasing human knowledge and understanding, and some of these efforts may eventually lead to beneficial products or processes. Clinical trial research projects, by contrast, represent the final stage in the journey from a scientific discovery or innovation to an effective therapy or treatment that could significantly enhance global health.

More than 70 percent of UC's clinical trial projects were sponsored by businesses. And of all the research contracts and grants that came to UC from businesses during 2012–13, nearly half of the total dollar amount was directed toward clinical trials.

### Research workforce changes

UC faces numerous challenges in pursuing its research mission, including the recruitment and retention of a world-class faculty; remaining competitive in attracting graduate academic and postdoctoral students who play a vital role in conducting research; and fully funding the research enterprise, because the University does not recover the full costs of research from either governmental or private research sponsors.

A critical issue facing the academic research enterprise nationwide is the ongoing reduction in federal support for academic research and development. Federal research awards to UC during 2012–13 fell to levels not seen since the early 2000s (after inflation adjustment). This decline was due in part to the federal sequester — the across-the-board spending cut in R&D appropriations that took effect in March 2013. The current federal budget reduces the impact of the sequester, but for most agencies, R&D support remains at low, pre-recessionary levels.

Also during 2012–13, UC spent the last of its billion-dollar-plus Recovery Act research funds. These one-time funds provided a temporary bump in research activity and employment that began to taper this past year. Graduate student researchers (GSRs) have already begun to feel the effects of declining federal research fund expenditures. Since 2010, when Recovery Act funds first became available for research, the number of GSRs employed by UC has declined from about 15,000 to 14,100, a drop of 6.5 percent. Declining federal research funds are responsible for more than half of this workforce reduction; the remainder is attributable to higher average annual compensation for GSRs, reflecting the overall higher net cost of graduate academic education.

This change in the GSR workforce is an early indicator of further changes to come. The effects of the sequester, combined with stagnant levels of federal research support, are likely to yield changes in UC's research workforce over the next few years, until federal budget priorities undergo a change.

The effect of these cutbacks on the research workforce will vary by campus and by discipline, with more of an impact on those fields, such as medical research, that depend heavily on project funding from the National Institutes of Health. Inevitably, there also will be an impact on the University's instructional mission, because research funding provides a major source of support for graduate students and postdoctoral researchers in many fields.

To offset some part of these federal budgetary cutbacks, given the overall improvement in the U.S. economy, it is possible that private sources of research sponsorship will emerge. Toward this goal, campus-based and systemwide initiatives to develop new forms of partnership with potential corporate and non-profit research sponsors are already under way. UC must prepare for the challenge of lower levels of federal support for research, which will mean a research workforce and a research enterprise smaller than it is today.

### For more information

UC's *Budget for Current Operations 2014–15* contains information on the contributions and impacts of UC's research enterprise on the California economy. It is at [www.ucop.edu/operating-budget/\\_files/rbudget/2014-15-budget.pdf](http://www.ucop.edu/operating-budget/_files/rbudget/2014-15-budget.pdf).

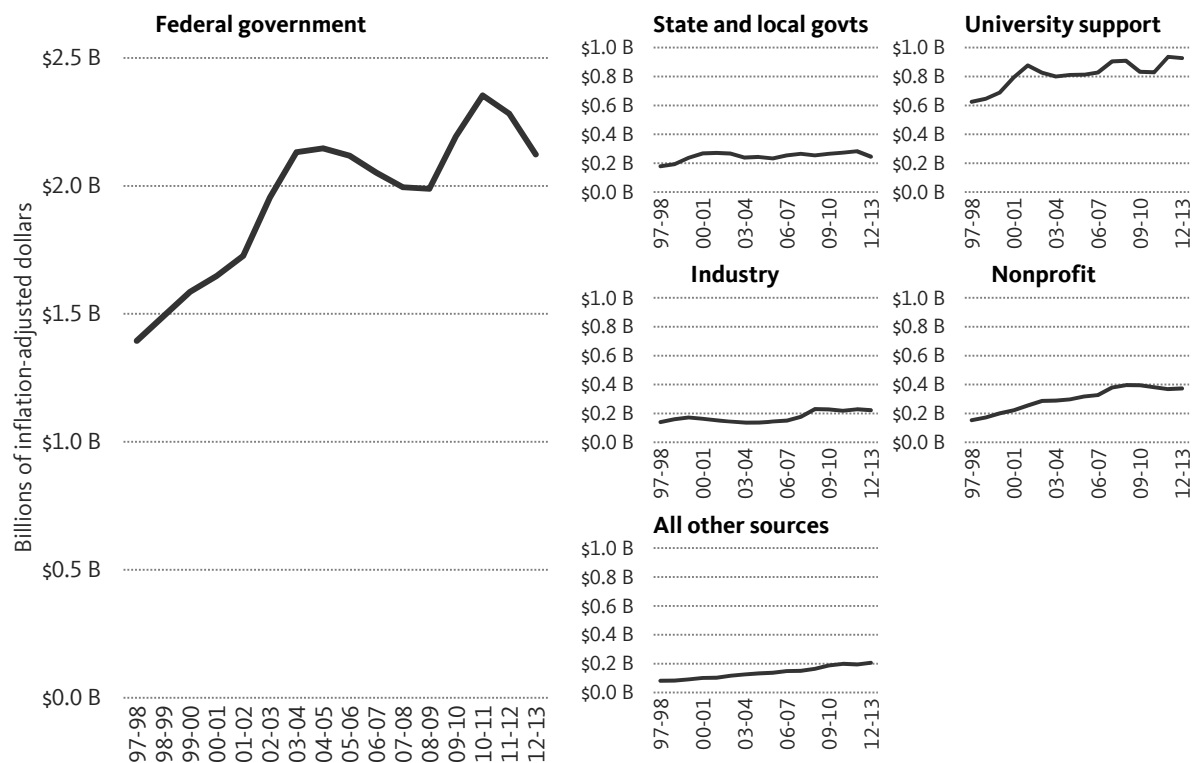
The *Technology Commercialization Report* is at [www.ucop.edu/innovation-alliances-services/\\_files/ott/genresources/documents/IASRptFY13.pdf](http://www.ucop.edu/innovation-alliances-services/_files/ott/genresources/documents/IASRptFY13.pdf).

The UCOP Office of Research and Graduate Studies website, [www.ucop.edu/research-graduate-studies/](http://www.ucop.edu/research-graduate-studies/), contains a number of resources about UC's research enterprise.

## 10.1 RESEARCH EXPENDITURES

### Federal funds support most of the research work done at UC.

#### 10.1.1 Direct research expenditures, by source Universitywide 1997–98 to 2012–13



Source: UC Corporate Financial System<sup>1</sup>

Fifty-two percent of UC’s research expenditures in 2012–13 came directly from federal agencies. A further 8 percent of expenditures represents federal flow-through funds that came to UC as sub-awards from state and private sources. Together, 60 percent of UC’s research expenditures started out as federal funds.

About three-quarters of UC’s federal research funds came from just two agencies: the National Institutes of Health and the National Science Foundation.

Fluctuations in federal appropriations have a major impact on UC’s research. Cutbacks at key federal agencies, starting in 2006, ended a long period of growth and resulted in a decline in research

expenditures. This downturn was reversed in 2009–10 by the American Recovery and Reinvestment Act (ARRA), which provided over \$1 billion in research funds to UC. The recent round of reductions in federal appropriations for research and development also has had a significant impact on UC’s research enterprise, and this decline in activity is likely to continue as long as agency appropriations remain at current levels.

University support, accounting for 23 percent of all 2012–13 direct research expenditures, derives from a variety of sources. These institutional funds include UC general funds (including a portion of the recovered indirect cost amounts), student tuition, state government specific appropriations, endowment income and gifts.

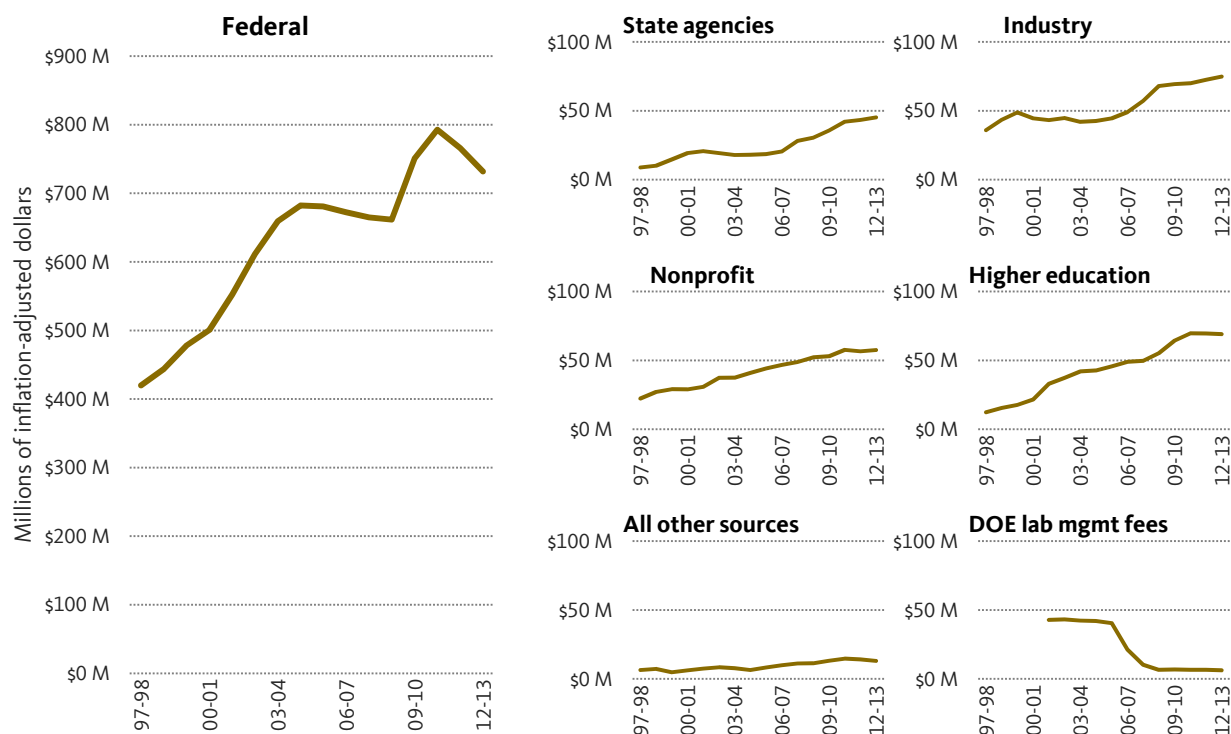
<sup>1</sup> Amounts have been adjusted for inflation and do not include accrual funds for postemployment retirement benefits or indirect cost recovery funds.



## 10.1 RESEARCH EXPENDITURES

### The true costs of conducting sponsored research at UC are significantly greater than the amounts the University receives, even for federally funded projects.

#### 10.1.2 Research indirect cost recovery, by source Universitywide 1997–98 to 2012–13



Source: UC Corporate Financial System

Budgets for externally funded research projects include both a direct cost component — the actual amount of salaries, benefits, equipment and materials needed to conduct the project — plus a percentage to cover the facilities and administration required to house and support the research project, including debt service, maintenance, libraries and the like. These facilities and administrative costs are called “indirect costs” and are billed at a percentage of the direct charges.

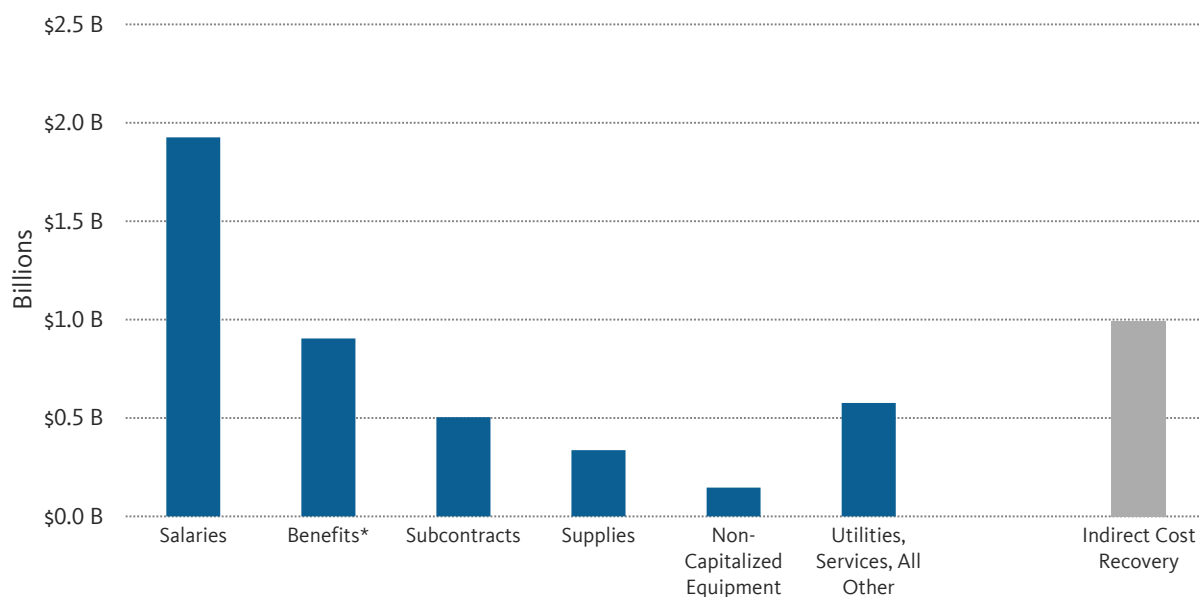
The true indirect costs of research, however, typically are much higher than the rate that research sponsors are willing to pay to UC or, for that matter, to other research universities. Actual indirect cost recovery rates vary widely among

research sponsors. Rates negotiated with federal agencies are among the highest, at about 52-56 percent, but they are nonetheless estimated to run between 5 and 18 percentage points below the true indirect costs of conducting research. Non-federal research sponsors, including many corporations, most non-profit organizations and the state of California, have policies that limit indirect cost recovery to well below federal rates. UC estimates that the true costs of its research exceed direct and indirect cost recovery by as much as \$600 million annually, and it must make up for this deficit from other sources. One of UC’s long-term financial goals is to increase indirect cost recovery by up to \$300 million annually.

## 10.1 RESEARCH EXPENDITURES

### Salaries and benefits represent more than half of all research expenditures.

#### 10.1.3 Research expenditures, by type Universitywide 2012–13



\*Includes post-employment benefit accruals. Source: UC Corporate Financial System

Total research expenditures of about \$5.4 billion during 2012–13, which include about \$1 billion in recovered indirect costs, represent more than one-fifth of UC’s total operating budget.

About 18 percent of the salaries paid to support research went to ladder-rank and other faculty. Twenty-three percent went to postdoctoral researchers and students, primarily graduate students, providing a critical source of support.

#### Research Salary Distribution

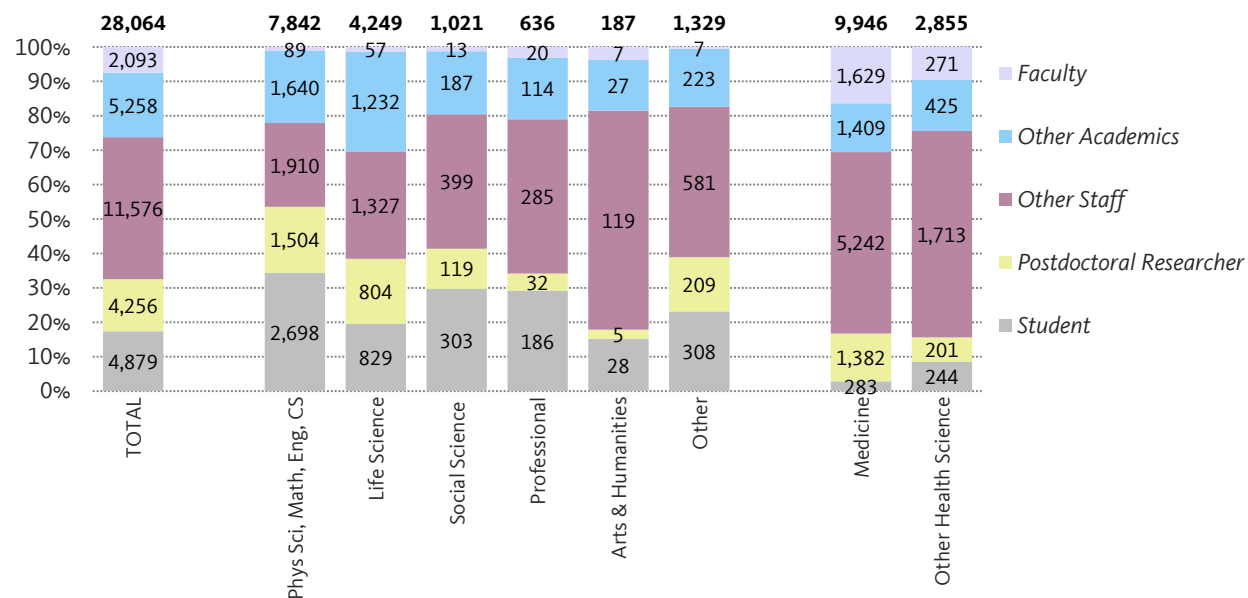
	(\$ millions)
Faculty	\$342
Academic Researchers	\$428
Other Staff	\$704
Postdoctoral Researchers	\$227
Students	\$226
<b>Total</b>	<b>\$1,926</b>



## 10.2 RESEARCH WORKFORCE

**In 2012–13, funded research projects provided employment for about 28,000 full-time-equivalent personnel. This represents 30 percent<sup>1</sup> of the total UC full-time-equivalent workforce, including student employees.**

### 10.2.1 Research workforce, by discipline Universitywide 2012–13



Source: UC Corporate Personnel System<sup>2</sup>

A diverse community of faculty, other academics, postdoctoral researchers, students, professional researchers and support staff all participate in UC's research enterprise. Student researchers (primarily graduate students) contribute significantly to research in all disciplines and comprise almost one-third of the paid research workforce in the physical sciences and technology fields.

The 2012–13 research workforce is about 3 percent smaller than the year before, due principally to the absence of any replacement for the American Recovery and Reinvestment Act funds (ARRA), all of which had to be expended by September 2013. Until there is a significant increase in federal R&D appropriations, the research workforce is likely to remain at current levels or to decline.

The employment shown above includes only staff and students paid through an externally funded research program or by UC's own research funds. It does not capture the effort of faculty and students who engage in research in the normal course of their work, or the staff who provide administrative, facilities and equipment maintenance support as part of the overall University mission. In most disciplines without significant external research funding, such as the arts and humanities, this work contributes the lion's share of the total research effort.

<sup>1</sup> UC has about 98,000 full-time-equivalent employees.

<sup>2</sup> Data shown here represents full-time-equivalent personnel receiving earnings from research accounts.

## 10.2 RESEARCH WORKFORCE

**Postdoctoral scholars (“postdocs”) are an integral part of the research function in many fields, and the training they receive at UC helps to create the next generation of scholars and researchers.**

### 10.2.2 Postdoctoral scholars, by discipline

UC Campuses  
Fall 2013

	UCSD (1,244)	UCSF (1,102)	UCB (1,091)	UCLA (959)	UCD (828)	UCI (344)	UCSB (251)	UCR (155)	UCSC (129)	UCM (34)
Medicine (2,071)	529	880		433	180	43		6		
Life Sciences (1,089)	174		293	66	333	65	31	87	35	5
Physical Sciences /Math (919)	179		235	147	74	109	61	35	70	9
Engineering/ Comp Sci (847)	140		256	113	116	35	139	17	16	15
Oth Hlth Prof & Clinical Sci (669)	127	215	54	136	66	70				1
Interdisciplinary (296)	64	7	171	7	26	13		2	3	3
Social Sciences (154)	25		40	34	26	5	17	2	4	1
Professional Fields (69)	5		34	17	7	2	1	3		
Arts & Humanities (23)	1		8	6		2	2	3	1	

Source: UCOP Decision Support System, October 2012 Payroll Data.<sup>1</sup>

There are more than 6,100 postdoctoral scholars at UC. Not all have full-time appointments, so the full-time equivalent total is about 4,256. Most if not all postdoctoral scholars are paid from research grants and, for this reason, are more prominent in fields with greater external research funding.

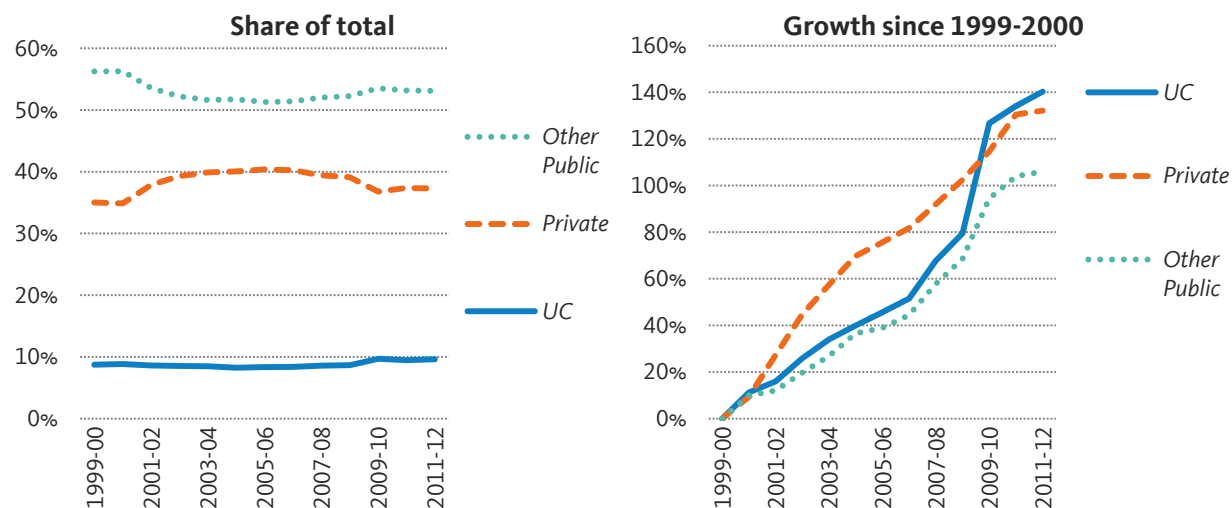
Postdoctoral scholars contribute to the training of graduate students by working with them in the laboratory setting. They may also have a formal supervisory function in the laboratory, depending on arrangements made by the faculty member in charge.

<sup>1</sup> Includes all postdoctoral scholar titles: Employee, Fellow and Paid Direct. Includes those who may hold concurrent titles in other academic or staff categories. Professional Fields include: Architecture & Environmental Design, Business & Management, Communications, Education, Home Economics, Law, Library Science and Social Welfare. Other Health Professions & Clinical Sciences include: Dentistry, Nursing, Optometry, Other Health Professions, Other Health Sciences, Pharmacy, Public Health and Veterinary Medicine.

### 10.3 RESEARCH ACTIVITIES

## The University of California performs nearly one-tenth of all the academic research and development conducted in the United States.

#### 10.3.1 UC share of U.S. research expenditures Universitywide 1999–2000 to 2011–12



Source: IPEDS

UC’s contribution to the academic research and development activity in the U.S., as reported through IPEDS, has remained constant over the last decade, at about 10 percent. Over this period, the rate of growth in UC’s research enterprise exceeded the average pace of other public universities.

This reflects not only UC’s competitiveness in securing federal awards — which provide the great majority of research funds — but also UC’s success in forging productive research relationships with the private sector. As shown in indicator 10.1.1, the most recent round of cutbacks in federal research funds has been partially offset by increases in research contracts with corporate and non-profit sponsors.

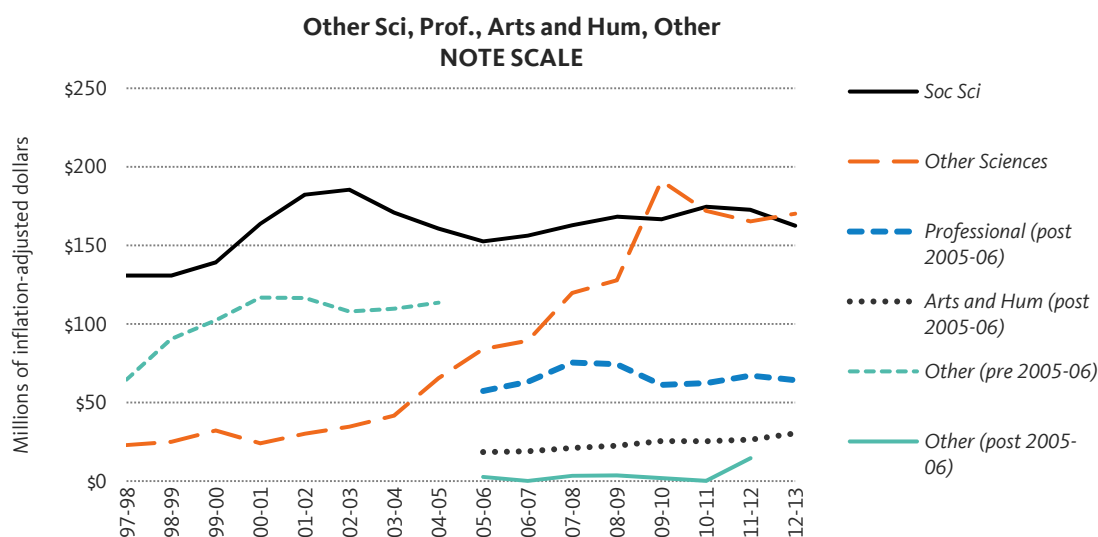
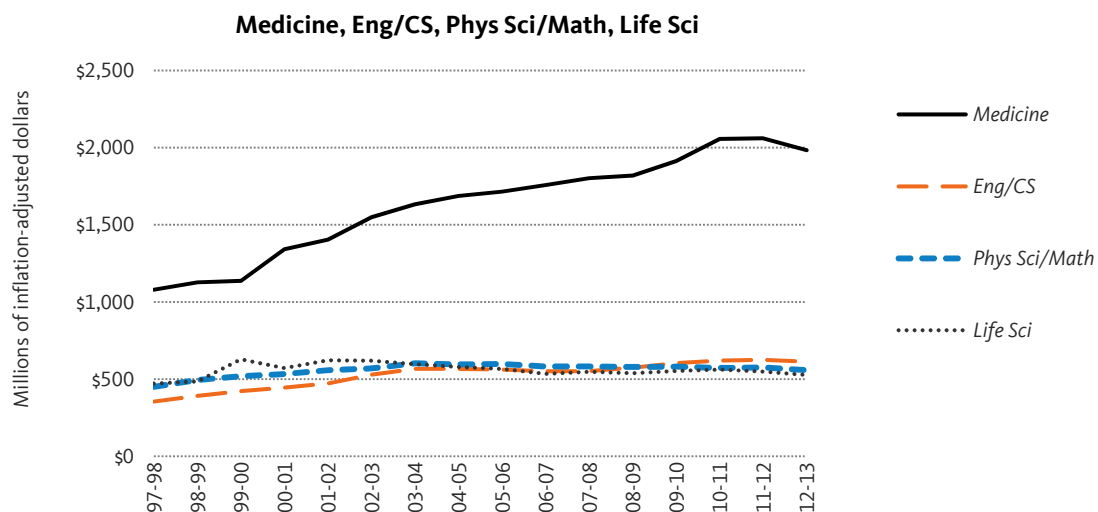


Alex Ardans, right, director of California Animal Health and Food Safety (CAHFS) at the UC Davis School of Veterinary Medicine, and Beate Crossley, graduate student in CAHFS, track animal outbreaks.

### 10.3 RESEARCH ACTIVITIES

**Inflation-adjusted expenditures for research in the medical fields have increased by 84 percent since 1997–98, compared with 40 percent for all other disciplines.**

#### 10.3.2 Direct research expenditures, by discipline Universitywide 1997–98 to 2012–13



Prior to 2005-06, "Other" included Professional and Arts and Humanities. Source: UC Corporate Financial System

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

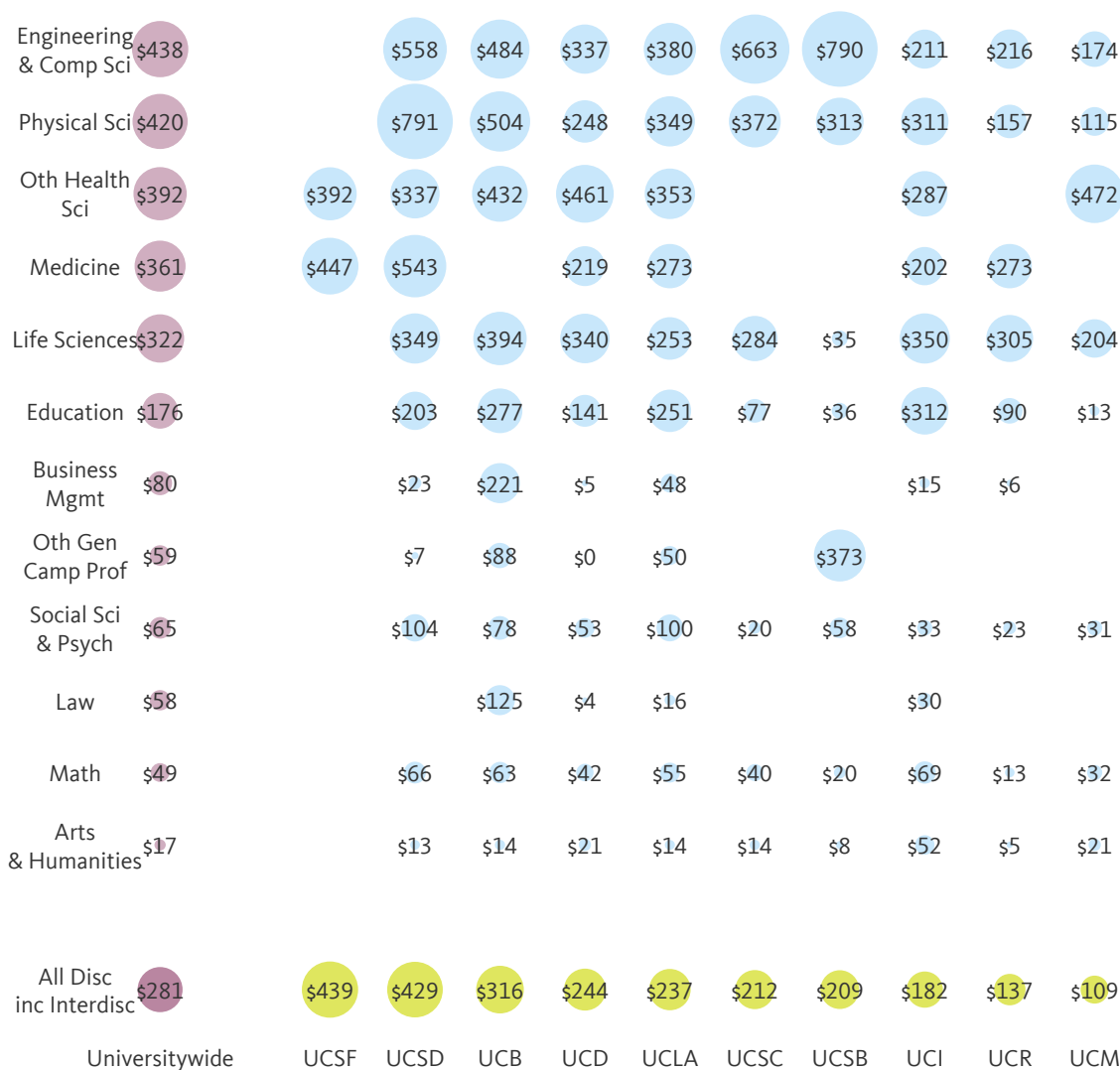
Measures based on research expenditures, however, substantially underrepresent research activity in the social sciences, arts and humanities, and professional disciplines, which make important contributions to scholarship and the quality of life yet have relatively little access to external research funding.



## 10.3 RESEARCH ACTIVITIES

### Annual research expenditures per eligible principal investigator are highest in Engineering and Computer Science and in Physical Sciences.

**10.3.3** Average research expenditure per eligible principal investigator<sup>1</sup>, by discipline, thousands of dollars Universitywide and UC campuses 2012–13



Source: UC Corporate Personnel System and Corporate Financial System<sup>2</sup>

In 2012–13, UC's direct research expenditures were about \$4.2 billion, and 14,800 individuals were eligible to be principal investigators (PIs), resulting in the Universitywide average of \$281,000 per eligible PI, as shown in the chart above.

<sup>1</sup> A principal investigator is a person authorized by the Academic Personnel Manual to apply for and receive grants. Nearly all are faculty, professional researchers or academic administrators. For more information, see the data glossary.

<sup>2</sup> Amounts in this chart were calculated by finding the total of direct research expenditures by discipline, then dividing that amount by the number of individuals in those disciplines on each campus who were eligible to serve as principal investigators.

## 10.4 RESEARCH OUTPUT

### The number of faculty publications is one measure of faculty research productivity.

A crucial component of UC's research mission is the diffusion of knowledge, and publication of research results in journals, books and other media remains among the most important, and certainly the most visible, means of achieving this goal. With vast publication databases now available, it is possible to mine these data sources for information about publications by UC researchers and develop quantitative measures of publication output.

The charts on the following page show faculty publications across three broad academic disciplines: health and life sciences, physical sciences and engineering, and social sciences and humanities. Some important caveats guide the interpretation and use of these tabulations.

Within a given academic discipline, differences in the level of faculty publications are due to a number of factors, among them the nature of scholarship in a given field, size of departments and the number of faculty at each campus working in a particular field. Davis, Irvine, Los Angeles, San Diego and San Francisco, for example, all have large medical schools and associated faculty and researchers, and accordingly show disproportionately high levels of publications in the health and life sciences.

Published outputs cannot be used to compare faculty research productivity across disciplines. The range of types, frequency and venues for the dissemination of research varies greatly among academic disciplines. In addition, the number of newly hired faculty and researchers can affect a campus's measure here, as it takes time for a new hire to publish articles.

Some disciplines favor shorter, multi-authored publications while other disciplines favor longer, sole-authored publications. Co-authorship, for example, is more common in the life and physical sciences, where credit may be shared with a team of researchers, than in the social sciences and humanities, where papers tend to be single-authored. Thus, faculty in the life and physical sciences may have more publications credited to them than do faculty in the social sciences and humanities, in part because of different publication norms.

Faculty in the social sciences and the humanities also publish books as well as scholarly articles; however, the 2013 Web of Science database, from which the data for this indicator are drawn, focuses principally on journals, and its coverage of books is much less thorough. Thus, it underestimates faculty research contributions in the arts, social sciences and humanities.

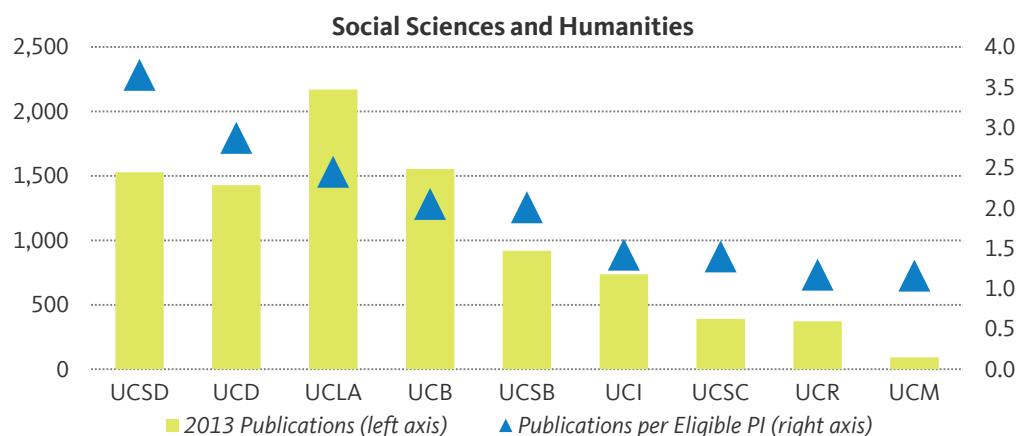
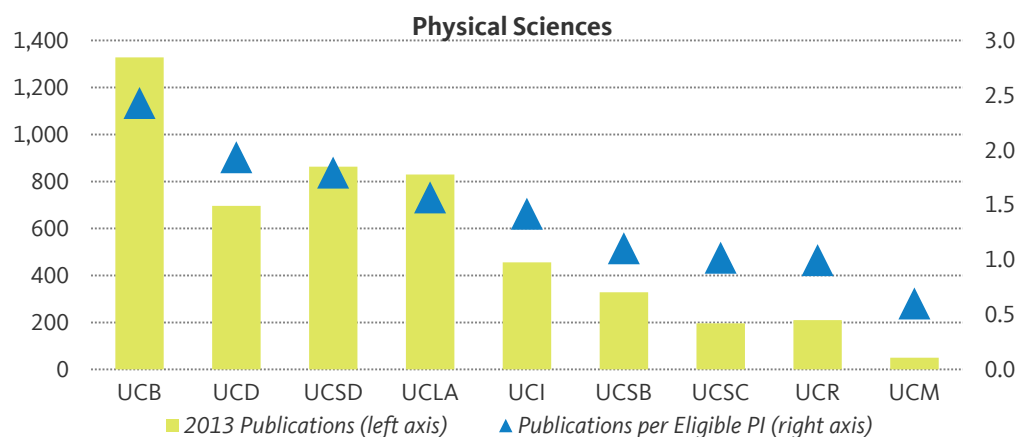
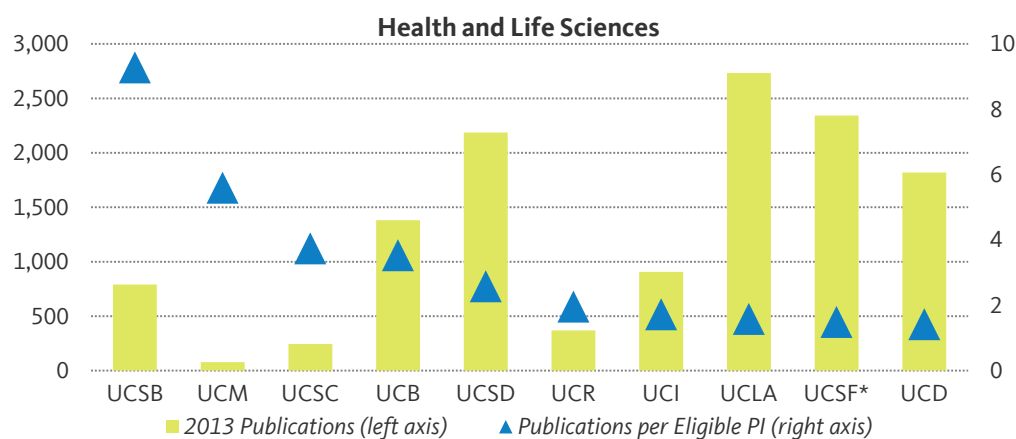


*Books in the UC Berkeley library.*

## 10.4 RESEARCH OUTPUT

### 10.4.1 Publications, by broad discipline and per eligible principal investigator (PI)<sup>1</sup>

UC campuses  
2013



Source: Web of Science and UC Corporate Personnel System. All UCSF publications are included in health/life sciences. Eligible PI count is from winter 2012–13.

<sup>1</sup> Information on eligible principal investigators (PI) can be found in Indicator 10.3.3.

# Chapter 11. Health Sciences and Services

## Goals

Under California's *Master Plan for Higher Education*, the University of California is delegated the primary responsibility in public higher education for doctoral education. For the health professions, this means that UC is the only California public institution chartered to grant the following professional degrees: D.D.S. (Doctor of Dental Science), M.D. (Doctor of Medicine), O.D. (Doctor of Optometry), Pharm.D. (Doctor of Pharmacy) and D.V.M. (Doctor of Veterinary Medicine). Along with other private educational institutions, UC also provides doctoral education leading to Ph.D. degrees in Nursing and Public Health, as well as the Dr.P.H. (Doctor of Public Health) degree.

UC health sciences programs are national and international leaders in teaching, research and clinical care. In support of these programs, Health Sciences and Services (HSS) provides leadership and strategic direction to advance the missions of the University's 17 health professional schools and ten hospitals, referred to collectively as UC Health.

UC's mission of instruction, research and public service is carried out across the entire system, but a great portion of the service activity, measured in terms of operating expenditures, occurs under the auspices of UC Health. In 2012–13, operating expenditures for UC Health rose to about \$10.9 billion, more than 41 percent of the University's total operating budget. Of this amount, \$2 billion represented instructional activities, \$2 billion was spent on research, and \$6.9 billion was expended by the medical centers in the delivery of health care services.

In fall 2013, about 40 percent of all UC faculty worked in health science disciplines. These faculty made up about one-fifth of all ladder rank faculty and about two-thirds of all other faculty across the UC system. Ladder-rank faculty have duties primarily focused on teaching and research. Other faculty primarily are clinical faculty; other academics primarily are researchers.

In fall 2013, 45 percent of postdoctoral fellows were in health science disciplines.<sup>1</sup>

## Health science academic workforce headcount Fall 2013

	Medicine	Other Health
Ladder-rank and equiv. faculty	1,270	516
Other faculty	5,204	905
Other academics	1,892	867
Postdoctoral fellows	2,071	669

## Educating health care professionals

The University of California operates the largest health sciences instructional program in the nation, enrolling more than 14,000 students annually. The systemwide instructional program includes six schools of medicine and three smaller medical education programs (located in Berkeley, in Fresno and at the Charles R. Drew University of Medicine and Science); three schools of nursing (and one program in nursing science at Irvine); two schools each of dentistry, pharmacy and public health; and one school each of optometry and veterinary medicine. The long-standing medical education program that operated as a joint program between UC Riverside and UCLA for more than 30 years has transitioned to an independent UC medical school, which enrolled its inaugural class of 50 students at Riverside in fall 2013.

## A focus on medical research

Health science research expenditures represent the single largest disciplinary focus of UC's research enterprise. Forty-six percent of UC's total research expenditures were for medical research, including related fields such as public health and veterinary medicine. More than half of the funding for this medical research was provided by federal agency awards to UC.

<sup>1</sup> Statistics are by headcount rather than FTE. Headcount numbers tend to be larger than FTE, especially in the health sciences, because non-ladder-rank health science faculty, such as clinical faculty, are more likely to have joint or partial appointments.

Clinical trial research is an increasingly important component of UC's medical research enterprise. During 2012–13, there were more than 3,000 clinical trials underway systemwide, and of the \$2 billion UC received that year in medical research awards, about 14 percent of the total was targeted for clinical trials. More than 70 percent of these clinical trial projects were sponsored by businesses.

These clinical trials occupy a unique position in UC's research enterprise. They represent the final stage in the journey from a scientific discovery or innovation to an effective therapy or treatment that could significantly enhance global health.

### Keeping California healthy

The University of California's five academic medical centers (Davis, Irvine, Los Angeles, San Diego and San Francisco) provide a vast resource for the clinical training programs of UC health professional schools. These centers prepare future generations of health professionals; they catalyze major advances in biomedical and clinical research; and they serve as California's fourth-largest health-care delivery system, employing approximately 5,000 faculty physicians and more than 36,000 hospital staff, including 10,000 nurses. UC staffs five major trauma centers, providing half of all transplants and one-fourth of extensive burn care in the state. UC medical centers manage more than 147,000 inpatient admissions, 290,000 emergency room visits and 3.8 million outpatient visits each year. Roughly 60 percent of all hospital days are from Medicare, Medi-Cal or uninsured patients. In support of its teaching, research and public service missions, UC health programs also maintain active relationships with more than 100 affiliated Veterans Affairs, county and community-based health facilities located throughout California.

In view of the size and contributions of health-related programs across the UC system, select performance indicators related to students, faculty and research are included both in this chapter and in the respective sections of this report that are devoted to those categories. For example, indicators related to students enrolled in UC professional degree programs are also included in Chapter 5 (Graduate Academic and Professional Degree Students). Chapter 6 (Faculty and Other

Academic Employees) includes indicators related to UC faculty appointments, headcounts and conference of doctoral degrees. Information regarding diversity is found in Chapter 8. Research workforce indicators for medicine and health sciences, as well as indicators for general funding and expenditures, are included in Chapter 10 (Research).

In addition, this chapter includes information and performance indicators for various aspects of the University's health sciences system, including information regarding health professional degree students; health sciences instruction and research expenditures; and the health sciences academic workforce. This section also includes a number of indicators and metrics related to the University's health care delivery system.

### Looking forward

California's population is growing, aging and increasing in diversity. Already the most populous state in the nation, California's population is projected by the Department of Finance to grow 39 percent from 2012 to 2060. Statewide shortages and misdistribution of health providers already exist in many health professions. These challenges will grow as health care reforms drive increasing demand for quality and accountability in the delivery of health services. At a time of unprecedented budgetary challenges, the financial success of UC medical centers has been an important resource for helping to back-fill diminishing state support for UC schools of medicine. However, the changing environment for health care signals changes that threaten this financial success and the ability of the medical centers to help support the academic mission of UC medical schools. Among these financial challenges are: 1) reductions in federal and state spending for programs such as Medicare, Medi-Cal and the National Institutes of Health; and 2) challenges associated with the implementation of health care reform.

Notwithstanding these challenges and the uncertainties related to health reform, UC Health is working to support new initiatives and developments to help meet current and future health care needs. Within the health professions, these include the opening of the Betty Irene Moore School of Nursing at UC Davis; the creation of new programs at each UC medical school in medical education focusing specifically on the needs of medically underserved communities; and the opening of a new medical school at UC Riverside concentrating on the needs of California's Inland Empire, making UCR the first new allopathic (M.D.-granting) medical school to open in California in more than 40 years. To recognize and accelerate implementation of innovative practices in clinical care, UC Health launched the new UC Center for Health Quality and Innovation in 2010. The center is expected to promote innovations in clinical care

that improve patient outcomes and quality of care within the UC system and beyond. These and other activities are among the many initiatives now underway at UC to help improve quality, access and value in the delivery of health services.

### For more information

UC Health Sciences and Services:

[www.universityofcalifornia.edu/sites/uhealth](http://www.universityofcalifornia.edu/sites/uhealth)

*Scale for Value: Briefing On The UC Health Clinical Enterprises (March 2014):*

<http://regents.universityofcalifornia.edu/regmeet/mar14/h2.pdf>

*Update on the Health of UC Health (May 2014):*

<http://regents.universityofcalifornia.edu/regmeet/may14/h1.pdf>.



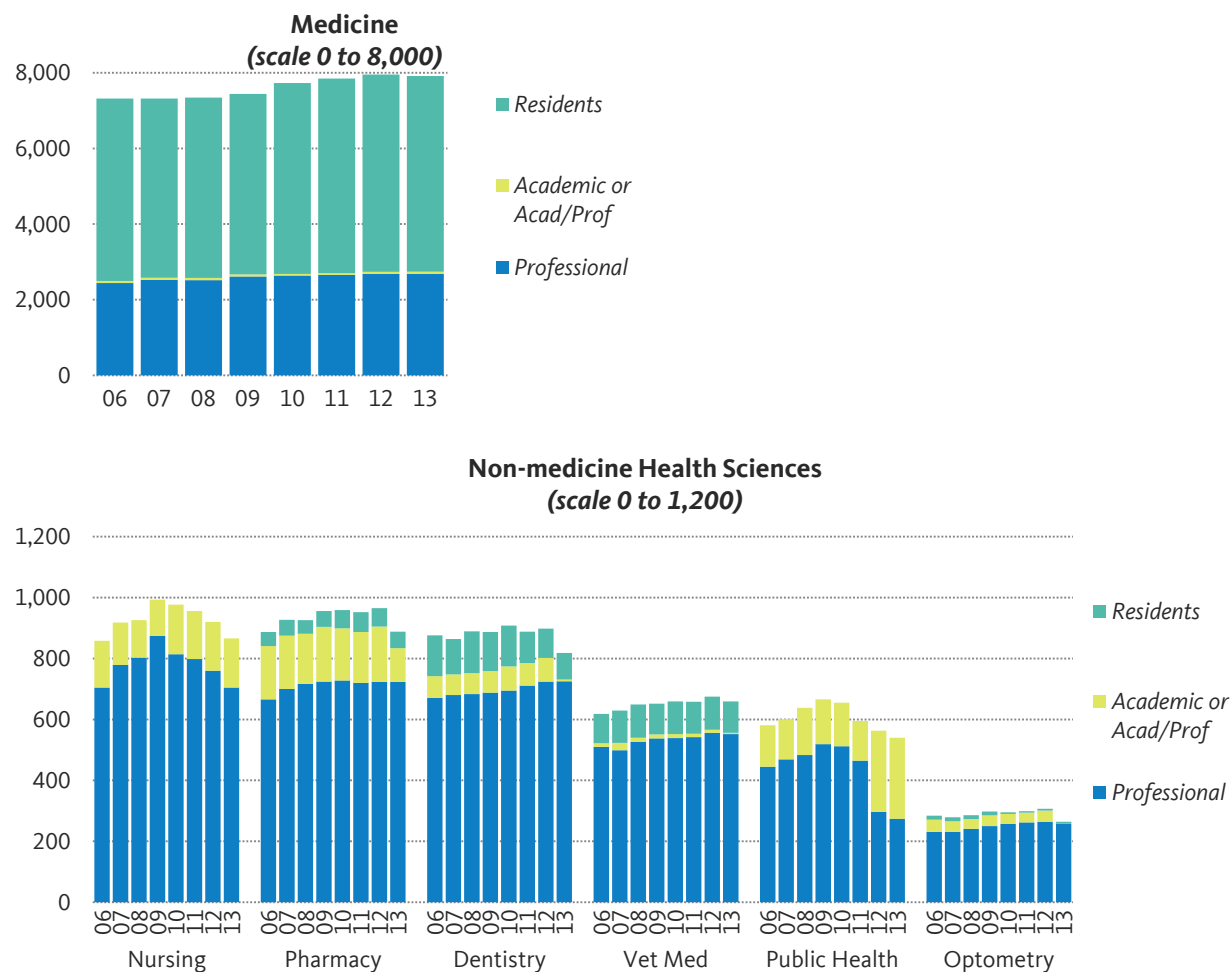
*Dr. Praveen Mummaneni, co-director of the UCSF Spine Center and UCSF Spine Fellowship Program and director of the UCSF Minimally Invasive Spine Program.*



## 11.1 UC HEALTH INSTRUCTION

**Medicine is by far the largest UC health professional degree program. Medical students and residents together make up roughly two-thirds of all UC health professions students.**

### 11.1.1 State-supported graduate health sciences students, by discipline Universitywide Fall 2006 to fall 2013



Source: UC Corporate Student System

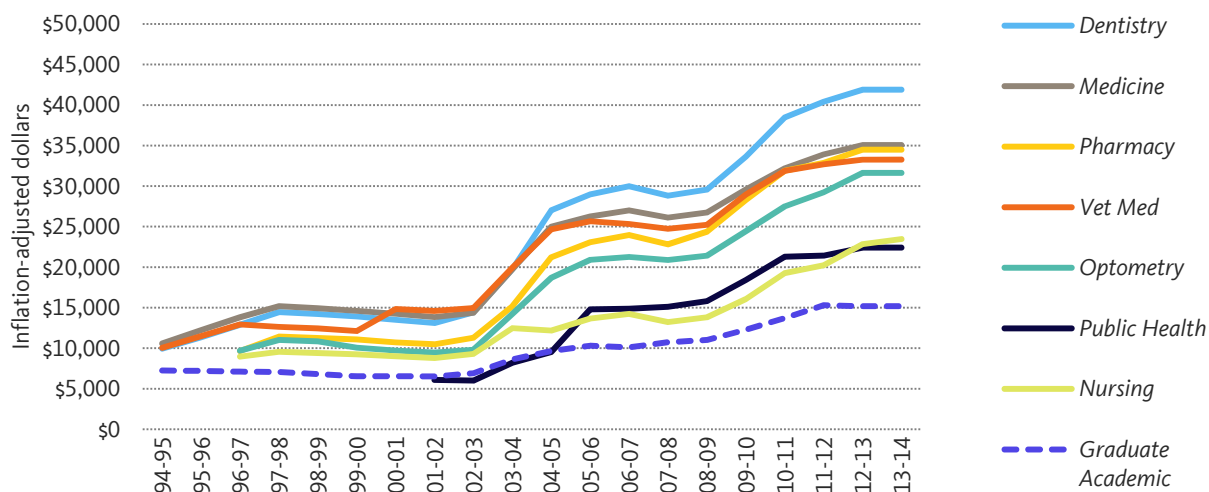
Health sciences students are in one of three program categories: professional degree programs, academic programs or residency programs. Professional degree programs lead to degrees such as the M.D., D.D.S or D.V.M. Academic programs lead to the Ph.D. Residents are professional school graduates (i.e., dental, medical, optometry, pharmacy and veterinary medical schools) who participate in specialty training programs after completing their degree programs.

In addition to the approximately 12,000 students and residents described above, there are approximately 2,300 UC health science students in health-related, life-science disciplines such as biomedical science, bioengineering, neuroscience and epidemiology.

## 11.1 UC HEALTH INSTRUCTION

### Tuition and fees for UC students in health professions have grown rapidly over the past few years, but did not increase in 2013–14.

#### 11.1.2 Average total charges<sup>1</sup> for UC Health professional degree students Universitywide 1994–95 to 2013–14



Source: UC Budget Office

Student charges include tuition and fees assessed systemwide to all graduate students, along with professional degree supplemental tuition, campus-based fees and health insurance assessed at the campus program level to professional degree students.

Professional degree fees (now referred to as professional degree supplemental tuition) vary across programs and across campuses; the figures shown above are the averages across all campuses with the associated programs.

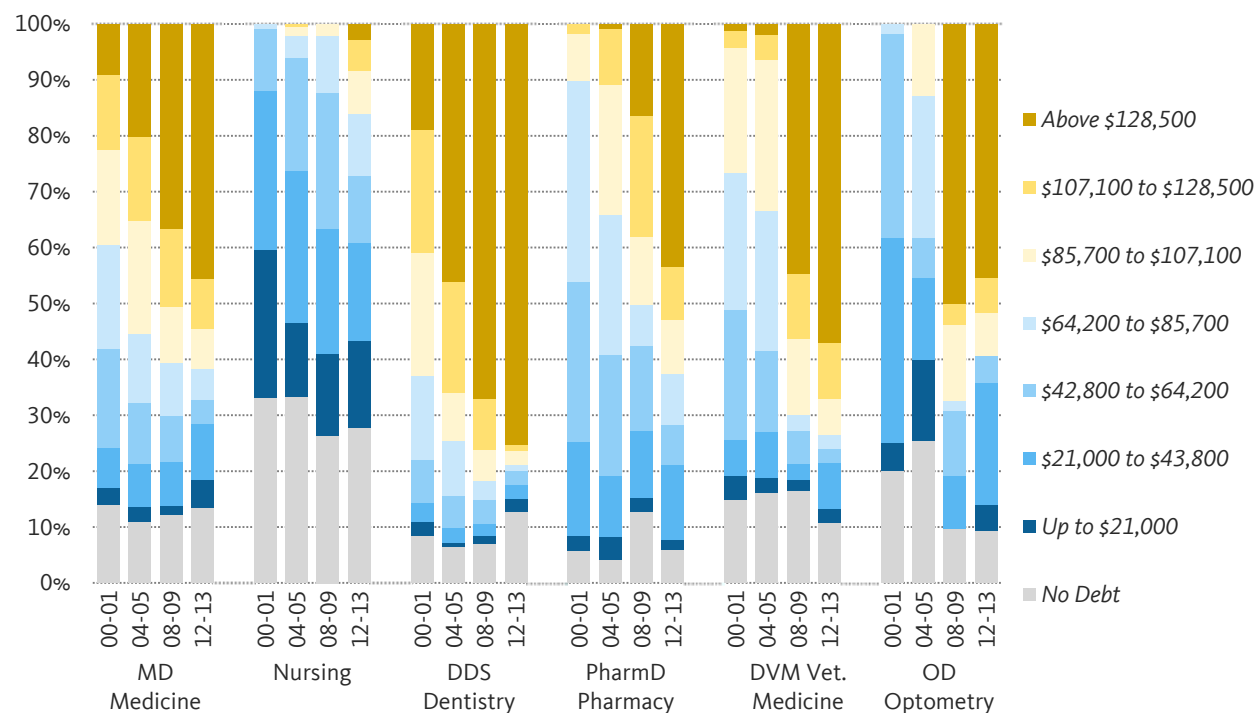
State support for UC's professional schools declined significantly during recurring state fiscal crises that began in the early 2000s. This has resulted in a dramatic increase in professional fees. The figures above demonstrate the steady and substantial rise in total required charges over the past decade. Between 2002–03 and 2013–14, average total inflation-adjusted charges for UC medical schools increased from approximately \$14,000 to \$35,000 for California residents — a jump of 149 percent. Total charges now exceed those of comparison public institutions and in some cases may be equal to or greater than the average for comparison private institutions.

<sup>1</sup> Calculated as the mean of total California resident charges at each campus. Includes mandatory tuition and fees (educational and student services), professional degree supplemental tuition, health insurance, campus-based fees and other fees where applicable. Averages are simple averages based on campus amounts; the number of students in each program is not taken into account.

## 11.1 UC HEALTH INSTRUCTION

### As fees for UC health professional degree students have increased, so has student debt.

#### 11.1.3 UC Health student debt at graduation Universitywide 1999–2000 to 2012–13



Source: UC Corporate Student System<sup>1</sup>

Increases in tuition over the past decade have increased the debt burden of UC health professional degree students. Rapid increases in the average student debt of graduates of UC schools of dentistry, medicine and veterinary medicine are illustrated in the figure shown above, and are representative of debt patterns for other health science professional programs. With rising tuition and fees comes a cumulative impact over the course of a student's enrollment in a program. For example, a medical student graduating in 2000 would have paid approximately \$58,500 in tuition and fees over four years when adjusted for inflation. A medical student graduating in 2013 would have paid approximately \$136,000 (inflation-adjusted). The figure above aligns with the increase in debt burden over this same period.

At least one-third of the revenue from professional school fees is used to provide financial aid to help maintain the affordability of a professional school education. Nonetheless, the cumulative impact of these rapid increases raises serious concerns regarding the educational debt burden for graduates of UC's professional degree health science programs and the University's ability to recruit the most highly qualified students. Anticipated debt levels are also identified as a major concern by students who have previously expressed interest in primary-care careers and/or one day practicing in a medically underserved community or health professional shortage area.

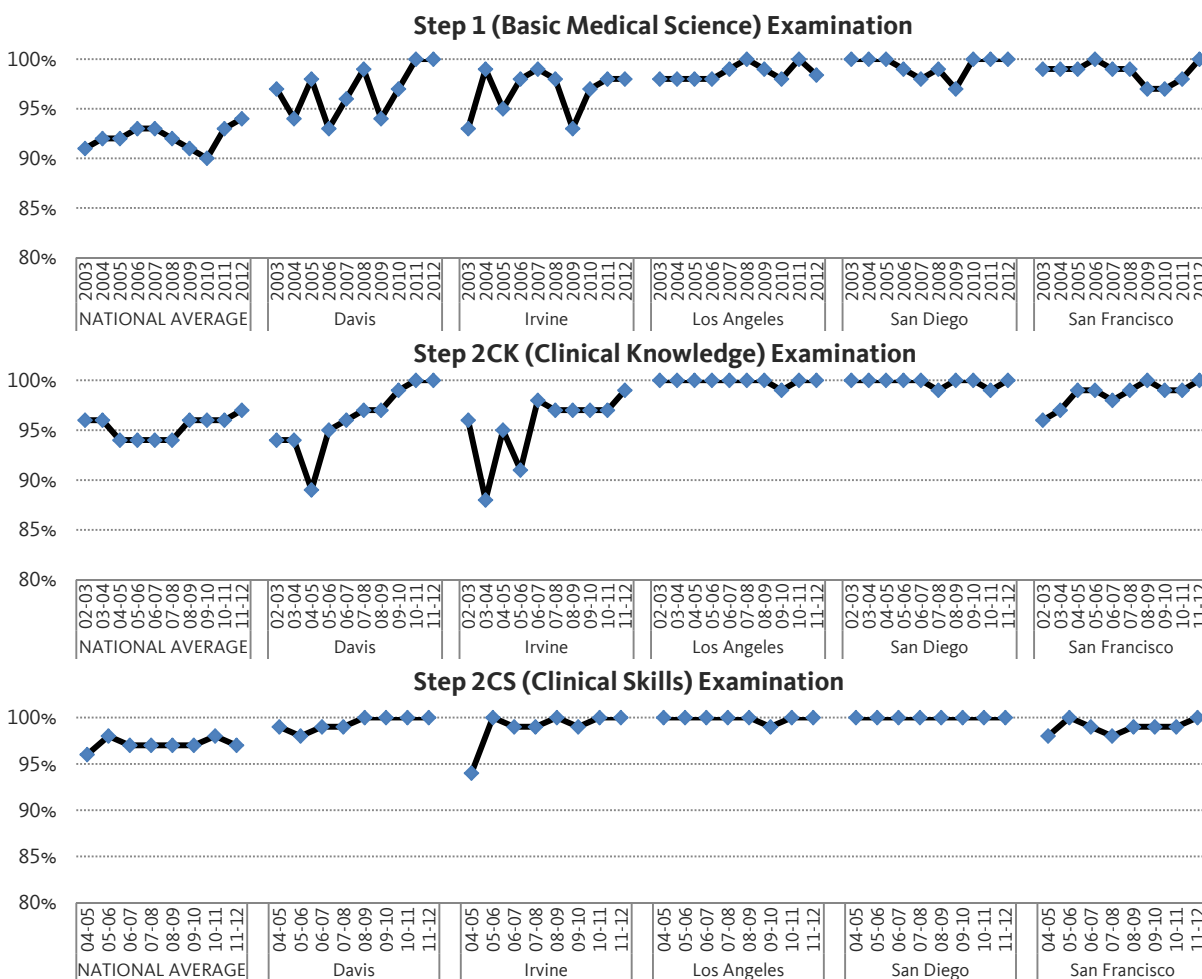
<sup>1</sup> Average debt is for those with debt.

## 11.1 UC HEALTH INSTRUCTION

### The proportion of UC medical students passing the United States Medical Licensing Examination (USMLE) is consistently higher than the national average.

#### 11.1.4 United States Medical Licensing Examination (USMLE) pass rates

UC medical schools  
2001–02 to 2010–11



Source: UC Medical Schools<sup>1</sup>

Sponsored by the Federation of State Medical Boards and the National Board of Medical Examiners, the United States Medical Licensing Examination is the examination for medical licensure in the United States.

Step 1 assesses whether a student understands and can apply important concepts of the sciences to the practice of medicine, with special emphasis on

principles and mechanisms underlying health, disease and modes of therapy.

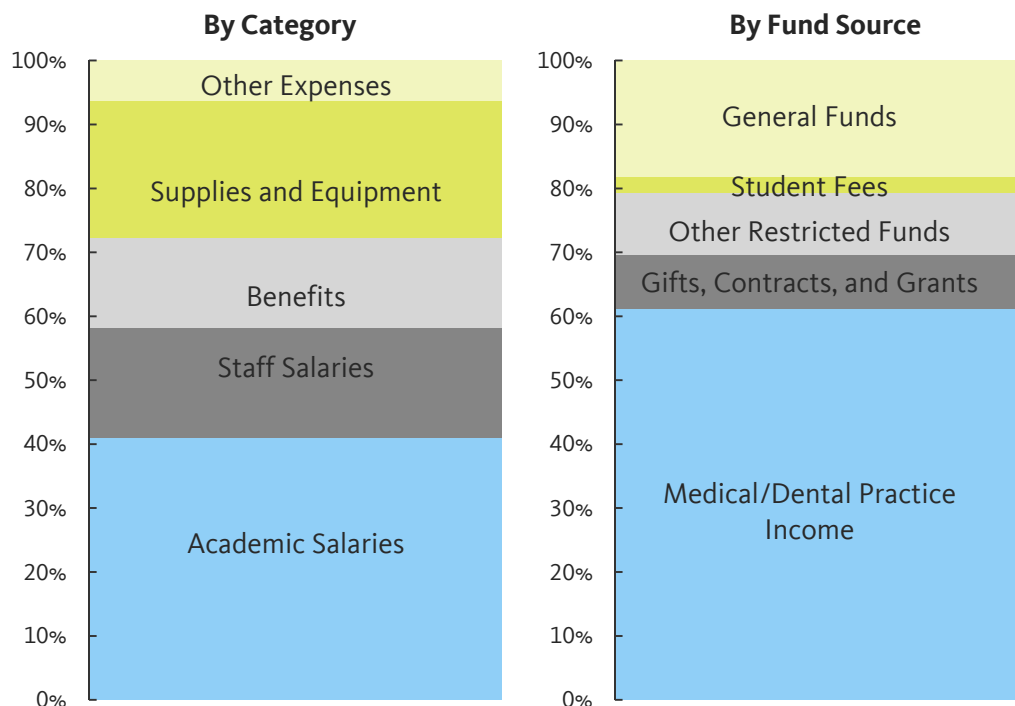
Step 2 assesses whether a student can apply medical knowledge, skills and understanding of clinical science, including emphasis on health promotion and disease prevention. Step 2 has two components: Clinical Knowledge (CK) and Clinical Skills (CS).

<sup>1</sup> Data presented here represent overall pass rates; students can take the USMLE exams multiple times if they do not pass. The national average is based on M.D. students in the United States and Canada. Step 1 results are collected based on the calendar year while Step 2CK and 2CS are collected on a fiscal year basis. The availability of historical data differ by exam.

## 11.1 UC HEALTH INSTRUCTION

**Medical and dental practice income supported over half of the instructional expenditures in the health sciences in 2012–13 (primarily for their respective educational programs).**

### 11.1.5 Health sciences instructional expenditures Universitywide 2012–13



Source: UC 2013–14 Budget for Current Operations<sup>1</sup>

Academic and staff salaries and benefits constitute nearly three-quarters of all health sciences instructional expenditures.

UC general funds provided about one-fourth of expenditures in health sciences instruction. Student fees, primarily professional school fees (i.e., Professional Degree Supplemental Tuition) also contributed to funding health sciences instruction.

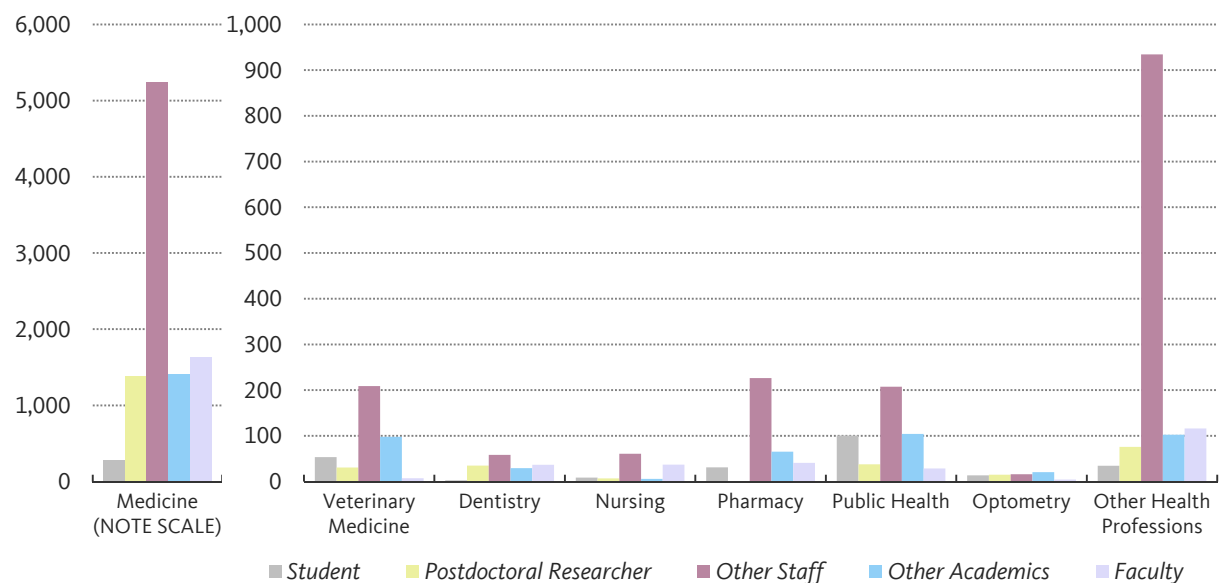
<sup>1</sup> For additional information, see [www.ucop.edu/operating-budget/\\_files/rbudget/2013-14-budget.pdf](http://www.ucop.edu/operating-budget/_files/rbudget/2013-14-budget.pdf).

## 11.2 UC HEALTH RESEARCH

### Research in medicine constitutes the bulk of health science research and involves by far the largest number of faculty, staff and students.

#### 11.2.1 Health science research workforce FTE [NOTE SCALES]

Universitywide  
2012–13



The approximately 12,800 FTE shown above represent about 27,500 headcount personnel. Students and staff assistants often have part-time appointments. Faculty and academics, in addition to their research duties, have joint appointments as instructors, administrators, and clinical service providers.

Other academics are primarily project scientists, professional researchers, specialists and medical interns and residents. Other staff include research associates, technicians, laboratory services, computer programmers/analysts, social services and administrative support.

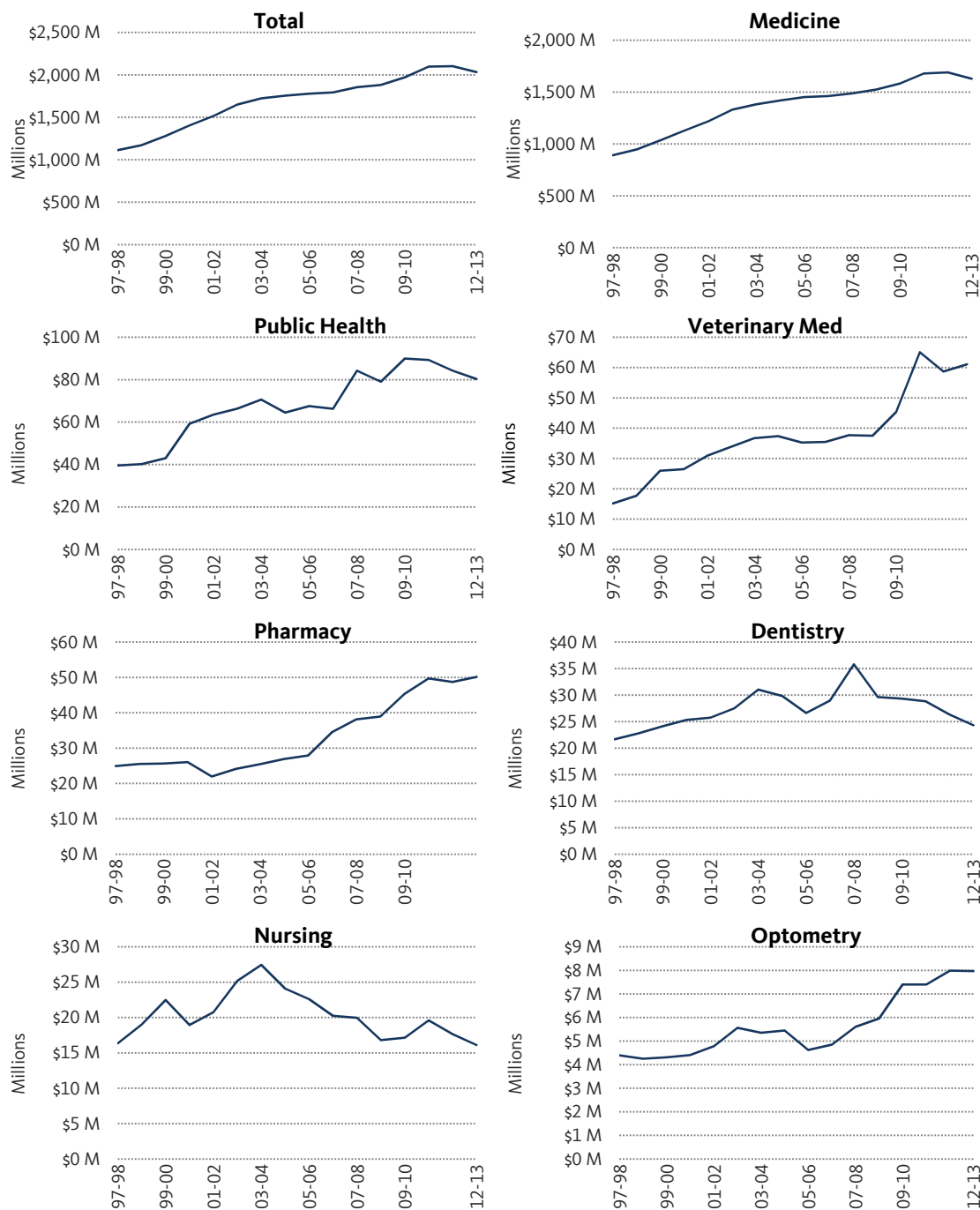
Source: UC Corporate Personnel System. Categories are based on UAS discipline assignment.



## 11.2 UC HEALTH RESEARCH

Research expenditures in the health sciences made up 46 percent of all UC direct research expenditures in 2012–13, compared with 43 percent in 1997–98.

**11.2.2** Research expenditures, by health science discipline [NOTE DIFFERENT SCALES]  
Universitywide  
1997–98 to 2012–13



Source: UC Corporate Financial System. All amounts are adjusted for inflation.

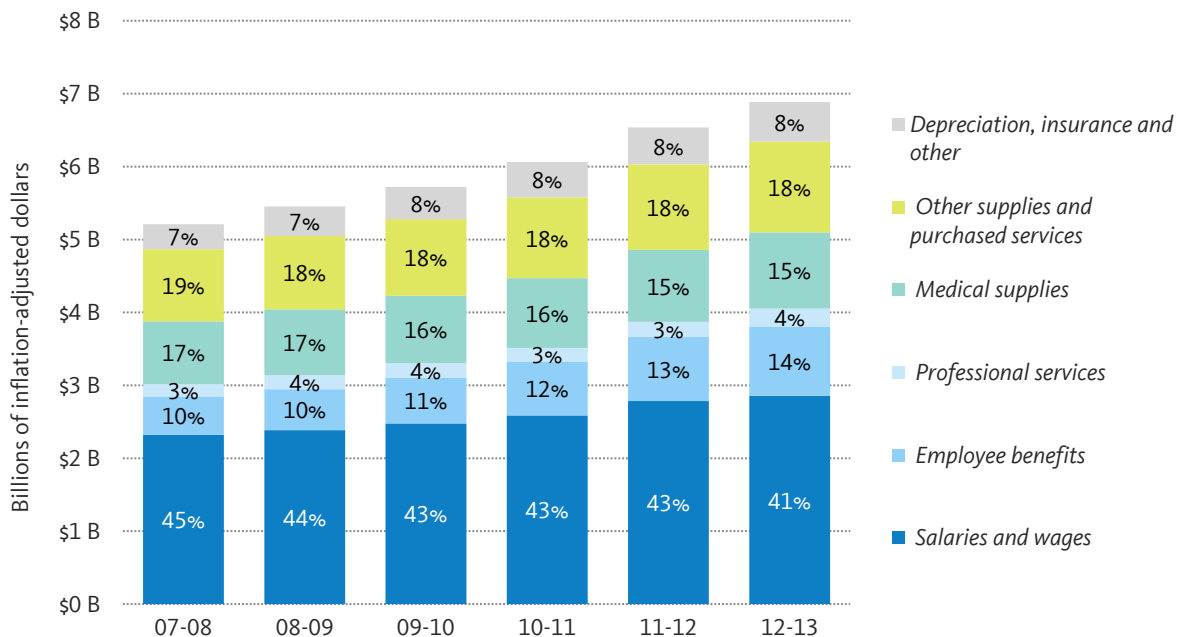
### 11.3 UC HEALTH MEDICAL CENTERS

Reflecting growth in UC’s clinical enterprise, inflation-adjusted medical center operating expenses have increased 32 percent over the past six years.

#### 11.3.1 Medical center operating expenses

Universitywide

2007–08 to 2012–13

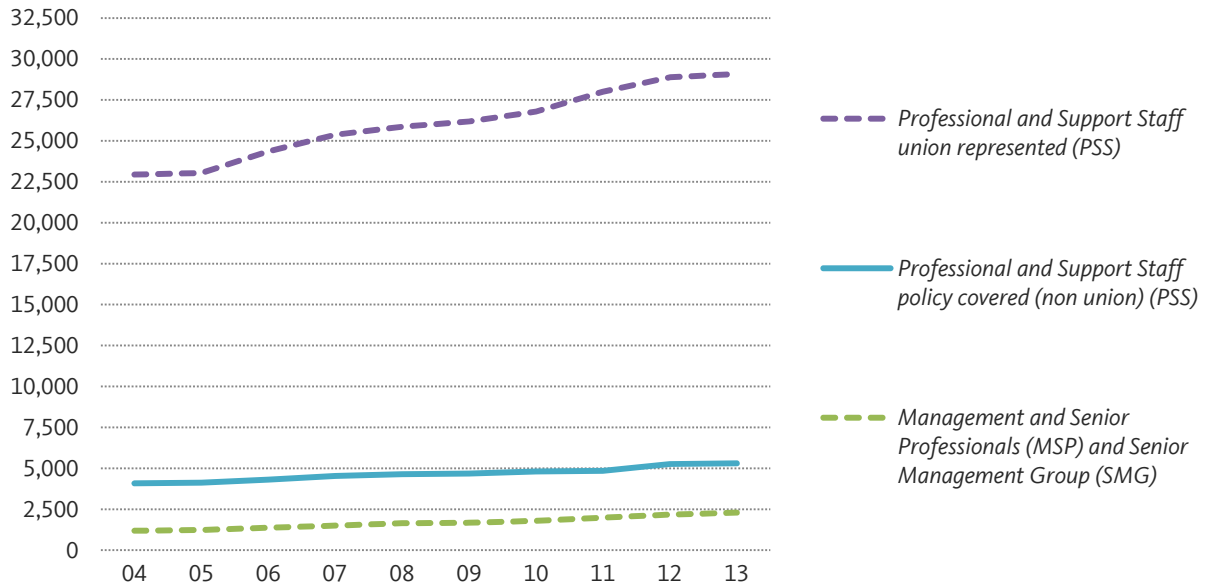


Source: UC Medical Centers Audited Financial Statements

### 11.3 UC HEALTH MEDICAL CENTERS

## The majority of medical center staff are in UC's Professional and Support Staff (PSS) personnel program; the majority of these are unionized.

### 11.3.2 Medical center staff, by personnel program Universitywide Fall 2004 to fall 2013



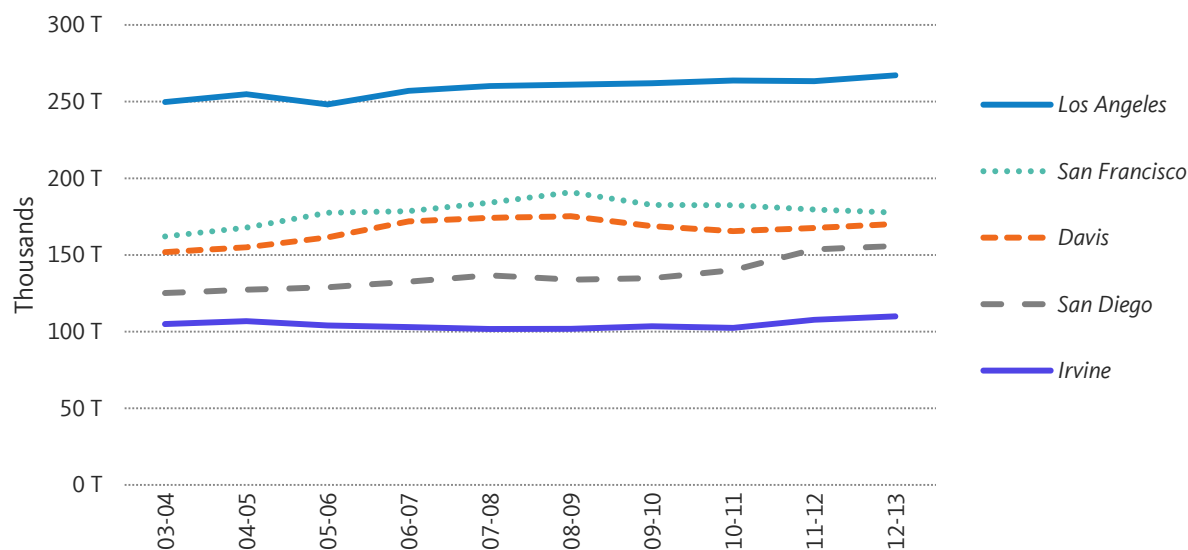
Source: UC Corporate Personnel System

Three unions — AFSCME Patient Care Technical Union, the California Nurses Association and the UPTe Health Care Professionals — represent more than 90 percent of the unionized medical center employees.

### 11.3 UC HEALTH MEDICAL CENTERS

## UC hospitals provide almost 900,000 inpatient days a year and serve a significant number of patients statewide.

### 11.3.3 Hospital inpatient days UC medical centers 2003–04 to 2012–13



Source: UC Medical Centers' Audited Financial Statements<sup>1</sup>

The University's academic medical centers operate in highly dense areas located throughout the state, including Orange, Sacramento, San Diego and Los Angeles counties as well as the San Francisco Bay Area. Three of the five centers are former county hospitals. Each medical center has several primary care and specialty clinics distributed in the communities they serve.

In addition to providing primary and specialty care, UC medical centers treat critically ill newborns, care for cancer patients, and treat half of all transplant patients and one-quarter of extensive burn cases in California. As tertiary and quaternary care centers, they also treat patients from other hospitals that have exhausted all other efforts.

"Inpatient days" represents the total number of days that all patients spend in a hospital bed. The graphs presented here display the total number of inpatient days at the five UC medical centers.

<sup>1</sup> UCLA Medical Center = UCLA Medical Center, Ronald Reagan, Santa Monica and Resnick Neuropsychiatric  
UCSD Medical Center = UCSD Medical Center, Hillcrest and Thornton  
UCSF Medical Center = UCSF Medical Center, Parnassus and Mount Zion

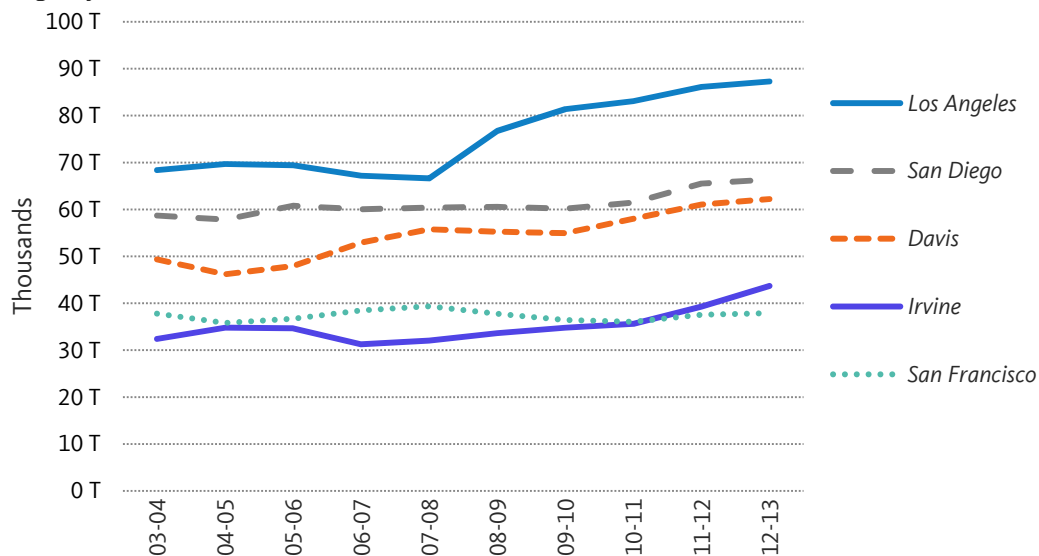
### 11.3 UC HEALTH MEDICAL CENTERS

## UC medical centers handle almost 4 million outpatient visits per year.

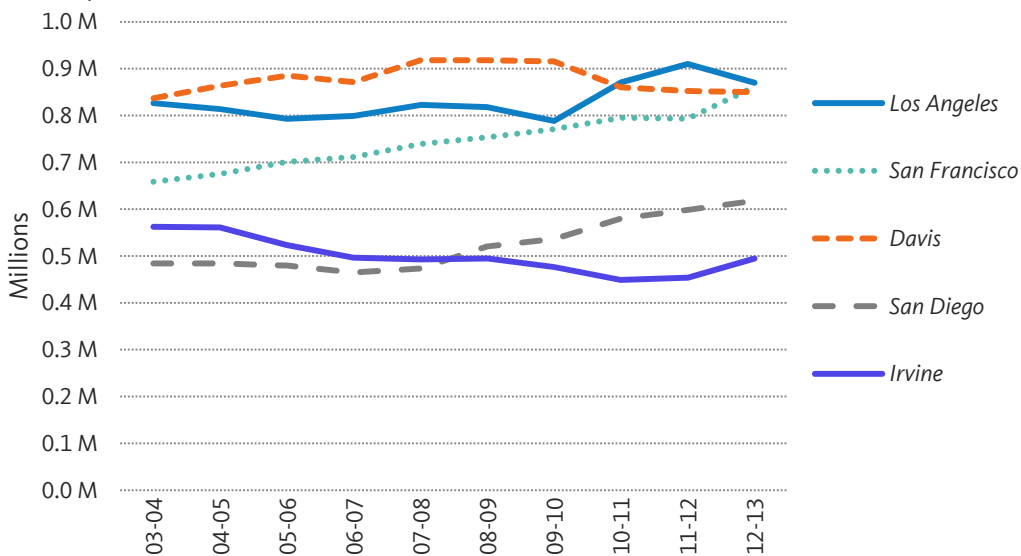
#### 11.3.4 Outpatient visits

UC medical centers  
2003–04 to 2012–13

Emergency visits (SCALE 0 to 100,000)



Other outpatient visits (includes home health, clinic and other visits) (SCALE 0 to 1 million)



Source: UC Medical Centers Audited Financial Statements

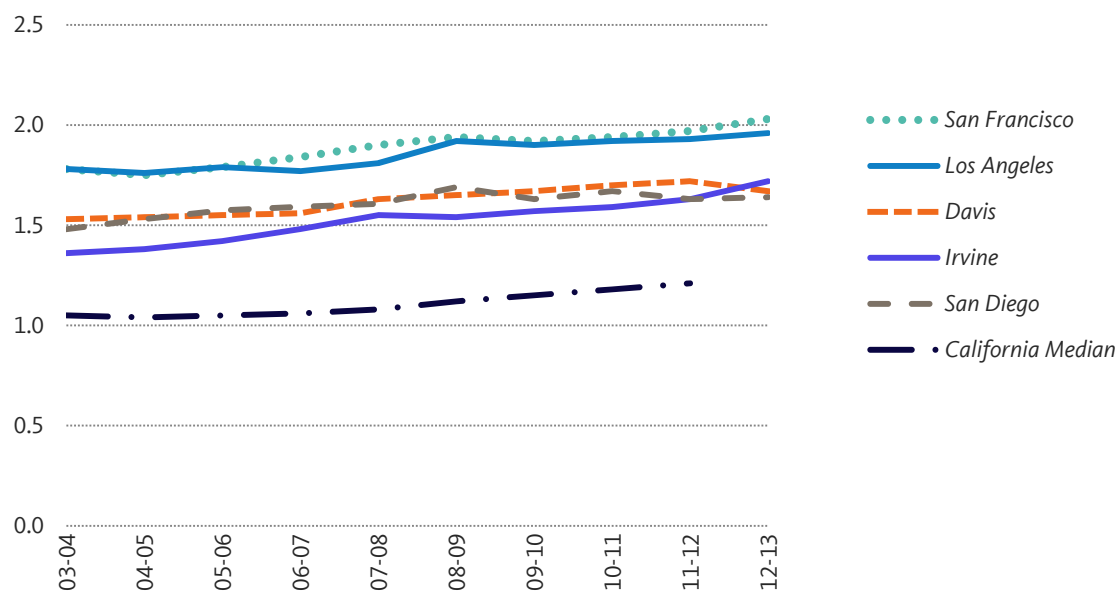
Outpatient visits are defined as visits during which patients see either a physician or a nurse practitioner in a clinic. Visits to other units, such as radiology, laboratory and physical therapy, are not counted as outpatient visits.

The medical centers provide a full range of health care services and are sites for testing the application of new knowledge and the development of new diagnostic and therapeutic techniques.

### 11.3 UC HEALTH MEDICAL CENTERS

The cases treated by UC medical centers tend to be more complicated than is typical for medical centers and hospitals in California. The difference has grown during the past eight years.

**11.3.5 Patient complexity**  
UC medical centers and California median  
2003–04 to 2012–13

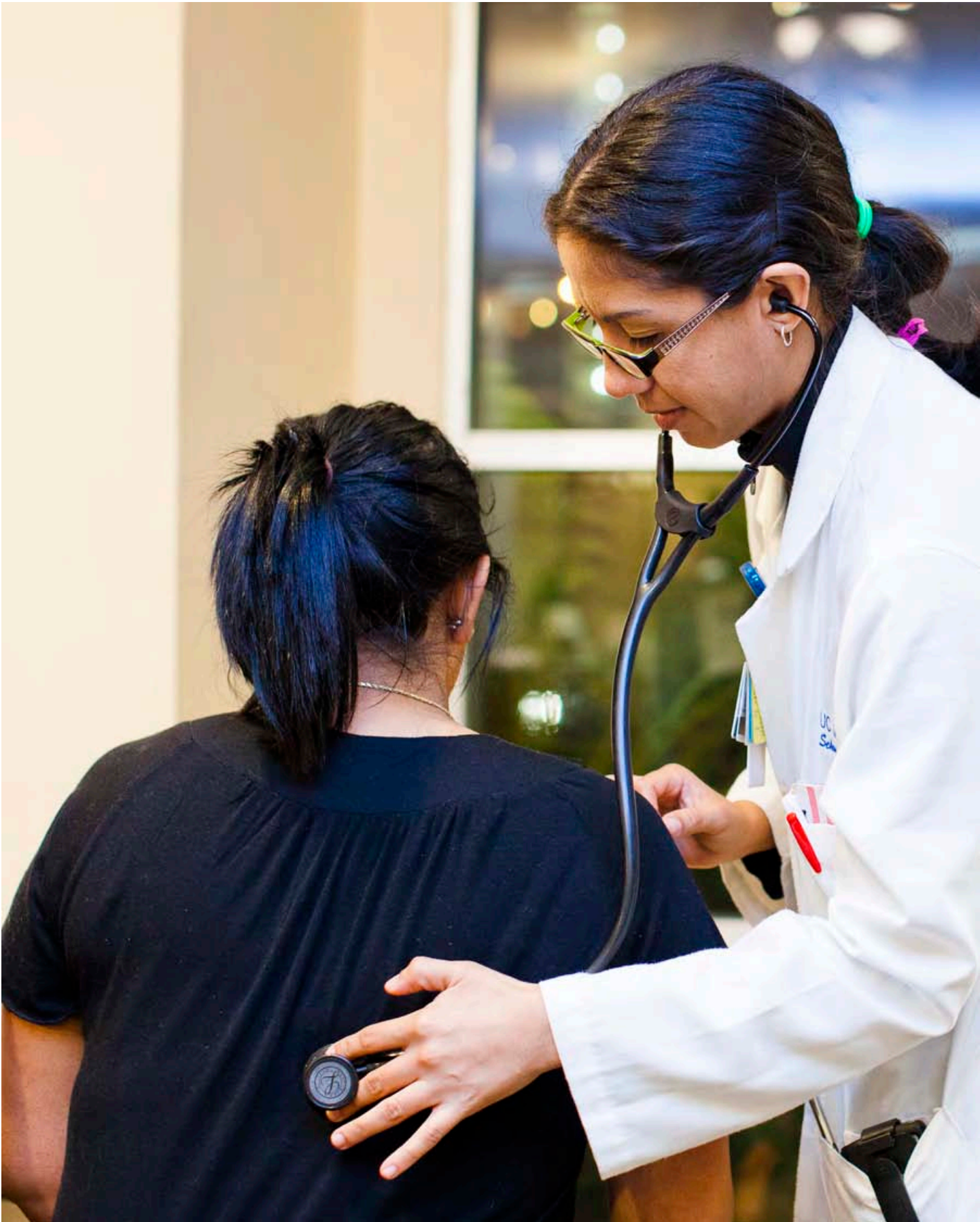


Source: UC Medical Centers' Audited Financial Statements and the CA Office of Statewide Health Planning and Development

The “Case Mix” Index is a standard hospital metric for addressing the question: “How sick are our patients?” Hospitals with patients who tend to be more seriously ill score higher on the index, which translates into more resources used per patient by the hospital and into higher costs. A patient of average complexity scores 1.0 on the index. The index has been rising at each of the medical centers, reflecting growth in highly complex care, including complex surgical cases and transplants.

The patient mix at the UC medical centers reflects the role of these centers as tertiary referral hospitals that often serve sicker patients and those with the most complex cases. As noted earlier, they treat critically ill newborns, care for cancer patients and treat half of all transplant patients and one-quarter of extensive burn cases in California.





*Patient care at UC San Diego.*

# Chapter 12. University Finances and Private Giving

## Background

The University of California seeks to develop reliable sources of revenues, including a strong investment from the state, and to use them in a strategic manner to sustain its tripartite mission of teaching, research and public service.

This chapter summarizes the financial challenges that the University has faced through the 2012–13 fiscal year. Revenue and expenditure data show changes in both the amounts generated (or expended) over time and their distribution across areas. Trends in private support are shown.

## Funding trends

Totaling \$24 billion in 2012–13, the University's revenues fund its core mission and a wide range of support activities, including teaching hospitals, the Lawrence Berkeley National Laboratory, UC Extension, and housing and dining services.

Prior to 2010–11, state funding was the largest single source of support for the education function of the University. Over the past ten years, state educational appropriations have fallen more than \$1 billion in inflation-adjusted dollars despite UC's enrollment growth. State educational appropriations constituted only 9 percent of UC's operating budget in 2012–13 compared to 23 percent in 2001–02.

## Tracking expenditures

To help mitigate declines in state funding, the University has sought to increase revenues from other sources, such as student tuition and fees, federal indirect cost recovery and private giving. The University also has moved aggressively to reduce operating costs. Chapter 13 identifies some of these cost savings. Even under the most optimistic assumptions, however, efficiency improvements and alternative revenue generation can offset only a portion of the budget shortfalls projected over the next few years.

## What this means for students and families

Even though the actual, inflation-adjusted cost of educating a student at UC has dropped by 13 percent since 1990, the state's share of expenditures has fallen even more steeply. As a result, students and their families must bear a growing proportion of the cost of education. Even these increases in student fees have not made up all of the reductions in state support.

## Looking forward

The November 2012 passage of Proposition 30 by California voters, combined with improvements in the California economy, promise to bring some stability to the state budget and thus to the UC budget. UC met the recent budget challenges by reducing operating costs and identifying alternative sources of revenues. In addition, the University is making comprehensive changes in the way funds flow within the University.

Historically, certain revenues have been collected centrally by the UC Office of the President and redistributed across campuses to promote systemwide priorities. Following lengthy consultation with campus leadership, beginning in 2011–12, all campus-generated funds — tuition and fees, research indirect cost recovery, and patent and investment income — have been retained by or returned to the source campus. To support central operations, the University has established a broad-based, flat assessment on campus funds. The University anticipates that these changes — referred to as the Funding Streams Initiative — will simplify University financial activity, improve transparency and motivate campuses to maximize revenue.

UC will face additional financial challenges in the years to come as a result of demographic and social policy changes occurring nationwide. The population in the United States is aging and living longer. The University has adopted a series of measures designed to preserve the long-term viability of its pension and retiree health benefits while still providing attractive post-employment benefits for employees.

Similarly, as health care costs and insurance premiums continue to rise, UC will encounter mounting costs in providing subsidized health care coverage for its students, employees and retirees.

In addition, the Affordable Care Act is likely to have a profound effect on the finances of UC medical centers. Not only will there be a larger number of individuals with coverage requesting health care services, but certain reimbursements for Medicaid patients will be reduced. These changes will affect all of American society, and UC, as a major employer and provider of health care services in the state of California, will not be exempt.

### For more information

UC's operating budget:

[www.ucop.edu/operating-budget/budgets-and-reports/index.html](http://www.ucop.edu/operating-budget/budgets-and-reports/index.html).

*Annual Reports on University Private Support:*

[www.ucop.edu/institutional-advancement/](http://www.ucop.edu/institutional-advancement/)

*Revised Long-Term Budget Model:*

<http://regents.universityofcalifornia.edu/regmeet/sep13/f4.pdf>



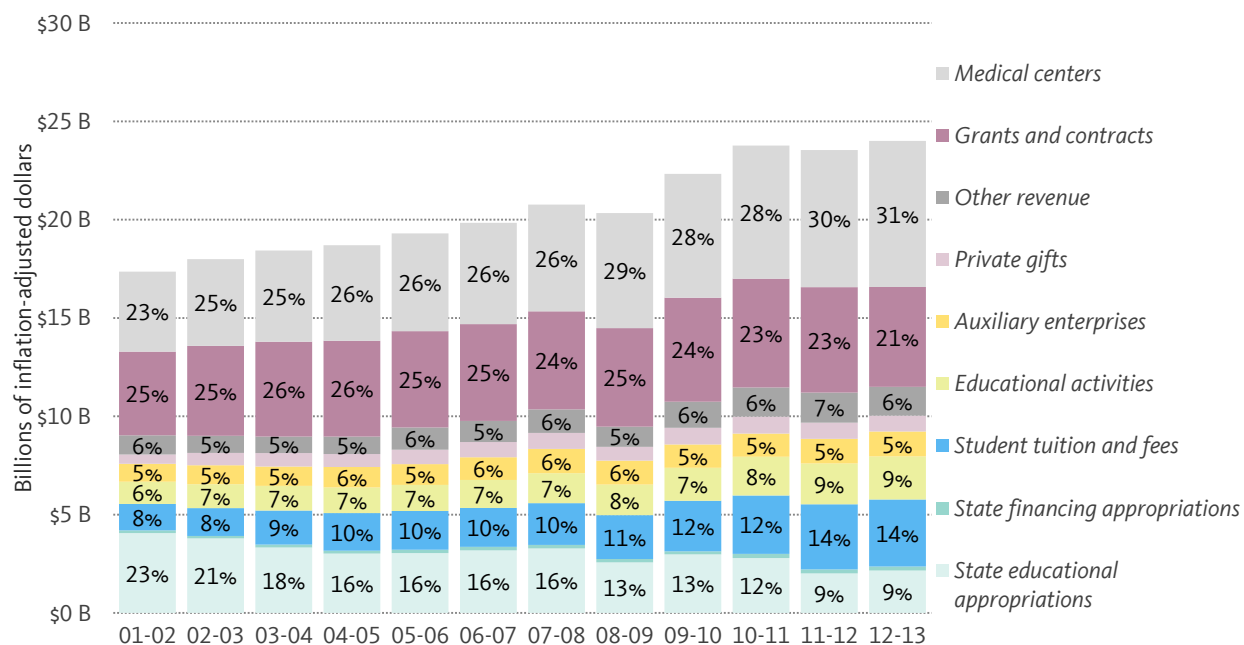
*A rendering of a medical complex at UC San Francisco (Stantec Architecture).*



## 12.1 REVENUES

**Between 2001–02 and 2012–13, state educational appropriations decreased from 23 percent of UC revenues to 9 percent.**

### 12.1.1 Revenues, by source Universitywide 2001–02 to 2012–13



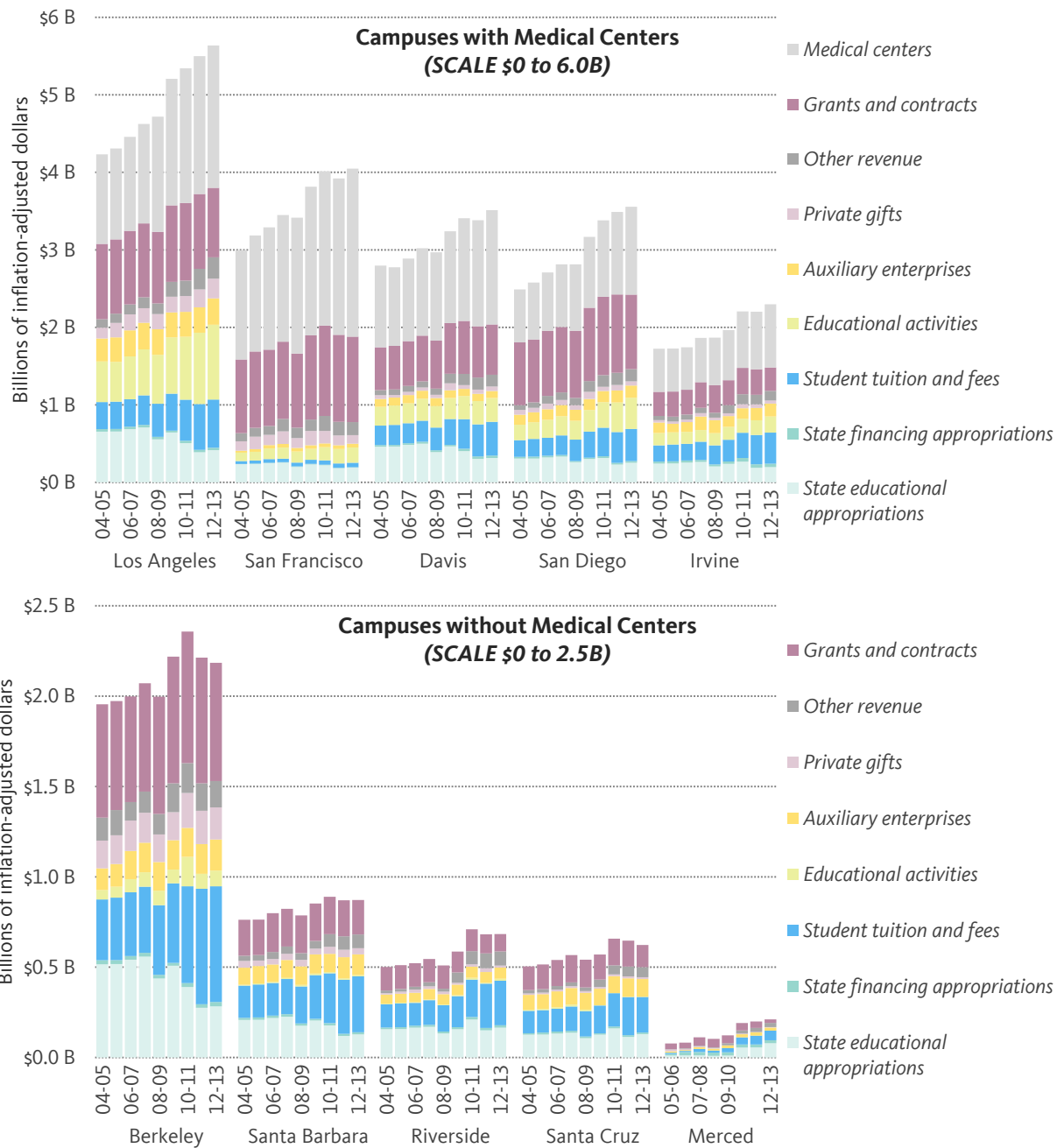
Source: UC Corporate Financial System (see footnote on following page)

The steep decline in state educational appropriations as a proportion of UC's total revenues over the past decade is a function of two trends: firstly, a long-term decline in state support from \$4.1 billion to \$2.4 billion in inflation-adjusted dollars; secondly, an increase in revenues from other sources, such as medical centers, contracts and grants, and student tuition and fees.

Private gift funding shown in the chart above does not include gifts to UC foundations (\$841 million in 2012–13) that are reported in the foundations' audited financial statements, not the UC-wide statements.

## 12.1 REVENUES

### 12.1.1 Revenues, by source UC campuses 2004-05 to 2012-13



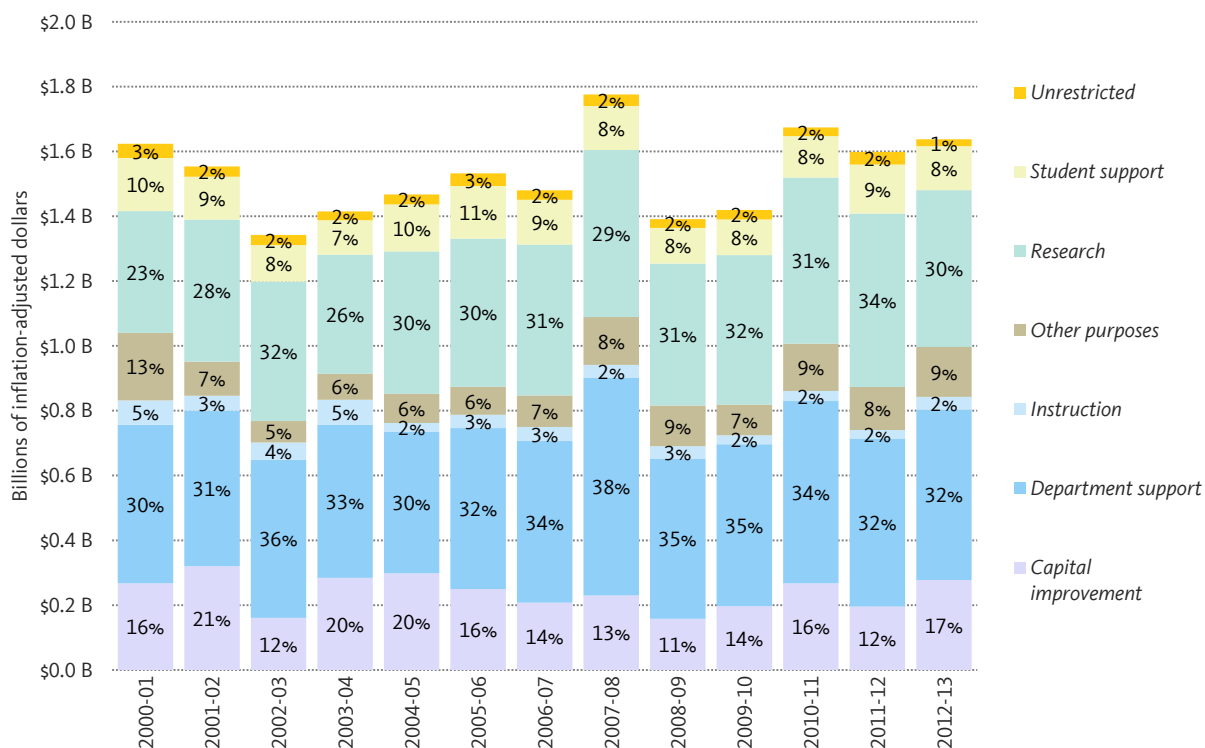
Source: UC Audited Financial Statements<sup>1</sup>

<sup>1</sup> Figures are in billions of inflation-adjusted 2012-13 dollars; Department of Energy laboratories, including the Lawrence Berkeley National Laboratory, are excluded. The Davis, Irvine, Los Angeles, San Diego and San Francisco campuses operate medical schools and teaching hospitals. In addition to the funds associated with medical school and teaching hospital operations, these programs help campuses attract additional contract and grant revenue. Campus data are not available prior to 2004-05.

## 12.2 DEVELOPMENT

### Virtually all gift funds (99 percent) are restricted by donors in how they may be used.

#### 12.2.1 Current giving, by purpose Universitywide 2000–01 to 2012–13



Source: UC Institutional Advancement, figures are adjusted for inflation

In 2012–13, new gifts to the University totaled more than \$1.5 billion, the third year that UC has reached this milestone. It was also the 13<sup>th</sup> consecutive year that UC’s fundraising efforts resulted in more than \$1 billion in annual gifts and donations. Virtually all of these funds are restricted for specific purposes and are not available to support general operating costs. In addition, approximately \$355 million was designated for endowment, so only the income/payout is available for expenditure.

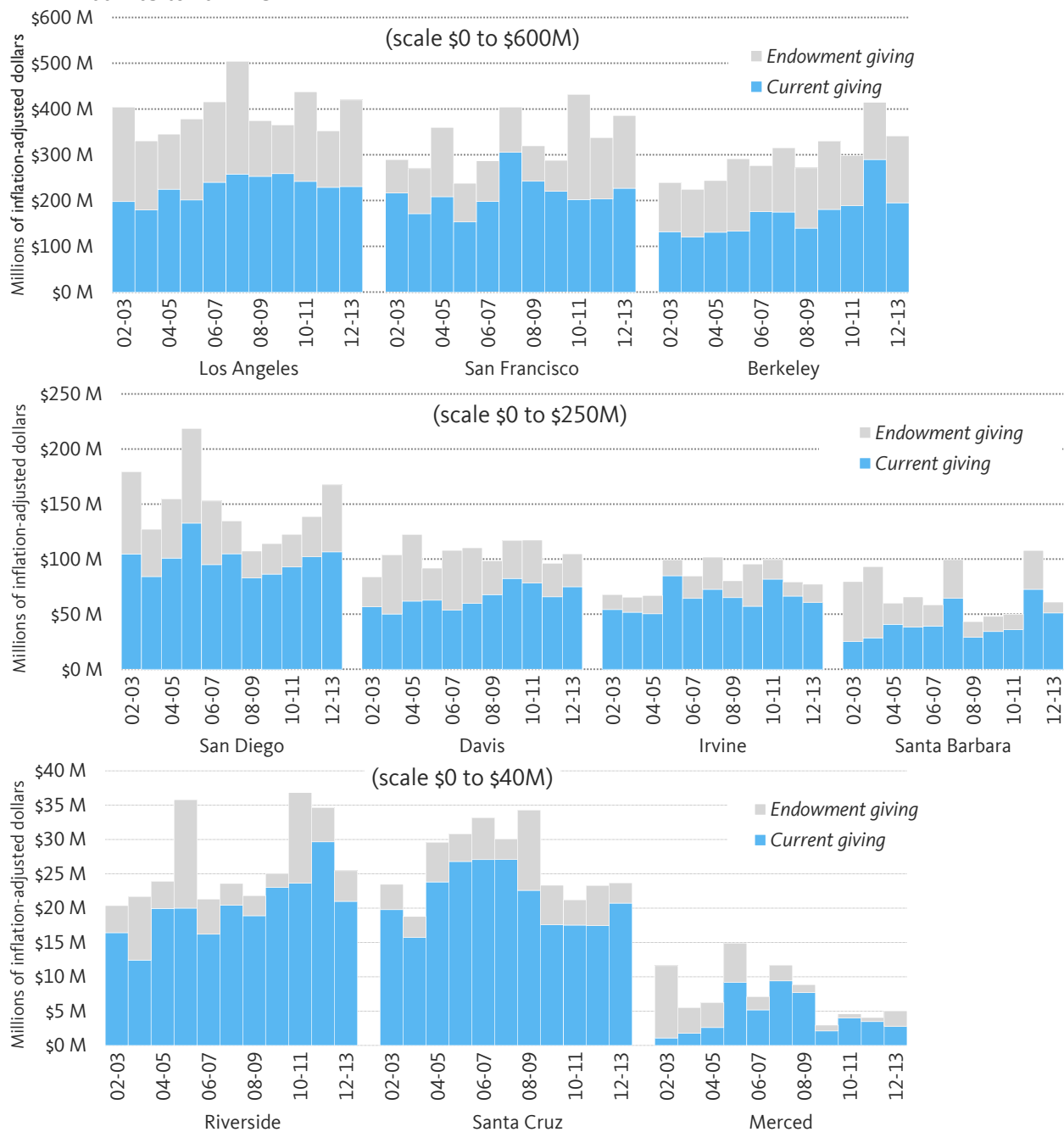
The University’s remarkable achievement in obtaining private funding in recent years — even during state and national economic downturns — is a testament to UC’s distinction as a leader in philanthropy among the nation’s colleges and universities and the high regard in which the University is held by corporations, foundations, its alumni and other supporters.

The University is energetically pursuing increased philanthropic giving as a means to help address budget shortfalls and expand student financial aid.

## 12.2 DEVELOPMENT

**A campus's ability to raise money is related to its age, number of alumni and presence of health science programs, which attract nearly half of all private support at UC.**

### 12.2.2 Total giving, by type UC campuses 2002-03 to 2012-13



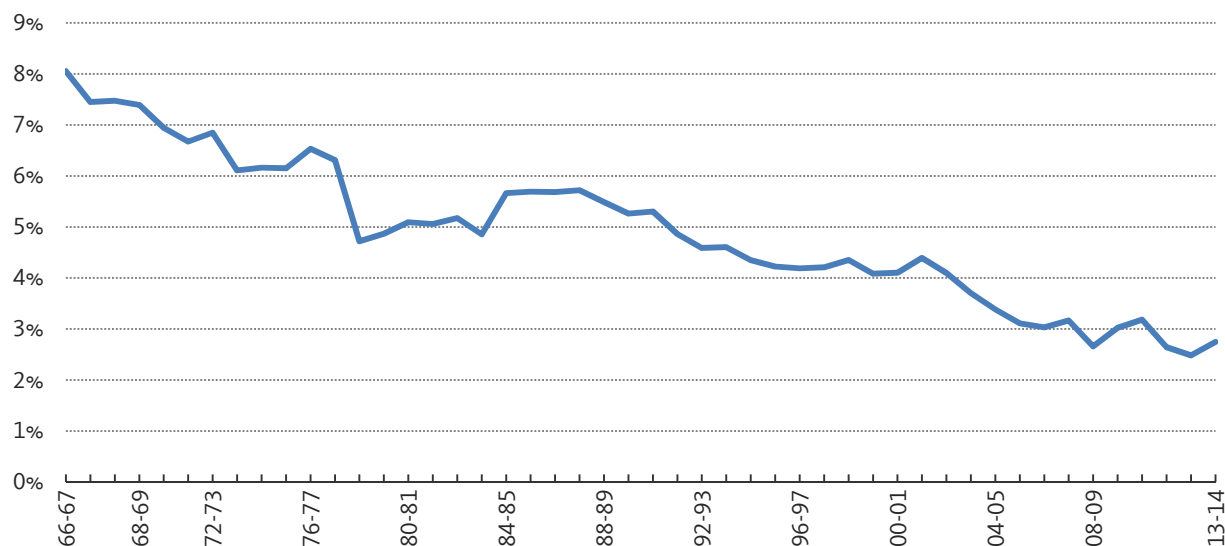
Source: Council on Aid to Education (CAE)



## 12.3 STATE SUPPORT

### The University's share of the state's general fund dropped from 8.1 percent in 1966–67 to 2.7 percent in 2013–14.

#### 12.3.1 UC share of state budget Universitywide 1966–67 to 2013–14



Source: UC Budget Office

Historically, state funding has been the largest single source of support for the University's core instructional budget. Together with UC general funds<sup>1</sup> and student fee revenue, state funding has provided relatively stable funding for faculty salaries and benefits, academic and administrative support, student services, facilities operation and maintenance, and student financial aid.

State support has fallen more than \$1 billion in inflation-adjusted dollars since 1990–91. To compensate, the University has raised student tuition and fees, but these increases have only partially compensated for the loss of state support (Indicator 12.1).

In addition, campuses have laid off employees, deferred faculty hiring, cut academic programs, eliminated courses, increased class size and cut back student services such as library hours.

<sup>1</sup> UC general funds are mostly nonresident tuition revenue and indirect cost recovery from research grants and contracts.

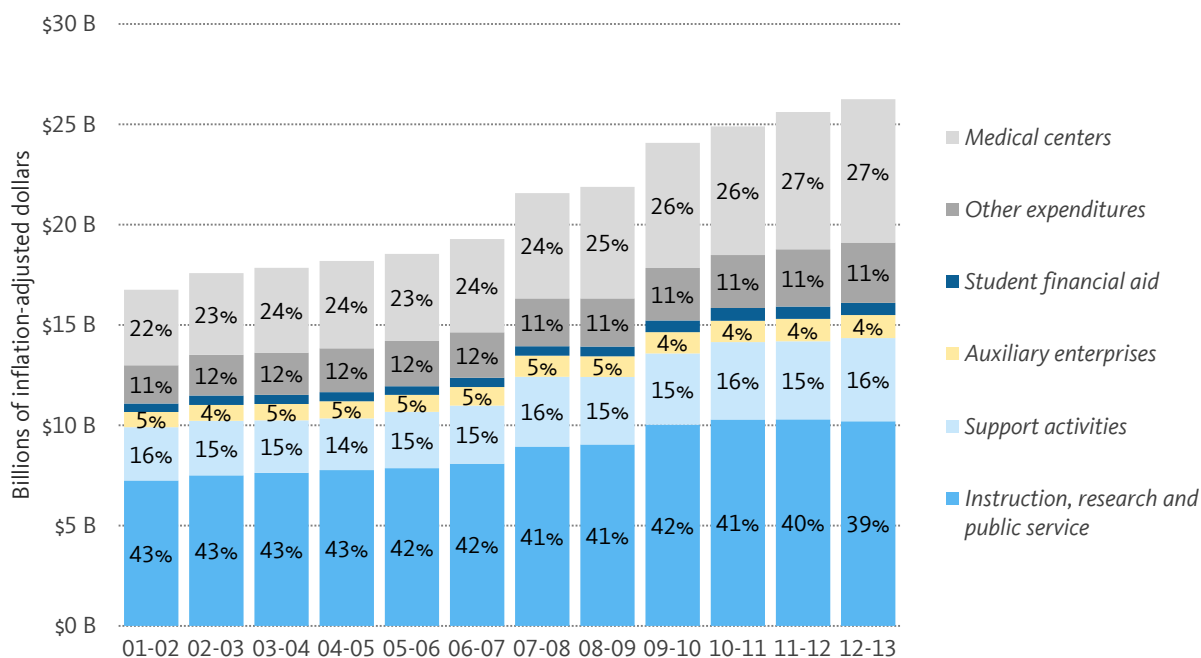


*An aerial view of UC Santa Barbara.*

## 12.4 EXPENDITURES

**Although total expenditures have increased by about 50 percent in the last decade, the distribution of expenditures by function has remained relatively stable.**

### 12.4.1 Expenditures, by function Universitywide 2001–02 to 2012–13



Source: UC Audited Financial Statements<sup>1</sup>

Instruction, research and public service accounted for 39 percent of total expenditures during 2012–13.

Medical centers and auxiliary enterprises, such as housing and dining services, accounted for 31 percent of operating expenditures in 2012–13.

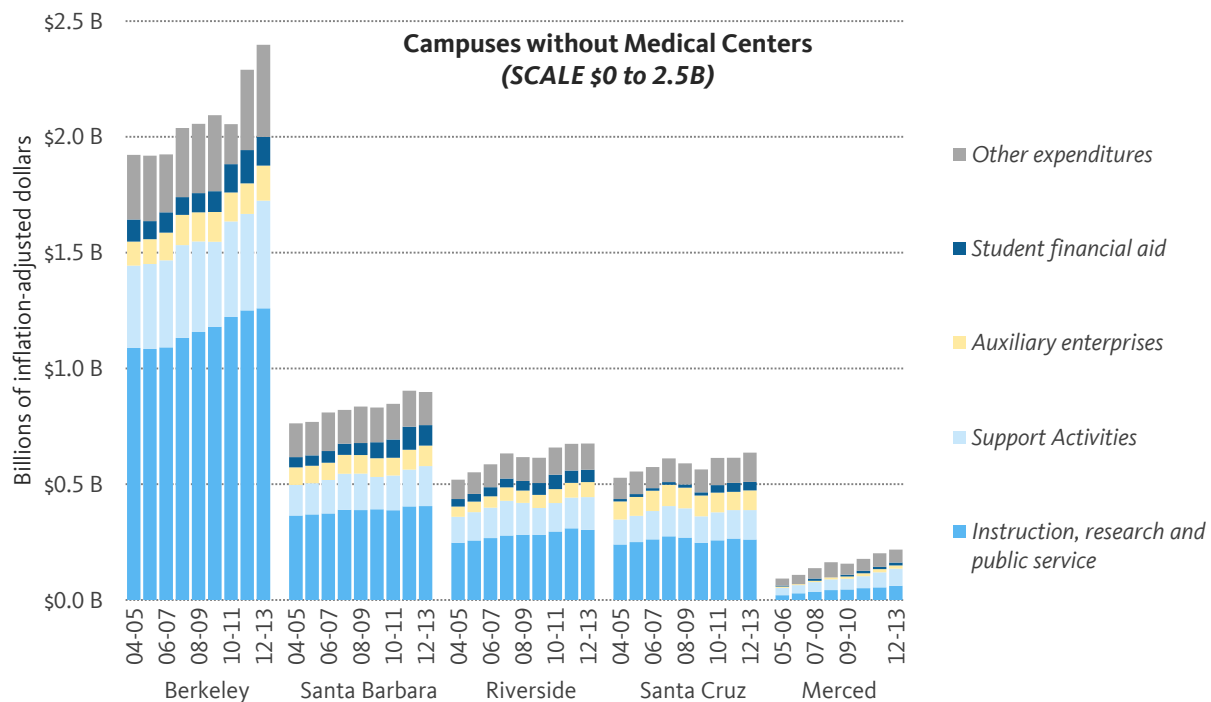
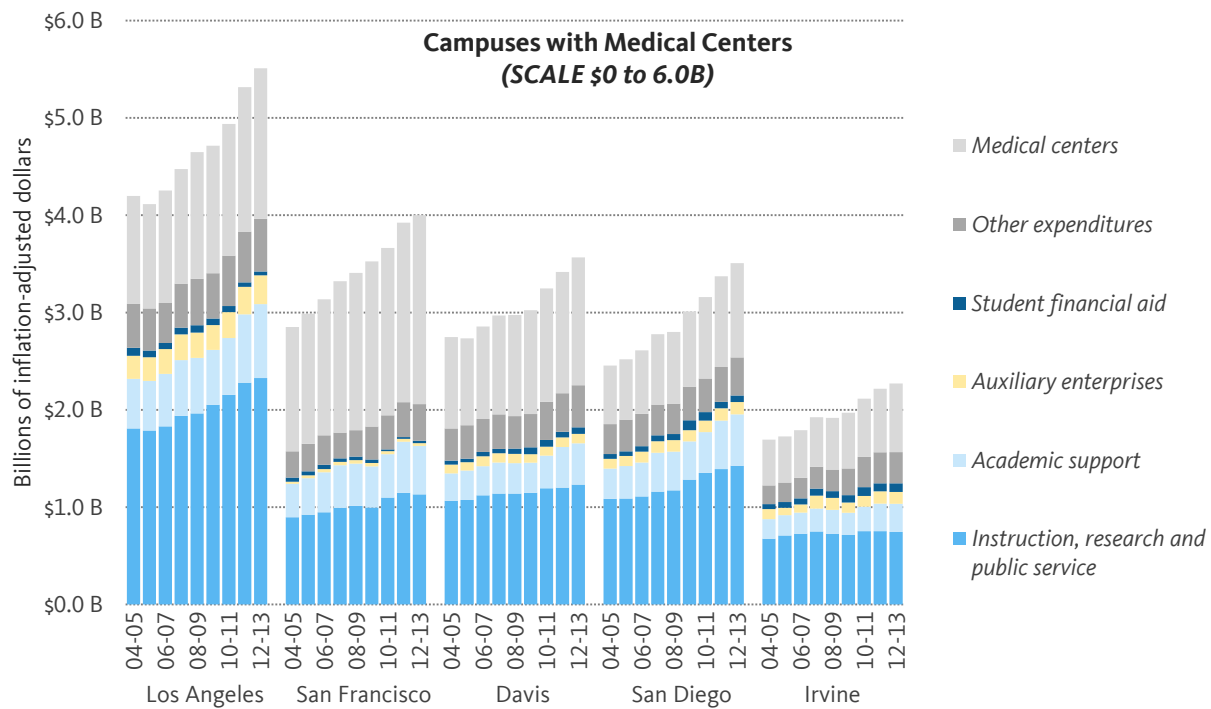
Libraries and other academic support services, such as instructional technology, student services, administration and general campus operation and maintenance of plant, accounted for 16 percent of total expenditures.

<sup>1</sup> Figures are in billions of inflation-adjusted 2012–13 dollars. Medical centers include UC's teaching hospitals; auxiliaries include operations such as food service, parking and student housing; other expenses include interest, depreciation and other miscellaneous expenses. Department of Energy laboratories, including the Lawrence Berkeley National Laboratory, are not included in the data above. Audited financial statements are at [www.universityofcalifornia.edu/reportingtransparency](http://www.universityofcalifornia.edu/reportingtransparency).

## 12.4 EXPENDITURES

### 12.4.1 Expenditures, by function

UC campuses  
2004-05 to 2012-13



Source: UC Audited Financial Statements<sup>1</sup>

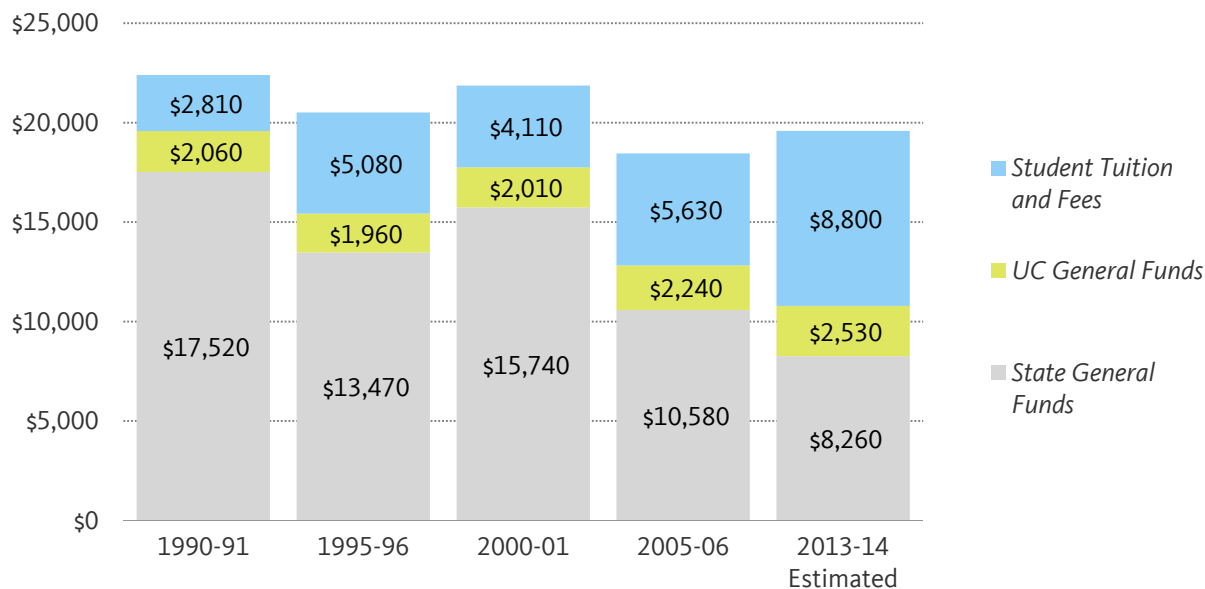
<sup>1</sup> Figures in billions of inflation-adjusted 2012-13 dollars. The Davis, Irvine, Los Angeles, San Diego and San Francisco campuses operate medical schools and teaching hospitals. In addition to the funds associated with medical school and teaching hospital operations, the programs help campuses attract additional contract and grant revenue.



## 12.5 EXPENDITURES PER STUDENT

Since 1990–91, the total cost of a UC education has declined by 13 percent per student. Students and their families have borne an ever increasing share of that cost.

### 12.5.1 Per-student average expenditures for education Universitywide 1990–1991 to 2013–14, selected years



Source: UC Budget Office

Since 1990–91, average inflation-adjusted expenditures for educating UC students have declined 13 percent. During the same time period, the state’s share of expenditures has fallen even more steeply, by more than 50 percent. The share of expenditures borne by students in the form of fees has more than tripled, from 13 percent to 45 percent.

In other words, students and their families are bearing a growing proportion of the cost of their education. Increases in student fees have made up some (but not all) of the reductions in state support.

# Chapter 13. Capital Program and Sustainability

## UC's capital program

The University maintains more than 5,800 buildings enclosing 130 million square feet on approximately 30,000 acres across its ten campuses, five medical centers, nine agricultural research and extension centers, and the Lawrence Berkeley National Laboratory. With such a substantial infrastructure, the University strives to be a good steward of the capital resources entrusted to its care.

## Sources of capital funding

Historically, the majority of UC's core academic infrastructure projects were funded by the state. However, over the past decade, the state's contribution has fallen to about 15 percent, and external financing now plays the dominant role. Approximately half of UC's existing space is eligible for maintenance using state funds; the other half is occupied by self-supporting enterprises, such as parking and housing. Since the mid-1980s, state funding for capital renewal and deferred maintenance has been minimal and unpredictable, significantly affecting the University's limited resources and its ability to maintain its facilities.

## Capital expenditures

During FY 2012–13, UC spent about \$778 million on capital projects, with nearly two-thirds of this amount funded from external financing. The majority of these projects, as well as those going back to at least 2008–09, were for projects aimed at core academic programs and aging facilities.

## An expanding infrastructure

Since 2003, the space available to UC for program uses has increased by 15.7 million square feet. Even more space must be added to accommodate enrollment growth and expanding programs. In addition, UC must maintain and upgrade its facilities, more than half of which are at least 35 years old. Capital requirements for just the next five years are estimated at \$5.5 billion, the great majority of which will be met through external financing.

## UC's sustainability program

The University of California is a national leader in sustainability and strives to reduce greenhouse gases to mitigate climate change. The University affirmed its leadership position in 2007 when all ten Chancellors signed the American College & University Presidents' Climate Commitment. Furthering this leadership, in November 2013 UC announced an initiative to become the first research university to achieve carbon neutrality by 2025.

The University's Policy on Sustainable Practices, updated in 2013, has nine areas of focus, including Climate Action, Green Building, Clean Energy, Transportation, Recycling and Waste Management, Procurement, Food Service and Water, demonstrating the University's commitment to wise stewardship of its resources and the environment.

## Looking forward

Several indicators in this chapter describe UC's capital program; others demonstrate UC's commitment to environmental sustainability. Both sustainability efforts and the capital program affect many diverse aspects of University operations.

## For more information

Additional information about UC's capital program is on the Capital Projects Portal:

[www.ucop.edu/capital-resources-management/capital-projects-portal/index.html](http://www.ucop.edu/capital-resources-management/capital-projects-portal/index.html).

Information on UC's sustainability is at [www.universityofcalifornia.edu/sustainability/](http://www.universityofcalifornia.edu/sustainability/).

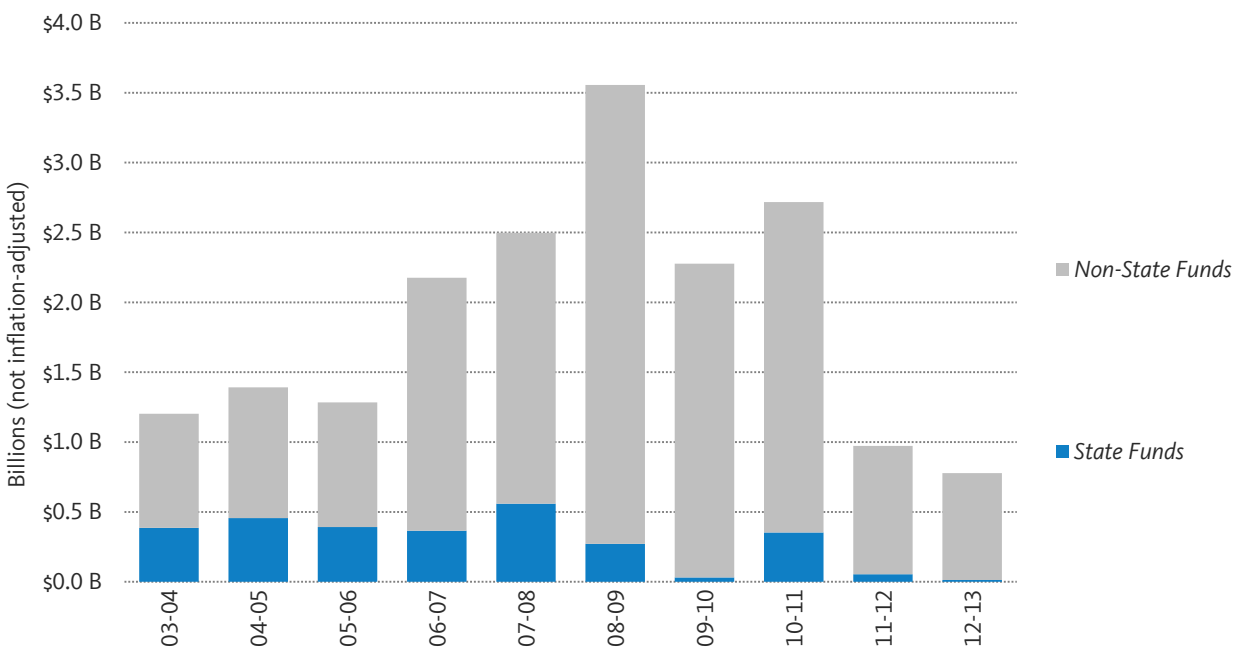
The UC Capital Resources Management office provides an annual report on major capital Projects Implementation. [www.ucop.edu/design-services/\\_files/major-cap-reports/majcap1213.pdf](http://www.ucop.edu/design-services/_files/major-cap-reports/majcap1213.pdf). The office also develops the Capital Financial Plan, which outlines each campus's capital plan, lists proposed projects and their budgets and provides background on campus strategic goals and priorities. Reference

<http://regents.universityofcalifornia.edu/regmeet/no13/gb2.pdf>.

## 13.1 CAPITAL PROJECTS

### The major portion of UC's capital project funding over the last ten years derives from non-state fund sources.

#### 13.1.1 Sources of capital spending Universitywide, based on budgets approved each year 2003–04 to 2012–13



Source: UC Capital Resources Management

UC's capital program is funded by a combination of state and non-state funds. State funds were historically the primary source of funding for core academic facilities. Non-state sources fund self-supporting enterprises, such as housing, parking, athletics and medical enterprises, which are generally not eligible for state funding.

As illustrated in display 13.1.1, state funding for the University's capital improvement projects has been declining and unpredictable over the last five years as a result of the economic downturn and the state's objective to reduce its overall bond debt.

The University had anticipated approval of General Obligation Bond measures in the past few voting cycles, yet these measures were never placed on the ballot. The last General Obligation Bond measure passed in November 2006. In the past decade, non-state funds, which include gifts, grants, bonds and other sources, have accounted for almost 85 percent of UC's capital program funding.

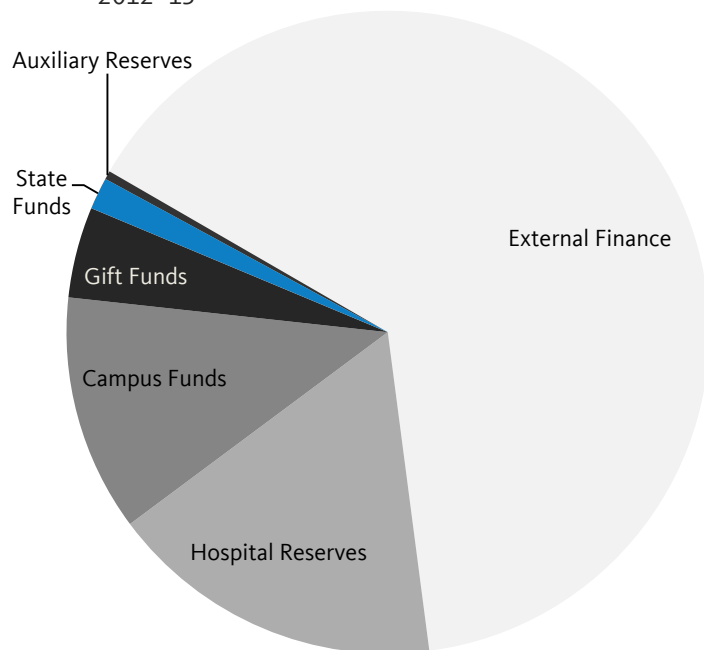
Non-state funding represents a diverse set of fund sources to support the capital projects. The use of long-term debt has played an increasingly pivotal role in supporting the University's capital program.



## 13.1 CAPITAL PROJECTS

### Nearly two-thirds of the cost of capital projects during 2012–13 was met through external financing.

#### 13.1.2 Sources of capital spending detail Universitywide 2012–13



#### 2012–13 Fund Sources (thousands)

External Finance	\$502,522	64.6%
Hospital Reserves	\$131,312	16.9%
Campus Funds	\$92,701	11.9%
Gift Funds	\$35,583	4.6%
State Funds	\$12,482	1.6%
Auxiliary Reserves	\$3,294	0.4%
Grant Funds	(\$220)	
<b>Total</b>	<b>\$777,674</b>	

Source: UC Capital Resources Management

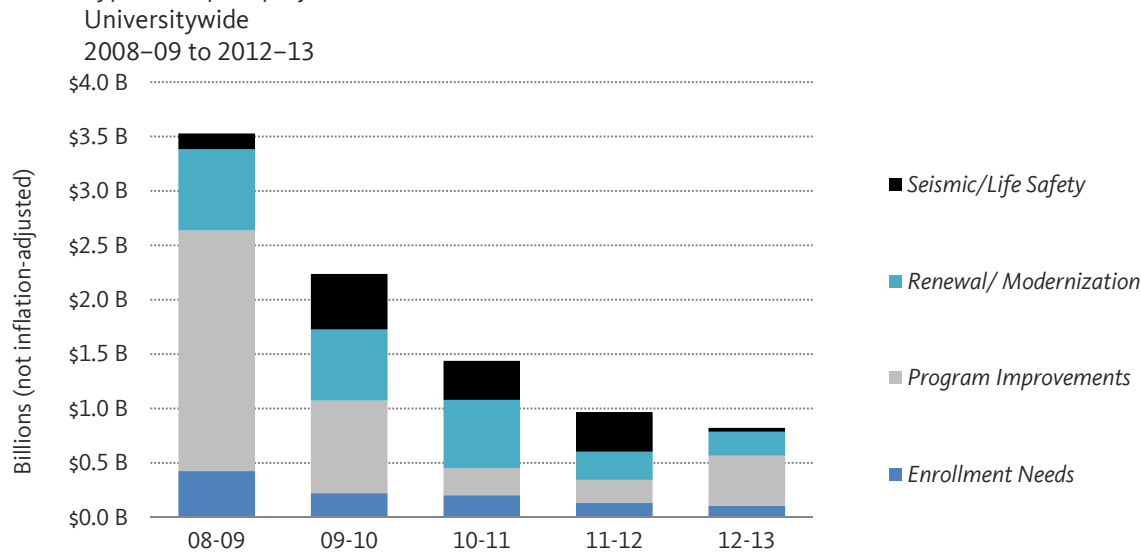
With state funds playing a declining role in UC's capital program, reliance on external financing has increased, and a new debt service model has emerged in response. The 2013–14 state legislative session saw a major change in how UC manages its debt service on capital outlay, which has a significant impact on capital programs. Assembly Bill 94 shifted this debt service from the state to the University. This allowed the University to refinance under more favorable terms than were available to the state.

More broadly, this legislation provided unprecedented and exceptional fiscal flexibility to the University of California. The University is now able, under certain conditions, to use its State General Fund allocation to finance a variety of capital needs: designing, constructing and equipping of academic facilities; addressing seismic and life-safety needs; accommodating enrollment growth; modernizing out-of-date facilities; and expanding infrastructure to serve academic programs.

## 13.1 CAPITAL PROJECTS

The majority of capital funds approved for expenditure between 2008–09 and 2012–13 went to projects addressing core academic programs and aging facilities.

### 13.1.3 Types of capital projects



Source: UC Capital Resources Management

Continuing enrollment growth has largely driven the University's requirement for new laboratories, classrooms, student housing and recreational facilities.

Academic, research and clinical priorities change over time. New program initiatives require specialized space, involving renovation of existing infrastructure or construction of new facilities.

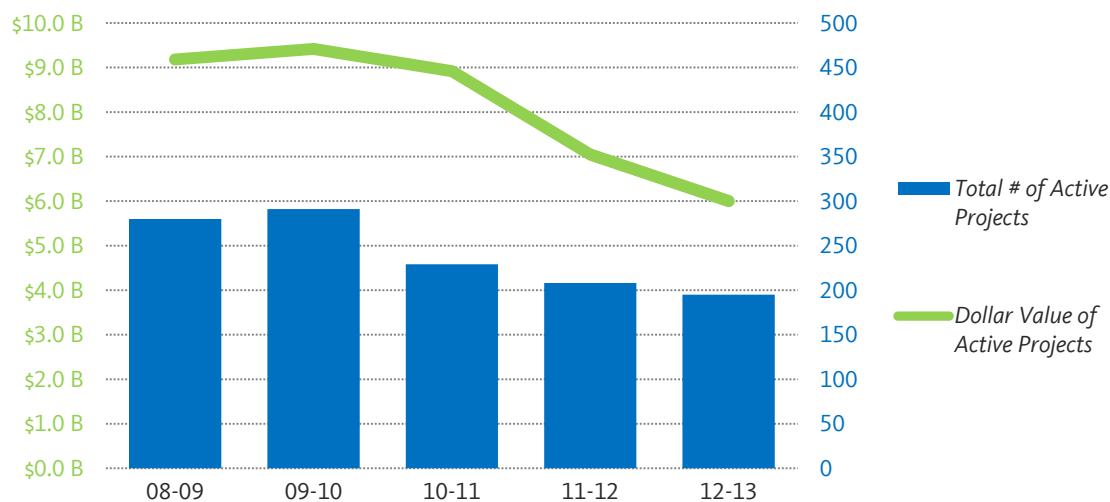
From 2008–09 to 2012–13, the University devoted \$1.4 billion to seismic and life-safety corrections to buildings. The University continues to review the seismic safety of its facilities, prioritize buildings for remediation and implement seismic upgrades.

Additionally, as campus facilities age, they must be renewed and modernized to ensure safety, extend the useful life of the building and improve energy efficiency. Heating, ventilation, electrical and plumbing systems, elevators and roofs need periodic replacement and renewal during the lifespan of a building. Due principally to declining state support, the University has a substantial backlog of deferred maintenance.

## 13.1 CAPITAL PROJECTS

The University's capital portfolio has declined slightly, reflecting the economic downturn in California.

### 13.1.4 Active projects Universitywide 2008-09 to 2012-13



Source: UC Capital Resources Management

Active projects are those with approved budgets and under design or construction at the end of each fiscal year. Because capital projects typically take from three to five years to design and construct, the data for any single year represents a snapshot of a cumulative process going on over several years.

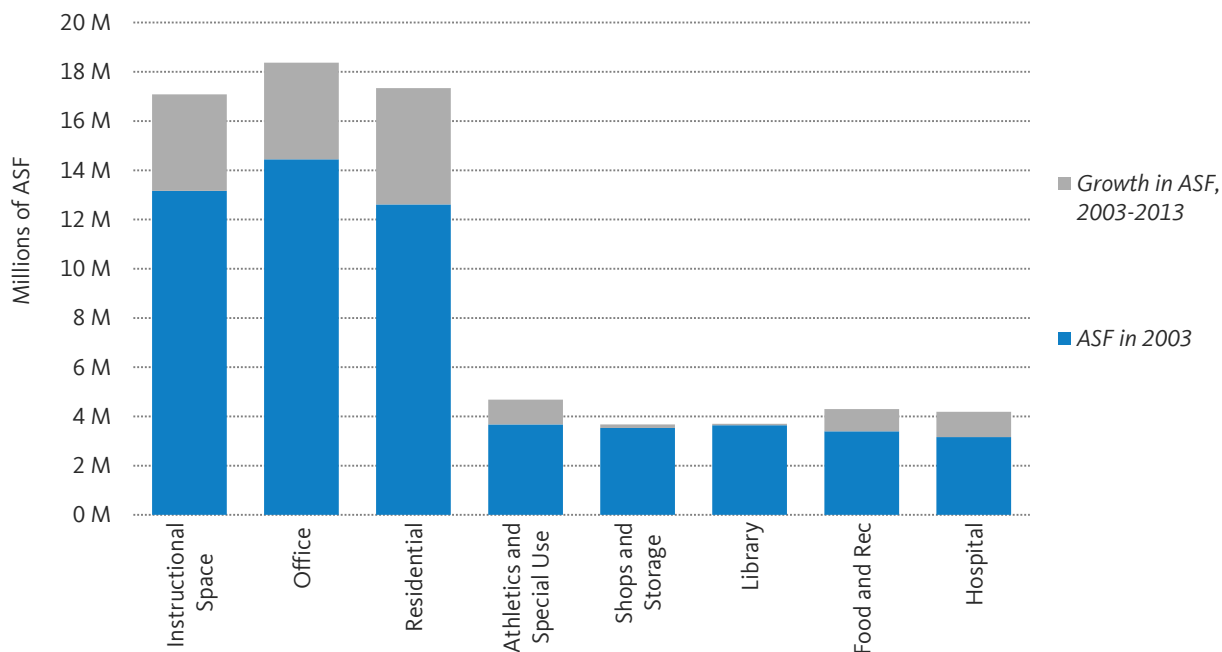
The University continues to develop and implement efficiency strategies for facility design and construction. New models for planning office space, such as the Faculty Office Building at UCSF's Mission Bay, reorganize floor plans to reflect modern work patterns of group collaboration by eliminating many private offices, clustering open workspaces and providing ample shared meeting spaces in a variety of sizes.

The University has expanded its use of construction contracting, enabling campuses to match the needs of different types of projects with the most efficient construction delivery for that project, considering cost efficiency, speed of delivery, local business climate and other factors that vary by location, current market conditions and project type.

## 13.1 CAPITAL PROJECTS

### Most of the growth in space over the last ten years has been for instruction and research, offices and residential uses.

#### 13.1.5 Assignable Square Footage (ASF) Universitywide 2003 to 2013



Source: UC Capital Resources Management

Assignable square footage (ASF) is the space available for program uses. It does not include corridors, bathrooms or building infrastructure. Systemwide, space has increased by 15.7 million ASF since 2003, driven by several related growth factors.

Increases in the student population have required significant additions to athletic, recreational and food service space. Residential space has grown as campuses strive for more on-campus student housing to reduce environmental impacts from commuting, to improve air quality and to improve student life in living/learning communities. This is especially important for first-year students, many of who are the first in their families to attend college.

Instructional, research and office space also has increased over the last ten years. In addition, UC Merced, the newest UC campus, continues to grow and other campuses have experienced growth in specific disciplines or programs.

## 13.1 CAPITAL PROJECTS

### The University will need \$5.5 billion over the next five years to address its most critical facility needs.

#### 13.1.6 Infrastructure needs Universitywide 2013–14 to 2017–18

##### University of California Infrastructure Report: 2013–14 to 2017–18 (millions)

Capital Infrastructure Needs	13–14	14–15	15–16	16–17	17–18	Total
Infrastructure Deficiencies	\$337	\$429	\$468	\$345	\$420	<b>\$1,999</b>
Renewal/Modernization	\$441	\$592	\$497	\$477	\$539	<b>\$2,546</b>
Enrollment/Program	\$226	\$271	\$178	\$126	\$195	<b>\$996</b>
<b>Total</b>	<b>\$1,005</b>	<b>\$1,292</b>	<b>\$1,142</b>	<b>\$948</b>	<b>\$1,153</b>	<b>\$5,540</b>

Source: UC Capital Resources Management

The University's *Statewide Infrastructure Report: 2013–14 Through 2017–18* estimates that UC will need approximately \$1.1 billion in capital funding each year over the next five years to address its most pressing facilities needs for academic-related space. Three major factors determine these needs:

1) **Critical infrastructure deficiencies.** UC's planned program of seismic corrections is one of the University's highest priorities. With an estimated cost of approximately \$2 billion, the program will be implemented over the next 10 to 15 years, depending on availability of funding. The University also has fire and other life-safety upgrades planned to meet updated code requirements.

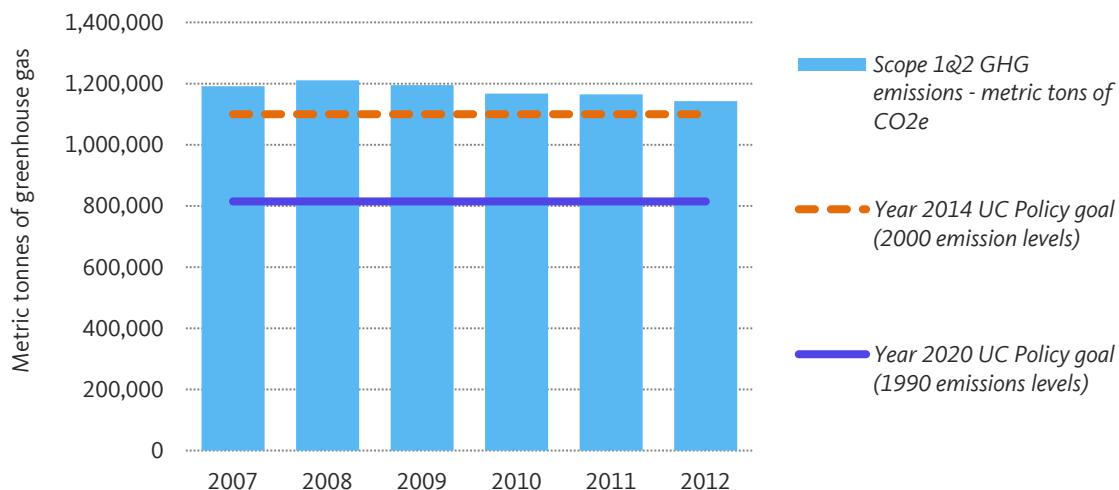
2) **Systematic renewal and modernization of existing space to address obsolescence.** Even with recent investments in new facilities, more than half of the University's state-supportable facilities are 35-plus years old and require renewal and modernization. The need for funding to support systematic renewal and replacement of building systems has significantly outpaced available funds. In addition, facility improvements are needed to accommodate changing programmatic requirements.

3) **Enrollment and programmatic growth.** The University enrolls more students than are provided for by state funds, and as a result, UC is currently over-enrolled. The system continues to experience extremely high demand from qualified students.

## 13.2 SUSTAINABILITY

### UC has made consistent progress toward its greenhouse gas emission goals.

#### 13.2.1 Greenhouse gas emissions Universitywide 2007 to 2012



Source: UCOP Capital Resources Management<sup>1</sup>

UC continues to lead higher education in sustainability as demonstrated in the annual report:

<http://sustainability.universityofcalifornia.edu/documents/annual-sustainability-report2013.pdf>.

Successes noted in this report include \$138M in avoided energy costs via Energy Efficiency Partnership projects; 15.7 megawatts of on-site renewable electrical generation (installed or under contract); and 143 LEED certifications, the most of any higher education institution in the country.

Building on this success, UC President Napolitano announced in November 2013 that the University of California would become carbon neutral by 2025. This complements UC's commitment to reduce its greenhouse gas (GHG) emissions to year 2000 levels by 2014 and to 1990 levels by 2020. All campuses track annual greenhouse gas emissions

and have a climate action plan identifying measures to reduce GHG emissions to these levels. Campuses have completed GHG emissions inventories for calendar year 2012.

UC's overall emissions decreased in 2012 despite enrollment growth and construction of new facilities. In 2012, Berkeley successfully reduced emissions to 7 percent below 1990 levels, meeting the 2020 Policy goal eight years early. Davis, Riverside, Santa Barbara and San Francisco emitted fewer metric tons of GHGs in 2012 than in 2000, meeting the 2014 goal early. Merced and San Diego reduced GHGs in 2012; most campuses are on schedule to meet the 2014 and 2020 GHG policy goals, while others will need to augment their efforts.

<sup>1</sup> Emissions in the graph above account for Scope 1 and Scope 2 emissions, consistent with the President's Carbon Neutrality Initiative. Scope 1 encompasses emissions that result directly from campus activities, primarily fossil fuel combustion. Scope 2 covers emissions associated with electricity and steam generated by a third party and sold to a campus.



## 13.2 SUSTAINABILITY

UC campuses are now working on the new challenge to become carbon-neutral by 2025. To achieve carbon neutrality the University has to dramatically change how it purchases energy by reducing consumption and rethinking its supply-sources. To that end, the University formed an Energy Services Unit (ESU) to implement large systemwide Climate Action strategies to achieve carbon neutrality, using UC's capability to finance projects at favorable rates and create economies of scales.

ESU is pursuing several major strategies to reduce emissions from energy purchases. The ESU aims to:

- Develop a wholesale power procurement strategy that provides a steadily increasing amount of renewable power;
- Procure and/or develop large quantities of biomethane<sup>1</sup> (biogas) in lieu of natural gas;
- Continue and expand the highly successful statewide Energy Efficiency Partnership program;
- Develop more on-campus renewable generation; and
- Manage a portfolio of carbon offsets and allowances under California's cap and trade program and voluntary programs.

The ESU will have an advisory board that will include campus representatives. The University has already made significant progress with various elements under the ESU.



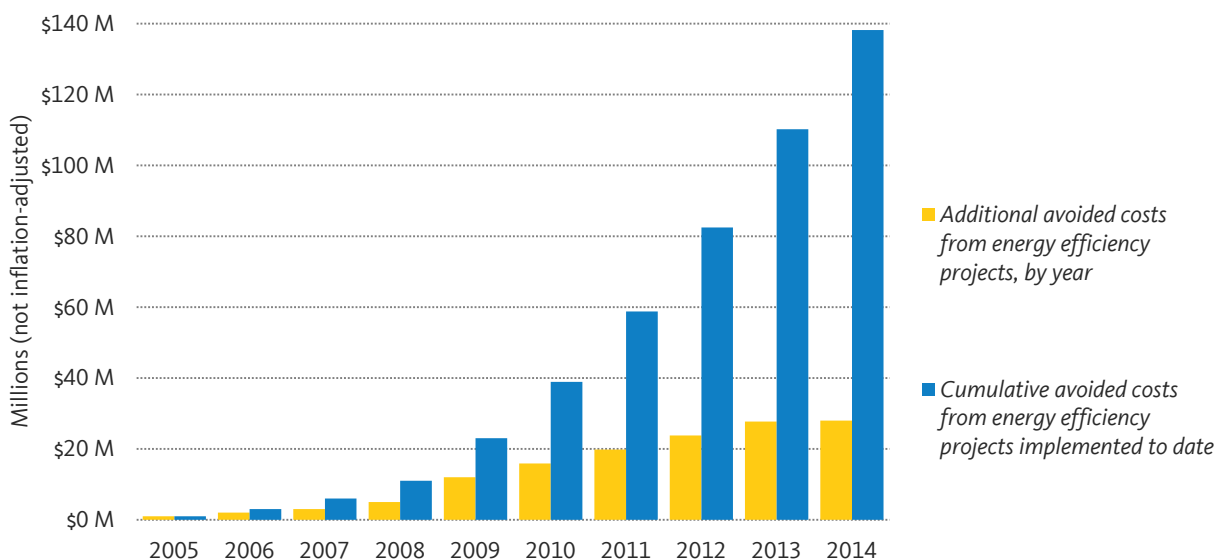
*The UC Riverside Bourns College of Engineering Center for Environmental Research @ Technology's Mobile Emissions Lab.*

<sup>1</sup> Biomethane is methane that is generated from controlled decomposition of organic matter and processed to standards suitable for natural gas pipeline transmission.

## 13.2 SUSTAINABILITY

### Energy efficiency upgrades will result in cumulative net avoided costs for the University of \$138 million by the end of 2014.

#### 13.2.2 Energy efficiency cost avoidance Universitywide 2005 to 2014



Source: UCOP Capital Resources Management

The University has an Energy Efficiency Partnership program with the California State University and the state's four investor-owned utilities to reduce energy consumption, operating costs and annual greenhouse gas emissions.

In 2013, the University received approximately \$18.2 million in incentives from the Partnership to implement 150 projects. Those projects are projected to save approximately 54.2 million kilowatt-hours of electricity annually, the amount used by about 8,000 California households. Additionally the projects will save approximately 5.5 million therms of natural gas annually.

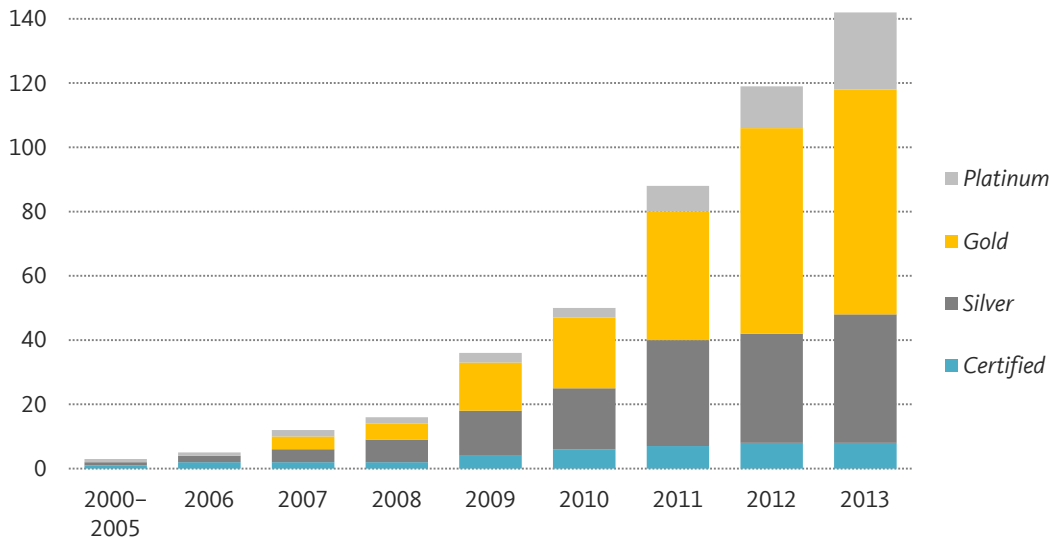
Since the program began in 2004, UC's cumulative net avoided utility cost from these energy efficiency projects is about \$110 million. Projects completed in 2013 will increase the annual net avoided costs to approximately \$28 million, for a cumulative savings of about \$138 million by the end of 2014.

The Partnership accelerated in 2009, when the Regents approved external financing for energy efficiency projects. Through the Partnership, UC implemented an ambitious portfolio of infrastructure projects and building upgrades to reduce energy consumption, lower operating costs, reduce carbon footprints and improve indoor environmental quality and safety. Partnership projects typically fall into four categories: Heating, Ventilation, Air Conditioning (HVAC); Monitoring Based Commissioning (MSC); Central Plant and Energy Distribution; and Lighting.

## 13.2 SUSTAINABILITY

**By the end of 2013, UC had achieved 143 LEED® certifications, more than any other university in the country.**

### 13.2.3 LEED® certifications Universitywide 2000 to 2013 (cumulative)



Source: UCOP Capital Resources Management

Leadership in Energy and Environmental Design (LEED®) standards, developed by the non-profit US Green Building Council, have emerged as an internationally recognized benchmark for sustainable design. UC's sustainability policy requires all new construction projects and renovation projects over \$5 million to achieve a minimum of LEED® Silver certification.

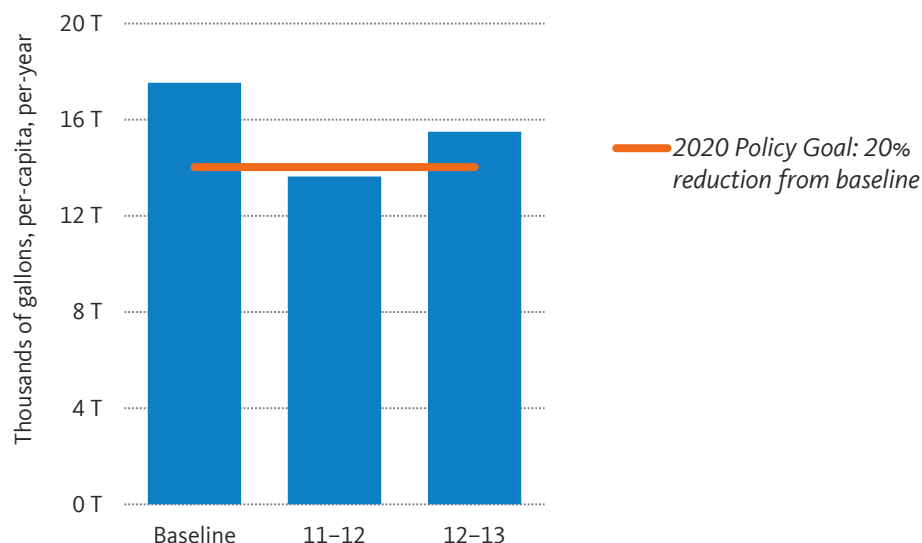
Beyond sustainability in new construction, UC has also adopted LEED® for Existing Buildings, Operations and Maintenance (LEED®-EBOM), to “green” the day-to-day ongoing environmental performance of its existing facilities. The University currently has 18 LEED®-EBOM-certified projects, with 25 more projects in progress or in planning.

By the end of 2013, the University of California had 143 LEED® certified projects (new construction, renovation, homes and existing building certifications), the most of any university in the country. Twenty-three of these projects were certified in 2013, with four earning Silver, six earning Gold and thirteen earning Platinum certification, the highest LEED® rating. UC LEED® certifications are listed at [http://sustainability.universityofcalifornia.edu/gb\\_lead.html](http://sustainability.universityofcalifornia.edu/gb_lead.html).

## 13.2 SUSTAINABILITY

**By reducing per capita potable water consumption by 12 percent, UC is more than halfway to meeting its goal of 20 percent reduction by 2020.**

### 13.2.4 Potable water consumption Universitywide, not including Medical Centers 2011–12 to 2012–13



Source: UCOP Capital Resources Management

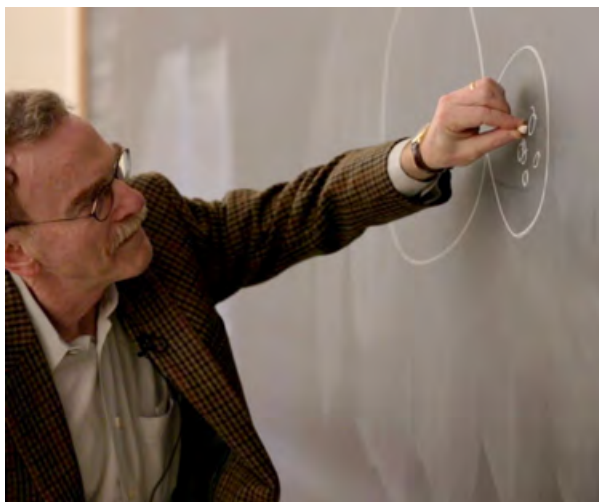
Over the past 15 years, despite increasing population and research intensity, UC campuses and medical centers have reduced annual water use by 520 million gallons out of a total of roughly 5 billion gallons, a 10 percent reduction. The campuses have employed a variety of strategies to achieve these savings, including water-efficient plumbing fixtures in buildings, smart irrigation, use of reclaimed and recycled water, and conversion from turf grass to drought-tolerant plantings.

Moving forward, as stress on water resources increases, UC is committed to reducing potable water use per capita 20 percent by 2020 from campus baselines. Seven campuses and medical centers have already met this target. Each campus and medical center is completing a Water Action Plan outlining strategies to meet or go beyond the 2020 goal.

In response to the current drought, each campus and medical center is taking immediate steps to reduce water consumption. Actions include irrigation cutbacks, increased efforts to detect and repair leaks, restroom fixture replacements and outreach and education of campus communities on water-conserving behavior and strategies.

## Chapter 14. Honors and Rankings

One of the points of pride for the University of California (UC) is providing undergraduate and graduate students, many of them low income, access to an educational and research environment that is equivalent to the Ivy League. This high quality experience comes in large part from the excellence of UC's faculty. Over the last decade, UC has celebrated a faculty member receiving a Nobel Prize on an almost annual basis with 60 in total for the UC system, which ranks it fifth in comparison with other countries.



*Randy Schekman of UC Berkeley, UCLA alum and co-winner of the 2013 Nobel Prize in Physiology or Medicine for his role in discovering the machinery that regulates the transport and secretion of proteins in our cells.*

The University of California does not endorse any particular set of rankings, nor does it have any specific goals with respect to any particular ranking. However, we recognize these rankings, although limited in scope, can give an indication of institutions' overall academic quality and allow them to assess performance relative to peers in a public way. UC campuses are visible in these rankings, with some near or at the top for public institutions.

UC Merced has not yet participated in these national ranking systems. Ranking a small 6-year-old campus like Merced against larger, well-established universities on indicators based on size, history and resources is not appropriate.

This chapter provides information on rankings of the UC campuses across five national and two international ranking schemes. Each ranking scheme uses different criteria to rank colleges and universities, and combines their criteria in different ways to produce a ranking that is unique to each. In addition, differences in rankings over time can be due to changes in methodology, making it difficult to assess changes in rankings across indices and across years.

Two organizations — U.S. News and World Report (USNWR) and the Washington Monthly — both rank undergraduate institutions, but they define academic quality very differently. USNWR, for example, focuses on academic reputation, graduation rates, student selectivity and financial resources to create its list of America's Best Colleges; in contrast, the Washington Monthly defines academic quality in terms of an institution's contribution to the public good. Three ranking systems — the National Research Council, USNWR and the Center for Measuring University Performance — look at the quality of graduate and professional education in the U.S. Two other ranking schemes — the Shanghai Academic Ranking of World Universities and the Times Higher Education — provide global rankings of institutions, primarily using measures of faculty research productivity.

The seven rankings selected for publication are:

*U.S. News:* America's Top National Universities

*Washington Monthly:* National University Rankings

National Research Council: Assessment of Research Doctorate Programs

*U.S. News:* Graduate Program Rankings

Center for Measuring University Performance: Top American Research Universities

Shanghai Ranking Consultancy: Academic Ranking of World Universities

*Times Higher Education:* World University Ranking

## 14.1 U.S. NEWS: AMERICA'S TOP UNIVERSITIES

First published in 1983, the *U.S. News and World Report* college rankings are the oldest and best known of all college rankings. These rankings are based on seven major factors: peer assessment, graduation and retention rates, faculty resources, student selectivity, financial resources and alumni-

giving rates. *U.S. News's* rankings of top national universities focus on academic reputation, financial resources and selectivity — factors that tend to privilege older, well-established, elite private institutions.

### 14.1.1 U.S. News: America's Top National Universities 2007 to 2014<sup>1</sup>

	2007	2008	2009	2010	2011	2012	2013	2014
Harvard	2	2	1	1	1	1	1	2
Yale	3	3	3	3	3	3	3	3
Stanford	4	4	4	4	5	5	6	5
MIT	4	7	4	4	7	5	6	7
<b>Berkeley</b>	<b>21</b>	<b>21</b>	<b>21</b>	<b>21</b>	<b>22</b>	<b>21</b>	<b>21</b>	<b>20</b>
<b>Los Angeles</b>	<b>26</b>	<b>25</b>	<b>25</b>	<b>24</b>	<b>25</b>	<b>25</b>	<b>24</b>	<b>23</b>
U of Virginia	24	23	23	24	25	25	24	23
U of Michigan	24	25	26	27	29	28	29	28
<b>Davis</b>	<b>47</b>	<b>42</b>	<b>44</b>	<b>42</b>	<b>39</b>	<b>38</b>	<b>38</b>	<b>39</b>
<b>San Diego</b>	<b>38</b>	<b>38</b>	<b>35</b>	<b>35</b>	<b>35</b>	<b>37</b>	<b>38</b>	<b>39</b>
<b>Santa Barbara</b>	<b>47</b>	<b>44</b>	<b>44</b>	<b>42</b>	<b>39</b>	<b>42</b>	<b>41</b>	<b>41</b>
U of Illinois	41	38	40	39	47	45	46	41
<b>Irvine</b>	<b>44</b>	<b>44</b>	<b>44</b>	<b>46</b>	<b>41</b>	<b>45</b>	<b>44</b>	<b>49</b>
<b>Santa Cruz</b>	<b>76</b>	<b>79</b>	<b>96</b>	<b>71</b>	<b>72</b>	<b>75</b>	<b>77</b>	<b>86</b>
U at Buffalo	3rd	3rd	121	121	120	111	106	109
<b>Riverside</b>	<b>88</b>	<b>96</b>	<b>89</b>	<b>96</b>	<b>94</b>	<b>97</b>	<b>101</b>	<b>112</b>

### 14.1.2 U.S. News: America's Top National Public Universities 2007 to 2014

	2007	2008	2009	2010	2011	2012	2013	2014
<b>Berkeley</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>Los Angeles</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
U of Virginia	2	2	2	2	2	2	2	2
U of Michigan	2	3	4	4	3	4	4	4
<b>Davis</b>	<b>13</b>	<b>11</b>	<b>12</b>	<b>11</b>	<b>9</b>	<b>9</b>	<b>8</b>	<b>9</b>
<b>San Diego</b>	<b>8</b>	<b>8</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>8</b>	<b>8</b>	<b>9</b>
<b>Santa Barbara</b>	<b>13</b>	<b>13</b>	<b>12</b>	<b>11</b>	<b>9</b>	<b>10</b>	<b>10</b>	<b>11</b>
U of Illinois	10	8	10	9	15	13	13	11
<b>Irvine</b>	<b>12</b>	<b>13</b>	<b>12</b>	<b>14</b>	<b>11</b>	<b>13</b>	<b>12</b>	<b>14</b>
<b>Santa Cruz</b>	<b>33</b>	<b>35</b>	<b>45</b>	<b>29</b>	<b>29</b>	<b>31</b>	<b>32</b>	<b>36</b>
U at Buffalo	-	-	-	-		54	51	53
<b>Riverside</b>	<b>39</b>	<b>45</b>	<b>40</b>	<b>43</b>	<b>41</b>	<b>41</b>	<b>46</b>	<b>55</b>

<sup>1</sup> *U.S. News* labels its undergraduate rankings for the prospective year; the 2013 rankings were published August 2012. UC San Francisco is not included in *U.S. News's* "America's Best Colleges" rankings because it is a graduate health sciences campus; Merced, which opened in 2005, also is not yet included in these rankings.

## 14.2 WASHINGTON MONTHLY: NATIONAL UNIVERSITY RANKINGS

*Washington Monthly* developed its ranking system in 2005 as an alternative to *U.S. News's* America's Best Colleges rankings. Unlike *U.S. News*, which ranks institutions on their prestige, resources and selectivity, *Washington Monthly* ranks institutions on their contributions to the public good. Its rankings are based on three broad factors: how well each institution fosters social mobility (e.g., percentage of students receiving Pell Grants); furthers research (e.g., faculty awards and Ph.D. production); and serves the country (e.g., student participation in ROTC and the Peace Corps).

### 14.2.1 *Washington Monthly*: National University Rankings 2005 to 2013

	2005	2006	2007	2008 <sup>1</sup>	2009	2010	2011	2012	2013
<b>San Diego</b>	<b>8</b>	<b>6</b>	<b>4</b>	<b>n/a</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>Riverside</b>	-	<b>22</b>	<b>15</b>	<b>n/a</b>	<b>16</b>	<b>40</b>	<b>5</b>	<b>9</b>	<b>2</b>
<b>Berkeley</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>n/a</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>5</b>
Stanford	5	7	13	n/a	4	4	4	3	6
Harvard	16	28	27	n/a	11	9	6	11	8
<b>Los Angeles</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>n/a</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>6</b>	<b>10</b>
MIT	1	1	27	n/a	12	15	11	15	11
U of Michigan	10	18	6	n/a	18	7	10	13	12
U of Illinois	13	16	11	n/a	24	27	38	22	19
<b>Santa Barbara</b>	-	<b>57</b>	<b>36</b>	<b>n/a</b>	<b>21</b>	<b>11</b>	<b>13</b>	<b>14</b>	<b>22</b>
<b>Davis</b>	<b>17</b>	<b>10</b>	<b>8</b>	<b>n/a</b>	<b>10</b>	<b>6</b>	<b>8</b>	<b>17</b>	<b>23</b>
U of Virginia	22	20	16	n/a	26	59	53	48	51
Yale	15	12	38	n/a	23	33	39	41	54
<b>Santa Cruz</b>	--	<b>68</b>	<b>76</b>	<b>n/a</b>	<b>56</b>	<b>93</b>	<b>70</b>	<b>67</b>	<b>65</b>
<b>Irvine</b>	--	<b>72</b>	<b>49</b>	<b>n/a</b>	<b>44</b>	<b>50</b>	<b>60</b>	<b>117</b>	<b>84</b>
U at Buffalo	--	203	111	n/a	101	121	160	202	204

<sup>1</sup> *Washington Monthly* did not publish rankings for 2008.



### 14.3 NATIONAL RESEARCH COUNCIL: RESEARCH-DOCTORATE PROGRAM RANKINGS

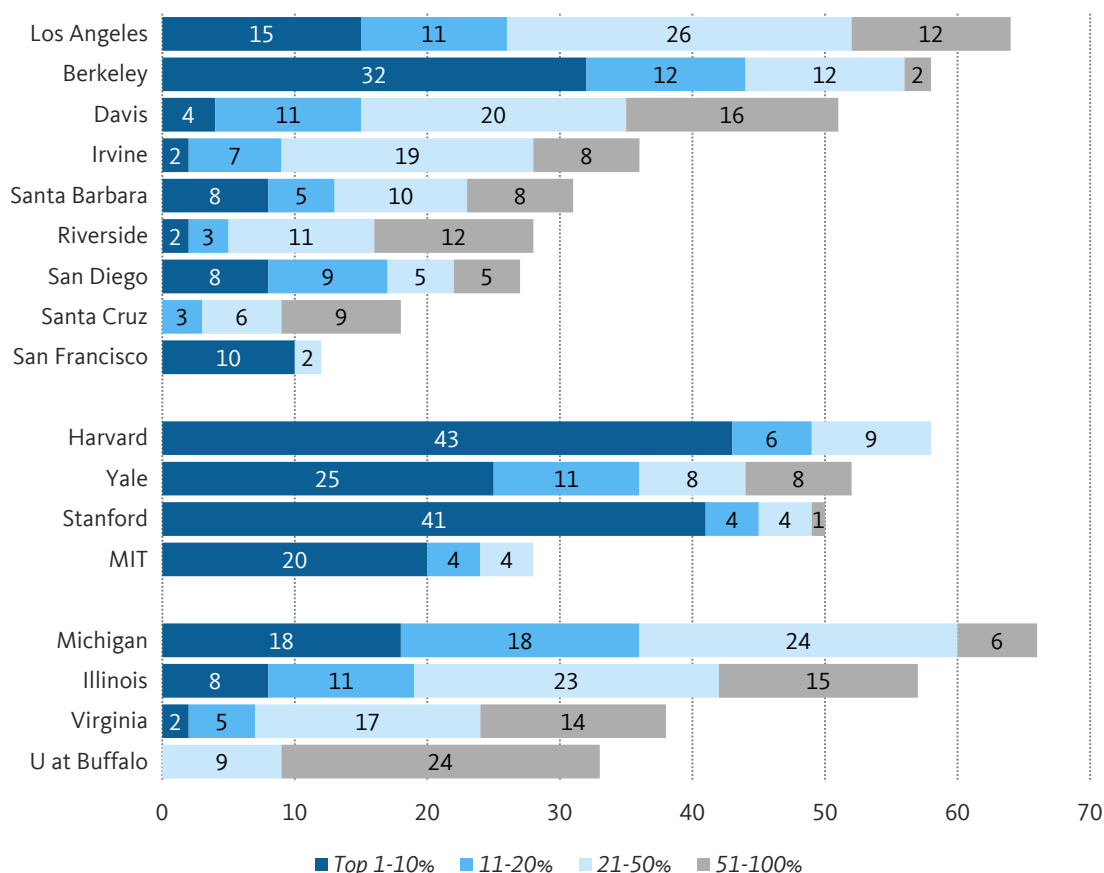
The National Research Council’s (NRC) assessments are the most comprehensive evaluations of Ph.D. programs in the United States. The most recent rankings, published in 2010 and revised in 2011, used data from the 2005–06 academic year to evaluate 4,838 doctoral programs at 212 universities.

The 2010–11 NRC rankings provoked significant debate and discussion within the academic community. The level of attention reflects the

influence that the NRC rankings have over perceptions of the quality of universities’ doctoral programs and by extension, their research enterprises.

UC graduate programs did well in the 2011 NRC rankings, primarily because of the weighting the rankings assign to faculty research productivity and academic honors and awards — areas in which UC faculty do well in comparison to those at other institutions.

#### 14.3.1 National Research Council: Research-Doctorate Program Rankings 2005–06 (published in 2011)



Source: National Resource Council Assessment of Research Doctorate Programs<sup>1</sup>

<sup>1</sup> The figures listed here are based on a lexicographic ordering of the S-Ranking; the weights for each field varied depending on the emphasis that faculty members in each field assigned the different variables collected by NRC. Additional information can be found here: <http://sites.nationalacademies.org/pgs/resdoc/index.htm>. These rankings use the updated dataset released on April 21, 2011.

## 14.4 U.S. NEWS: GRADUATE PROGRAM RANKINGS

U.S. News has ranked American universities' graduate programs in business, education, engineering, law and medicine since 2000. Like its college rankings, *USNWR's* graduate program rankings are controversial. The absence of an

institution from a top ranking does not necessarily imply it received a lower ranking: Berkeley, Santa Barbara and Santa Cruz, for example, do not offer M.D. degrees and thus are not ranked in medicine.

### 14.4.1 U.S. News: Graduate Program Rankings 2007 to 2014

	Campus	2007	2008	2009	2010	2011	2012	2013	2014
Business	Stanford	2	1	2	1	1	1	1	1
	Harvard	1	1	1	1	2	1	1	1
	MIT	4	4	4	3	3	4	4	5
	<b>Berkeley</b>	<b>8</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>
	U of Virginia	12	14	15	13	13	13	12	11
	U of Michigan	11	12	13	12	14	13	14	11
	Yale	14	13	10	11	10	10	13	13
	<b>Los Angeles</b>	<b>16</b>	<b>11</b>	<b>14</b>	<b>15</b>	<b>14</b>	<b>15</b>	<b>14</b>	<b>16</b>
	U of Illinois	38	38	42	42	37	37	47	35
	<b>Davis</b>	<b>44</b>	<b>40</b>	<b>42</b>	<b>42</b>	<b>28</b>	<b>36</b>	<b>40</b>	<b>41</b>
	<b>Irvine</b>	<b>44</b>	<b>nr</b>	<b>36</b>	<b>36</b>	<b>40</b>	<b>49</b>	<b>49</b>	<b>45</b>
	<b>San Diego</b>							<b>73</b>	<b>60</b>
	U at Buffalo	nr	nr	nr	nr	75	89	75	74
	<b>Riverside</b>	<b>nr</b>	<b>nr</b>	<b>nr</b>	<b>nr</b>	<b>nr</b>	<b>97</b>	<b>nr</b>	<b>nr</b>
Education	Harvard	3	6	6	3	2	2	3	3
	Stanford	2	1	2	5	4	4	5	4
	U of Michigan	6	9	14	14	9	12	11	8
	<b>Los Angeles</b>	<b>5</b>	<b>3</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>8</b>	<b>11</b>
	<b>Berkeley</b>	<b>8</b>	<b>7</b>	<b>7</b>	<b>10</b>	<b>12</b>	<b>13</b>	<b>12</b>	<b>14</b>
	U of Virginia	31	24	21	21	22	23	22	22
	U of Illinois	25	48	25	25	23	22	19	26
	<b>Irvine</b>	<b>nr</b>	<b>nr</b>	<b>nr</b>	<b>nr</b>	<b>48</b>	<b>43</b>	<b>37</b>	<b>36</b>
	<b>Davis</b>	<b>nr</b>	<b>nr</b>	<b>nr</b>	<b>nr</b>	<b>58</b>	<b>63</b>	<b>60</b>	<b>45</b>
	<b>Santa Barbara</b>	<b>nr</b>	<b>nr</b>	<b>nr</b>	<b>nr</b>	<b>58</b>	<b>63</b>	<b>40</b>	<b>64</b>
	<b>Riverside</b>	<b>nr</b>	<b>nr</b>	<b>nr</b>	<b>nr</b>	<b>66</b>	<b>67</b>	<b>74</b>	<b>77</b>
<b>San Diego</b>								<b>98</b>	
Engineering	MIT	1	1	1	1	1	1	1	1
	Stanford	2	2	2	2	2	2	2	2
	<b>Berkeley</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
	U of Illinois	5	5	5	5	5	5	5	6
	U of Michigan	9	9	9	8	9	8	9	8
	<b>San Diego</b>	<b>13</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>
	<b>Los Angeles</b>	<b>16</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>14</b>	<b>16</b>	<b>16</b>	<b>16</b>
	<b>Santa Barbara</b>	<b>19</b>	<b>19</b>	<b>18</b>	<b>19</b>	<b>21</b>	<b>21</b>	<b>20</b>	<b>19</b>
	Harvard	23	22	18	19	18	19	23	24
	<b>Davis</b>	<b>32</b>	<b>33</b>	<b>32</b>	<b>32</b>	<b>31</b>	<b>31</b>	<b>33</b>	<b>31</b>
	Yale	39	40	39	39	35	34	34	34
	<b>Irvine</b>	<b>37</b>	<b>35</b>	<b>36</b>	<b>36</b>	<b>39</b>	<b>39</b>	<b>37</b>	<b>38</b>
	U of Virginia	38	37	39	39	39	39	38	40
	U at Buffalo	nr	nr	nr	nr	52	54	61	60
<b>Riverside</b>	<b>nr</b>	<b>nr</b>	<b>nr</b>	<b>nr</b>	<b>66</b>	<b>64</b>	<b>67</b>	<b>69</b>	
<b>Santa Cruz</b>	<b>nr</b>	<b>nr</b>	<b>nr</b>	<b>nr</b>	<b>78</b>	<b>87</b>	<b>87</b>	<b>81</b>	

#### 14.4 U.S. NEWS: GRADUATE PROGRAM RANKINGS

	Campus	2007	2008	2009	2010	2011	2012	2013	2014
Law	Yale	1	1	1	1	1	1	1	1
	Harvard	2	2	2	2	2	2	2	2
	Stanford	2	3	3	3	3	3	2	3
	U of Virginia	10	9	10	10	9	7	7	8
	Berkeley	8	6	6	7	9	7	9	9
	U of Michigan	8	9	9	9	7	10	9	10
	Los Angeles	15	16	15	15	16	15	17	16
	Davis	44	35	28	28	23	29	38	36
	U of Illinois	25	27	23	21	23	35	47	40
	Hastings	38	39	42	42	42	44	48	54
U at Buffalo	100	85	third tier	third tier	84	82	86	100	
Medicine: Primary Care	San Francisco	8	6	5	5	4	3	4	4
	U of Michigan	45	17	7	14	20	8	8	8
	Harvard	13	7	15	17	15	15	14	11
	Los Angeles	18	12	10	14	16	10	11	13
	Davis	26	35	20	20	41	24	19	16
	U of Virginia	38	35	29	39	20	19	18	29
	San Diego	35	26	28	28	33	27	39	38
	Stanford						63	62	38
	Irvine	nr	nr	nr	nr	nr	86	66	61
	Yale	nr	nr	nr	nr	67	74	72	68
U at Buffalo	nr	nr	nr	nr	86	nr	79	nr	
Medicine: Research	Harvard	1	1	1	1	1	1	1	1
	Stanford	7	8	6	11	5	4	2	2
	San Francisco	5	5	5	4	5	5	4	4
	Yale	8	9	6	6	5	7	7	7
	U of Michigan	10	11	11	6	10	10	8	12
	Los Angeles	13	9	11	11	13	13	13	12
	San Diego	14	14	15	16	15	16	15	14
	U of Virginia				25	22	25	26	26
	Davis	48	48	47	47	42	42	42	40
	Irvine	43	45	47	47	42	44	42	43
U at Buffalo	nr	nr	nr	nr	55	57	64	71	

Notes: ‘-’ denotes years when programs were not evaluated. “nr” denotes the program was not rated in that year. Professional programs are listed here by what *U.S. News* calls the “edition” year, which is one year after the “ranked in” year. For example, the 2013 rankings above were published in the 2013 edition but ranked in 2012.

## 14.5 THE CENTER FOR MEASURING UNIVERSITY PERFORMANCE: TOP AMERICAN RESEARCH UNIVERSITIES

The Center for Measuring University Performance at Arizona State develops an annual list of Top American Research Universities. While the center's rankings are not as well known as other systems, its methodology is unique in that each of its nine factors is weighted equally.

Other systems presented in this chapter weight specific criteria (e.g., faculty publications, research expenditures) differently. The center instead awards one point for each of nine areas when an institution crosses a pre-determined threshold. The main areas are research expenditures, faculty honors and awards, endowment assets, annual giving, doctorates awarded, number of postdocs and SAT scores.

The center relies exclusively on objective measures and does not include academic reputation in its ranking scheme. However, its rankings are biased towards institutions with large research funding and resource bases. Data from the center are also not normalized by faculty size, resulting in lower rankings for smaller institutions.

### 14.5.1 The Center for Measuring University Performance: Top American Research Universities 2005 to 2012

	2005	2006	2007	2008	2009	2010	2011	2012
	(higher is better)							
MIT	9	9	9	9	9	9	9	9
Stanford	9	9	9	9	9	9	9	9
<b>Los Angeles</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>8</b>
U of Michigan	8	8	8	8	8	7	8	8
Harvard	8	9	9	8	8	8	8	8
Yale	7	7	7	8	7	7	7	8
<b>Berkeley</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>
<b>San Diego</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>5</b>
<b>Davis</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>3</b>
U of Illinois	5	5	4	4	3	3	4	3
<b>Santa Barbara</b>	-	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
U of Virginia	2	2	2	2	2	2	1	1
<b>Irvine</b>	-	<b>1</b>	-	-	<b>1</b>	<b>1</b>	<b>1</b>	
<b>San Francisco</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	-		

## 14.6 SHANGHAI RANKING CONSULTANCY: ACADEMIC RANKINGS OF WORLD UNIVERSITIES

The Academic Rankings of World Universities (ARWU) was created by Shanghai Jiao Tong University in China in 2003 to determine the global standing of Chinese research universities. Since 2009, the Shanghai Ranking Consultancy has published these rankings; see [www.arwu.org/aboutARWU.jsp](http://www.arwu.org/aboutARWU.jsp).

This ranking system emphasizes research outputs, such as total research expenditures. Because research outputs are not normalized by number of faculty, larger institutions tend to rank more highly than smaller ones. Institutions with strong research programs, especially in the sciences, also tend to score higher than those whose major strengths are in the humanities and social sciences.

The Shanghai Ranking Consultancy ranks the top 1,200 universities worldwide; their rankings are based entirely on measures of research strength and faculty honors and awards. English-speaking universities, especially those in the United States, tend to dominate the ARWU rankings.

### 14.6.1 Shanghai Ranking Consultancy: Academic Rankings of World Universities 2006 to 2013

	2006	2007	2008	2009	2010	2011	2012	2013
Harvard	1	1	1	1	1	1	1	1
Stanford	3	2	2	2	3	2	2	2
<b>Berkeley</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>4</b>	<b>3</b>
MIT	5	5	5	5	4	3	3	4
Yale	11	11	11	11	11	11	11	11
<b>Los Angeles</b>	<b>14</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>12</b>	<b>12</b>	<b>12</b>
<b>San Diego</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>15</b>	<b>15</b>	<b>14</b>
<b>San Francisco</b>	<b>18</b>	<b>18</b>	<b>18</b>	<b>18</b>	<b>18</b>	<b>17</b>	<b>18</b>	<b>18</b>
U of Michigan	21	21	21	22	22	22	22	23
U of Illinois	25	26	26	25	25	25	25	25
<b>Santa Barbara</b>	<b>35</b>	<b>35</b>	<b>36</b>	<b>35</b>	<b>32</b>	<b>33</b>	<b>34</b>	<b>35</b>
<b>Irvine</b>	<b>44</b>	<b>45</b>	<b>46</b>	<b>46</b>	<b>46</b>	<b>48</b>	<b>45</b>	<b>45</b>
<b>Davis</b>	<b>42</b>	<b>43</b>	<b>48</b>	<b>49</b>	<b>46</b>	<b>48</b>	<b>47</b>	<b>47</b>
<b>Riverside</b>	<b>102-150</b>	<b>102-150</b>	<b>101-151</b>	<b>101-151</b>	<b>101-150</b>	<b>102-150</b>	<b>101-150</b>	<b>101-150</b>
<b>Santa Cruz</b>	<b>102-150</b>	<b>102-150</b>	<b>101-151</b>	<b>101-151</b>	<b>101-150</b>	<b>102-150</b>	<b>101-150</b>	<b>101-150</b>
U of Virginia	102-150	102-150	95	91	96	102-150	101-150	101-150
U at Buffalo	201-300	203-304	201-302	201-302	201-300	201-300	201-300	201-300

Note: Campuses ranked below the top 100 are placed into ranges in lieu of an exact ranking.

## 14.7 TIMES HIGHER EDUCATION: WORLD UNIVERSITY RANKINGS

The British-based *Times Higher Education* (THE) significantly revised its educational rankings in 2011; thus, institutional scores from prior years are not comparable to current rankings.

The rankings are based on five “headline” categories: teaching, research, citations, industry income and international outlook.

### 14.7.1 *Times Higher Education*: World University Rankings 2010–11 to 2013–14

	Reputational Ranking				Overall Ranking			
	2011	2012	2013	2014	2010–11	2011–12	2012–13	2013–14
Harvard	1	1	1	1	1	2	4	2
Stanford	5	4	6	3	4	2	2	4
MIT	2	2	2	2	3	7	5	5
<b>Berkeley</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>8</b>	<b>10</b>	<b>9</b>	<b>8</b>
Yale	9	10	10	8	10	11	11	11
<b>Los Angeles</b>	<b>12</b>	<b>9</b>	<b>8</b>	<b>10</b>	<b>11</b>	<b>13</b>	<b>13</b>	<b>12</b>
U of Michigan	13	12	12	15	15	18	20	18
U of Illinois	21	23	24	23	33	31	33	29
<b>Santa Barbara</b>	<b>51-60</b>	<b>51-60</b>	<b>51-60</b>	<b>61-70</b>	<b>29</b>	<b>35</b>	<b>35</b>	<b>33</b>
<b>San Diego</b>	<b>30</b>	<b>36</b>	<b>34</b>	<b>40</b>	<b>32</b>	<b>33</b>	<b>38</b>	<b>40</b>
<b>Davis</b>	<b>38</b>	<b>44</b>	<b>48</b>	<b>51-60</b>	<b>54</b>	<b>38</b>	<b>44</b>	<b>52</b>
<b>Irvine</b>					<b>49</b>	<b>86</b>	<b>96</b>	<b>93</b>
U of Virginia					72	135	118	112
<b>Santa Cruz</b>					<b>68</b>	<b>110</b>	<b>122</b>	<b>136</b>
<b>Riverside</b>					<b>117</b>	<b>143</b>	<b>154</b>	<b>148</b>
U at Buffalo							198	176
<b>San Francisco</b>	<b>34</b>	<b>31</b>	<b>40</b>	<b>32</b>				

Note: nr denotes not ranked. Campuses in the reputational ranking below the top 50 are placed into ranges and in lieu of an exact ranking.

# Glossary

**AAU** — Association of American Universities. The AAU is a highly selective membership organization of preeminent public and private research universities. AAU currently has 60 American and two Canadian member institutions. In this report, the Canadian institutions are excluded from calculations. Of the ten UC campuses, six are AAU members: Berkeley, Davis, Irvine, Los Angeles, San Diego and Santa Barbara.

**AB 540** — AB 540 is an Assembly bill passed in 2001. It allows undocumented high school students who meet certain requirements to pay in-state, instead of nonresident, tuition at California’s public higher education institutions.

**Academic Senate** — The Academic Senate represents the faculty in the shared governance of the University of California.

**API** — Academic Performance Index. API is the measure of a high school’s academic performance and may affect a student’s success in college.

**ARRA** — American Recovery and Reinvestment Act, passed by Congress in 2009, was an economic stimulus package intended to ameliorate the effects of the 2007–09 recession.

**Auxiliary enterprises** — Auxiliary enterprises are campus services that charge fees for goods and services and therefore are self-supporting. Examples include student housing, meals and bookstores.

**Climate** — Climate is a term employed to measure diversity at UC campuses and the degree to which the campuses are welcoming and inclusive of different groups and affiliations.

**Clinical faculty** — Clinical faculty are instructors in medical and health sciences fields. They include professors in residence, professors of clinical \_\_ (\_\_ being the name of the discipline or specialty), and health science clinical professors. Clinical faculty are not members of the Academic Senate.

**Comparison institutions; comparators** — UC historically has used eight universities against which to benchmark faculty salaries. The comparison institutions — four public and four private — are: University of Illinois, University of Michigan, University at Buffalo and University of Virginia (all public); and Harvard, Massachusetts Institute of Technology, Stanford and Yale (all private).

**FTE** — Full time equivalent – a unit of measurement of employee or student workload or attendance. Two individuals each engaged in half-time employment constitute a single FTE. (See *headcount*.)

**General campus** — Used to distinguish the non-health science areas of a campus from the health science areas. Berkeley, Davis, Irvine, Los Angeles, Riverside and San Diego include both general campus and health science areas. Merced, Santa Barbara, and Santa Cruz are general campus only, and San Francisco is an exclusively health science campus.

**General funds** — General funds include State general funds, which are funds from the State of California, and UC general funds, which are primarily indirect cost recovery and nonresident tuition.

**Gift aid** — [p.29]

**Graduation rate** — The proportion of students in a cohort who finish their degrees within a specified period. Undergraduate graduation rates are generally measured in four-, five- and six-year increments for entering freshmen, and two-, three- and four-year increments for transfer students.

**Headcount** — Headcount is the actual number of individuals without accounting for full- or part-time status. Two students each attending school half-time constitute a headcount of two. (See *FTE*.)



**Health sciences instruction** — Seven UC campuses offer health sciences instruction. Davis, Irvine, Los Angeles, San Francisco and San Diego have schools of medicine and other health sciences such as pharmacy, nursing and dentistry; Riverside has a school of medicine; Berkeley offers health sciences instruction in optometry and public health.

**K-12** — Kindergarten through 12-grade instruction.

**Ladder-rank** — Ladder-rank faculty are faculty who are tenured or have potential to receive tenure, and generally are members of the Academic Senate.

**Master Plan** — The Master Plan for Higher Education establishes a system of public higher education in California that defines the roles of public institutions with the goal of making higher education available to all Californians. The Master Plan originally was drafted in 1960 and has been updated several times to accommodate changing circumstances.

**Non-ladder-rank faculty** — Non-ladder rank faculty are faculty who are neither tenured nor on track to receive tenure, and generally are not members of the Academic Senate. Non-ladder rank faculty includes lecturers, visitors, adjuncts, instructional assistants and clinical faculty.

**Nonresident** — Nonresident students come from outside California to attend a UC campus. They must meet higher admissions criteria and pay the full cost of attendance.

**Pell Grant** — The Pell Grant is a federal program that provides need-based grants to low-income individuals for the purposes of obtaining a college degree. The number and percentage of Pell Grant recipients is frequently used as a measure of an institution's accessibility for low-income students.

**Postbaccalaureate teaching credential** — The postbaccalaureate teaching credential trains individuals to meet state standards for teacher certification.

**Postdoctoral scholar** — A postdoctoral scholar is engaged in further research or training in the field in which they obtained their doctoral degree for the purpose of gaining additional expertise and skills. Postdoctoral scholars may hold concurrent titles in other academic or staff categories.

**Retention** — Retention is the proportion of students in a cohort who remain enrolled or earn a degree at a specified time, such as after one year.

**SCH, student credit hours** — Student credit hours are a measure of faculty teaching workload. SCH is defined as the number of student enrollments in a course multiplied by the number of credits available from that course. For example, a 4-credit course with 50 students generates 200 SCH; a 2-credit course of 15 students generates 30 SCH.

**Shared governance** — At the University of California, faculty, operating through the Academic Senate, have a voice in the operation of the University and a measure of responsibility for the manner in which the University operates. This system is known as shared governance.

**STEM** — Science, technology, engineering and mathematics. In this report, includes physical sciences and mathematics, life sciences, engineering, computer science and health sciences.

**Tenure** — Tenure is the right to continuous employment until ended by the tenure holder by retirement or resignation. A tenured appointment may not be terminated by the employer except for good cause.

**Terminal master's degree** — A master's degree that is not intended nor has the capability of leading to a doctoral program of study.

**Transfer students** — Transfer students enter UC after completing their freshman- and sophomore-level studies at a California Community College. The Master Plan calls for UC to admit as juniors all qualified California Community College students and specifies that the University maintain a 60:40 ratio of upper-division (junior- and senior-level) to lower-division (freshman- and sophomore-level).

**UC Extension** — UC Extension is a program of courses offered by UC campuses to working professionals to meet their continuing-education needs through both credit and non-credit programs. UC Extension does not award degrees; it offers only certificates and continuing education credit.

**UCUES** — University of California Undergraduate Experience Survey. UCUES is a biennial survey that solicits undergraduate opinions on all aspects of the UC experience. *See Data Glossary entry below for more information.*

**VAI** — Visitors, adjuncts and instructional assistants are types of faculty who do not have tenure or security of employment.

**VERIP** — Voluntary Early Retirement Incentive Program

**WASC** — Western Association of Schools and Colleges — WASC is UC’s regional accrediting agency. It is recognized by the U.S. Department of Education as the accrediting agency for colleges and universities in the western United States and the Pacific Basin.

## Data Sources

The following provides brief information on data sources and terms used in the 2014 Accountability Report and hyperlinks for further information. The majority of the data for this report was generated by UCOP’s Institutional Research and Academic Planning (IRAP) Unit. In addition, other UC policy departments provided data as noted.

### Association of American Universities (AAU)

The Association of American Universities (AAU) is an association of 62 leading public and private research universities in the United States and Canada. A list of the institutions can be found in Table 6 of this glossary. Membership in AAU is by invitation and is based on the high quality of programs of academic research and scholarship and undergraduate, graduate and professional education in a number of fields, as well as general recognition that a university is outstanding by reason of the excellence of its research and education programs. Throughout this report, the two AAU institutions in Canada are excluded from the “Non-UC AAU Public” group because the Canadian institutions do not submit data to the U.S. Department of Education, which is the source of the AAU data used here. For more information, visit [www.aau.edu](http://www.aau.edu).

### American Association of University Professors (AAUP)

The American Association of University Professors is an organization of professors and other academics in the United States. It conducts an annual survey of faculty compensation, used in this report to compare UC’s faculty salaries. More information on the AAUP data set can be found at [www.aaup.org/our-work/research/annual-report-economic-status-profession](http://www.aaup.org/our-work/research/annual-report-economic-status-profession).

### California State Department of Finance

The California State Department of Finance is a state cabinet-level agency that is responsible for preparing, explaining and administering the state’s annual financial plan. The department also is responsible for creating and monitoring current and future economic forecasts for the state, estimating population demographics and enrollment projections. More information can be found at [www.dof.ca.gov](http://www.dof.ca.gov).

### **Comparison 8 (Comp 8)**

The “Comparison 8” institutions are the eight universities — four public and four private — with which UC regularly compares faculty pay scales and student fees. This group is recognized as appropriate for purposes of comparison by such external agencies as the California Department of Finance. The public universities are University of Illinois, University of Michigan, University of Virginia and University at Buffalo. The private universities are Harvard University, Massachusetts Institute of Technology, Stanford University and Yale University.

### **Consumer Price Index (CPI)**

The CPI is a measure of inflation experienced by consumers, and an important indicator of the condition of the economy. It can be used to adjust other economic data for changes in price level and to convert them into inflation-free dollars. For example, retail sales and income data are "deflated" to assess their "real" movements over time. This report uses the calendar year average of the CPI-W (CA), which is the Consumer Price Index for Urban Wage Earners and Clerical Workers. For more information on the CPI-W (CA), visit [www.dof.ca.gov/HTML/FS\\_DATA/LatestEconData/FS\\_Price.htm](http://www.dof.ca.gov/HTML/FS_DATA/LatestEconData/FS_Price.htm).

### **Council for Aid to Education (CAE)**

The Council for Aid to Education (CAE) is a national nonprofit organization based in New York City. Initially established in 1952 to advance corporate support of education and to conduct policy research on higher education, today CAE also is focused on improving quality and access in higher education. CAE's Voluntary Support of Education (VSE) survey is the authoritative national source of information on private giving to higher education and private K-12 classrooms, consistently capturing about 85 percent of the total voluntary support to colleges and universities in the United States. CAE has managed the survey as a public service for over 50 years. For more information, visit [www.cae.org](http://www.cae.org).

### **Integrated Postsecondary Education Data System (IPEDS)**

IPEDS is a system of interrelated surveys conducted annually by the U.S. Department's National Center for Education Statistics (NCES). IPEDS gathers information from every college, university, and technical and vocational institution that participates in the federal student financial aid programs. The Higher Education Act of 1965, as amended, requires that institutions that participate in federal student aid programs report data on enrollments, program completions, graduation rates, faculty and staff, finances, institutional prices and student financial aid. IPEDS provides basic data needed to describe — and analyze trends in — postsecondary education in the United States, in terms of the numbers of students enrolled, staff employed, dollars expended and degrees earned. IPEDS forms the institutional sampling frame for other NCES postsecondary surveys, such as the National Postsecondary Student Aid Study and the National Survey of Postsecondary Faculty. For more information, visit <http://nces.ed.gov/ipeds>.

### **National Research Council's (NRC) Assessment of Research Doctoral Programs**

The National Research Council (NRC) periodically assesses research doctoral programs. Data in this report are from the Data-Based Assessment of Research-Doctorate Programs, originally released on Sept. 28, 2010 with a revised data release in April 2011. Data were collected from about 5,000 doctoral programs across 62 fields at 212 research universities. Data are based on the 2005–06 academic year and, for some data elements, for prior years as well. More information can be found at: <http://sites.nationalacademies.org/pga/Resdoc/index.htm>.

### **National Postsecondary Student Aid Study (NPSAS)**

The National Postsecondary Student Aid Study is the most comprehensive, nationally representative survey of student financing of postsecondary education in the United States. Since 1987, NPSAS has been conducted every three to four years by the National Center for Education Statistics (NCES) of the Institute of Education Sciences, U.S. Department of Education. Undergraduate and graduate students enrolled at all types of postsecondary institutions are represented. For more information, visit <http://nces.ed.gov/surveys/npsas>.

### **Survey of Earned Doctorates (SED)**

The Survey of Earned Doctorates (SED) is a federal agency survey conducted by the National Opinion Research Center (NORC) for the National Science Foundation and five other federal agencies (National Institutes of Health, U.S. Department of Education, National Endowment for the Humanities, U.S. Department of Agriculture and the National Aeronautics and Space Administration). The SED gathers information annually from 45,000 new U.S. research doctorate graduates about their educational histories, funding sources and postdoctoral plans.

### **UC Alumni Survey 2010**

UC undertook a survey of baccalaureate degree recipients five, ten and 20 years after receiving their degrees (in 2004, 1999 and 1989, respectively). Using addresses contributed by campus alumni associations and development offices, a total of 86,439 alumni who received their baccalaureate degrees in 1989, 1999 or 2004 were contacted and invited to respond to the survey instrument by email or by post. A total of 5,976 useable responses were received for an overall response rate of 8 percent, with individual campus response rates ranging from 5 percent to 10 percent. A comparison of respondents to the population of each of the three graduating cohorts revealed that there was no response bias related to gender, entry status, ethnicity, first-generation college status, first language, final UC GPA, campus, residency status at the time of admission and Pell Grant recipient status.<sup>1</sup>

### **UC Audited Financial Statements**

UC, like all public entities, is audited by an external auditing firm. UC's external audit is performed by Price Waterhouse Coopers, an external independent certified public accounting firm reporting to the Regents. UC's audited financial statements can be accessed at [www.universityofcalifornia.edu/reportingtransparency](http://www.universityofcalifornia.edu/reportingtransparency).

### **UC Budget for Current Operations**

UC budget documents can be found at [www.ucop.edu/operating-budget/budgets-and-reports/index.html](http://www.ucop.edu/operating-budget/budgets-and-reports/index.html).

### **UC Corporate Contracts and Grants System (CGX)**

The Corporate Contracts and Grants System (CGX) is a set of databases and processes that provides information about sponsored projects at the University of California. More information can be found at [www.ucop.edu/irc/systems/cgx.html](http://www.ucop.edu/irc/systems/cgx.html).

### **UC Corporate Financial System (CFS)**

The Corporate Financial System (CFS) contains financial data for all UC campuses and is available to corporate functional offices for inquiry and reporting purposes. The primary source of data in the CFS is a monthly transmittal file from each of the ten UC campuses. Each campus file contains data reflecting current financial, budgetary and encumbrance balances and current month financial activity in the campus's general ledger. More information can be found at [www.ucop.edu/irc/systems/cfs.html](http://www.ucop.edu/irc/systems/cfs.html).

### **UC Corporate Personnel System (CPS)**

The Corporate Personnel System (CPS) is a reporting system that provides Office of the President management and staff with demographic, personnel and pay activity data on employees paid at the ten campuses, the Office of the President, the Division of Agricultural and Natural Resources, the Lawrence Berkeley National Laboratory, Hastings College of Law and the Associated Students of UCLA (ASUCLA). More information can be found at [www.ucop.edu/irc/systems/cps.html](http://www.ucop.edu/irc/systems/cps.html).

<sup>1</sup> Response bias testing for the class of 1989 was limited to gender, entry status, ethnicity, final UC GPA and campus because data on the other variables was not collected when this cohort entered UC.

### **UC Corporate Student System (CSS)**

The Corporate Student System (CSS) is a set of databases and processes that provides information to meet the management, analytical and operational needs of the UC Office of the President related to student enrollment and performance. The seven CSS databases contain information about enrollment, undergraduate and graduate admissions, financial support, degrees conferred, and health science resident and postdoctoral fellow appointees. The databases are created and/or updated with edited data received from the campuses and other sources, and are organized to allow both cross-sectional analyses and longitudinal studies of performance and persistence. Registrant and financial support databases are updated quarterly; remaining databases are updated annually. More information can be found at [www.ucop.edu/irc/systems/css.html](http://www.ucop.edu/irc/systems/css.html).

### **UC Faculty Instructional Activities dataset (“TIE” data collection)**

UC conducts annual data collections from campuses on faculty instructional activities. This data collection was originally undertaken in response to a state reporting requirement which was not renewed. The 2007 annual report to the Legislature was the last mandated report; it can be found at [/www.ucop.edu/academic-planning-programs-coordination/\\_files/documents/fia/fia\\_annlrpt2007.pdf](http://www.ucop.edu/academic-planning-programs-coordination/_files/documents/fia/fia_annlrpt2007.pdf). Since that time, UC has continued to collect these data for management and accountability purposes.

### **UC Graduate Student Support Survey**

The UCOP Student Affairs department conducts periodic surveys of the competitiveness of UC graduate student support. Reports on this survey can be found at [www.ucop.edu/student-affairs/data-and-reporting/graduate-student-support/index.html](http://www.ucop.edu/student-affairs/data-and-reporting/graduate-student-support/index.html).

### **UC Medical Centers Audited Financial Statements**

The UC medical centers, like all public entities, are audited by an external auditing firm. The medical center audited financial statements are published separately from UC’s external audit. They are performed by Price Waterhouse Coopers, an external independent certified public accounting firm reporting to the Regents. UC’s audited financial statements can be accessed at [www.universityofcalifornia.edu/reportingtransparency](http://www.universityofcalifornia.edu/reportingtransparency).

### **UC Medical Schools**

Six UC campuses include medical schools: Davis, Irvine, Los Angeles, Riverside, San Diego and San Francisco. More information on these schools can be found at <http://health.universityofcalifornia.edu/medical-centers/>.

### **UC Statistical Summary of Students and Staff (StatSumm)**

Each spring, UC publishes the Statistical Summary of Students and Staff, which summarizes data supplied by all campuses and serves as the official record of student enrollment at the University of California. Additional information can be found at [www.ucop.edu/ucophome/uwnews/stat](http://www.ucop.edu/ucophome/uwnews/stat).

### **UC Student Financial Support Annual Reports**

These reports, produced by the UCOP Student Affairs department, can be found along with other financial aid information at [www.ucop.edu/student-affairs/data-and-reporting/index.html](http://www.ucop.edu/student-affairs/data-and-reporting/index.html).

### **University of California Undergraduate Experience Survey (UCUES)**

The University of California Undergraduate Experience Survey (UCUES) biennially solicits student opinions on all aspects of the UC experience. UCUES content is broad and covers most aspects of students’ academic and co-curricular experiences. Students evaluate such things as instruction, advising and student services. All respondents answer questions in the core as well as one of three or four modules of additional questions to which they have been randomly assigned. Thus, the number of respondents can vary greatly for any given items. The systemwide response rate for UCUES was 38 percent in 2006, 39 percent in 2008, 42 percent in 2010 and 36 percent in 2012. More information can be found at <http://studentsurvey.universityofcalifornia.edu/>.

**Table 1. UC Student Enrollment Classification Using UC Corporate Student System**

<i>Level</i>	<i>UC Degree Level</i>	<i>UC Student Level Code</i>	<i>Disciplines (CIP Categories)</i>		
<b>Graduate Academic</b>			<i>Excludes Post-baccs in discipline breakdowns</i>		
Academic Doctoral	PhD	6, 7, 8	Visual/Performing Arts	Foreign Languages	History
Academic Masters	MA, MS	5 or Post-bacc.	English Literature	Philosophy	Liberal Arts
Professional Doctoral	EdD, DEnv, DPh, DPT, DNS, etc.	6, 7, 8	Engineering	Area Studies	Bio/Life Sciences
			Computer Science	Psychology	Conservation Science
			Math	Social Sciences	Science
			Physical Science	Agricultural Science	Interdisciplinary
			Business	Public Admin.	Other/Unknown
			Architecture	Law (non-J.D.)	Criminology
			Education	Communications	Health Sciences
					Library Science
<b>Graduate Professional</b>		<i>Include self-supporting</i>			
Professional Masters	MBA, MPP, MPH, MSW, MLS, M. City Planning, MA/MS in Education, MEng, MFT, etc.	5	Business	Public Admin.	Criminology
Professional Practice	JD, MD, OD, DDS, PharmD, DVM, AudD, etc.	5 or 6	Architecture	Law (non-J.D.)	Health Sciences
			Education	Communications	Library Science
			Arts (MFT only)		
			Law (JD only)		Other Health Sciences
			Medicine (MD only)		
<b>Health Science Resident</b>	--	R	Health Sciences		
<b>Undergraduate</b>	BA, BS	1-4	All Disciplines, grouped into broad disciplines		

**Table 2. UC and Comparative Student Data Classification Using IPEDS Data**

Enrollment Level	Degree Classification	IPEDS Degree	Disciplines (CIP Categories)		
Graduate & Professional	Graduate Academic				
	Academic Doctoral	Doctor's Degree (old) Doctor's Degree – research/scholarship (new)	Visual/Perf. Arts English Literature Engineering Computer Science Math Physical Science	Foreign Languages Philosophy Area Studies Psychology Social Sciences Agricultural Science	History Liberal Arts Bio/Life Sciences Conservation Science Interdisciplinary Other/Unknown
	Academic Masters	Master			
	Professional Doctoral	Doctor's Degree (old) Doctor's Degree – research/scholarship (new)	Business Architecture Education Military Science Homeland Security	Public Admin. Law (non-J.D.) Communications Parks & Recreation Agricultural Science	Criminology Health Sciences Library Science Theology
	Graduate Professional				
	Professional Masters	Master	Business Architecture Education Military Science Homeland Security	Public Admin. Law (non-J.D.) Communications Parks & Recreation	Criminology Health Sciences Library Science Theology
	Professional Practice	First Professional (old) Doctor's Degree – professional practice (new)		Law (J.D. only) Medicine (M.D. only)	Other Health Sciences Theology
	Undergraduate	Undergraduate	Bachelor	All Disciplines, grouped into broad disciplines	



**Table 3. Broad Discipline Classification**

Broad Discipline	CIP Categories Included	
	When Using UC Corporate Data	When Using IPEDS Degree Data
Arts & Humanities	Visual/Performing Arts English Literature Foreign Languages Philosophy History Liberal Arts	Visual/Performing Arts English Literature Foreign Languages Philosophy History Liberal Arts
Life Sciences	Bio/Life Sciences Conservation Science Agricultural Science (select 01 CIPs)	Bio/Life Sciences Conservation Science Agricultural Science (select 01 CIPs)
Physical Sciences, Technology, Engineering and Mathematics (PSTEM)	Math Physical Science Engineering Computer Science	Math Physical Science Engineering Computer Science
Social Sciences	Area Studies Psychology Social Sciences (except UCSD Pacific Affairs, UCI Criminology) Agricultural Business/Production (select 01 CIPs)	Area Studies Psychology Social Sciences Agricultural Business/Production (select 01 CIPs)
Other Disciplines	Interdisciplinary Other/Unknown Business Architecture Education Public Admin. Law (non-J.D.) Communications Criminology Health Sciences Library Science Social Sciences (UCSD Pacific Affairs and UCI Criminology)	Interdisciplinary Other/Unknown Business Architecture Education Public Admin. Law (non-J.D.) Communications Criminology Health Sciences Library Science Theology Parks & Recreation Military Science Homeland Security

**Table 4. Inflation Adjustments**

Unless otherwise noted, all inflation adjustments are to 2011 calendar year dollars using the consumer price index for urban wage earners and clerical workers, California (CPI-W) published by the California Department of Finance at [www.dof.ca.gov/HTML/FS\\_DATA/LatestEconData/documents/BBFYCPI.XLS](http://www.dof.ca.gov/HTML/FS_DATA/LatestEconData/documents/BBFYCPI.XLS).

Calendar Year	Fiscal Year	Academic Year	CCPI-W, CA (1982–84=100)		Calendar Year	Fiscal Year	Academic Year	CCPI-W, CA (1982–84=100)	
			Year	Year				Year	Year
1993	FY 1994	1993–94	144.7		2003	FY 2004	2003–04	183.8	
1994	FY 1995	1994–95	146.6		2004	FY 2005	2004–05	188.9	
1995	FY 1996	1995–96	149.1		2005	FY 2006	2005–06	195.9	
1996	FY 1997	1996–97	152.0		2006	FY 2007	2006–07	203.3	
1997	FY 1998	1997–98	155.0		2007	FY 2008	2007–08	209.9	
1998	FY 1999	1998–99	157.6		2008	FY 2009	2008–09	217.6	
1999	FY 2000	1999–00	162.2		2009	FY 2010	2009–10	216.3	
2000	FY 2001	2000–01	168.1		2010	FY 2011	2010–11	219.7	
2001	FY 2002	2001–02	174.7		2011	FY 2012	2011–12	226.4	
2002	FY 2003	2002–03	179.0		2012	FY 2013	2012–13	231.6	

**Table 5. Faculty Discipline Groupings  
By Discipline Grouping — Accountability**

Discipline Grouping - Accountability	UAS Acad Disc Code	UAS Discipline
Arts & Humanities	410	Fine & Applied Arts
Arts & Humanities	420	Foreign Languages
Arts & Humanities	430	Letters
Arts & Humanities	440	Theology
Business/Management	610	Business & Management
Education	620	Education
Engineering & Computer Science	220	Computer & Information Sciences
Engineering & Computer Science	240	Engineering
Interdisciplinary/Other	020	Interdisciplinary Studies
Interdisciplinary/Other	510	Physical Education
Interdisciplinary/Other	520	Military Sciences
Interdisciplinary/Other	690	Home Economics
Law	640	Law
Life Sciences	110	Biological Sciences
Life Sciences	120	Agriculture & Natural Resources
Math	210	Mathematics
Medicine	810	Medicine
Other General Campus Professional	630	Architecture & Environmental Design
Other General Campus Professional	650	Criminology
Other General Campus Professional	660	Social Welfare
Other General Campus Professional	670	Communications
Other General Campus Professional	680	Library Science
Other Health Science	820	Veterinary Medicine
Other Health Science	830	Dentistry
Other Health Science	840	Nursing
Other Health Science	850	Pharmacy
Other Health Science	860	Public Health
Other Health Science	870	Optometry
Other Health Science	880	Other Health Professions
Physical Science	230	Physical Sciences
Social Science & Psychology	310	Psychology
Social Science & Psychology	320	Social Sciences
Social Science & Psychology	330	Area Studies

Mapping Developed 1/7/2011

UC Institutional Research and Academic Personnel

**Table 6. AAU Member Universities (United States only)**

<b>UC</b>	<b>Non-UC Public</b>	<b>Private</b>
Berkeley	Georgia Institute of Technology — Main Campus	Boston University
Davis	Indiana University — Bloomington	Brandeis University
Irvine	Iowa State University	Brown University
Los Angeles	Michigan State University	California Institute of Technology
San Diego	Ohio State University — Main Campus	Carnegie Mellon University
Santa Barbara	Pennsylvania State University — Main Campus	Case Western Reserve University
	Purdue University — Main Campus	Columbia University in the City of New York
	Rutgers University — New Brunswick	Cornell University
	Stony Brook University	Duke University
	Texas A & M University	Emory University
	The University of Texas at Austin	Harvard University
	University at Buffalo	Johns Hopkins University
	University of Arizona	Massachusetts Institute of Technology
	University of Colorado at Boulder	New York University
	University of Florida	Northwestern University
	University of Illinois at Urbana — Champaign	Princeton University
	University of Iowa	Rice University
	University of Kansas	Stanford University
	University of Maryland — College Park	Tulane University of Louisiana
	University of Michigan — Ann Arbor	University of Chicago
	University of Minnesota — Twin Cities	University of Pennsylvania
	University of Missouri — Columbia	University of Rochester
	University of North Carolina at Chapel Hill	University of Southern California
	University of Oregon	Vanderbilt University
	University of Pittsburgh — Pittsburgh Campus	Washington University in St Louis
	University of Virginia — Main Campus	Yale University
	University of Washington — Seattle Campus	
	University of Wisconsin — Madison	