

Office of the President

TO MEMBERS OF THE ACADEMIC AND STUDENT AFFAIRS COMMITTEE:

DISCUSSION ITEM

For Meeting of January 22, 2020

GRADUATE EDUCATION AND THE CALIFORNIA ECONOMY

EXECUTIVE SUMMARY

California is the fifth largest economy in the world, in large part due to its skilled workforce. To keep California's economy strong in the future, the state needs to grow highly educated workers to replace baby boomers who are headed to retirement and to fill jobs in growing industries that require college degrees. A significant number of these jobs will require a graduate degree, including occupations that previously required bachelor's degrees. UC graduate students are an essential part of UC's research mission—UC research, much of which is conducted by UC faculty and graduate students, is the source of future California industries and the high-wage, high technology jobs associated with those industries. The University of California is seeking State funding to grow 1,000 graduate students in 2020-21, and that investment will help California continue to lead economically, advance state workforce needs, and further UC 2030 degree attainment goals and efforts to expand the pathway for new generation students (i.e., low-income, first-generation, Latino, African American, and American Indian students) to go to graduate school.

BACKGROUND

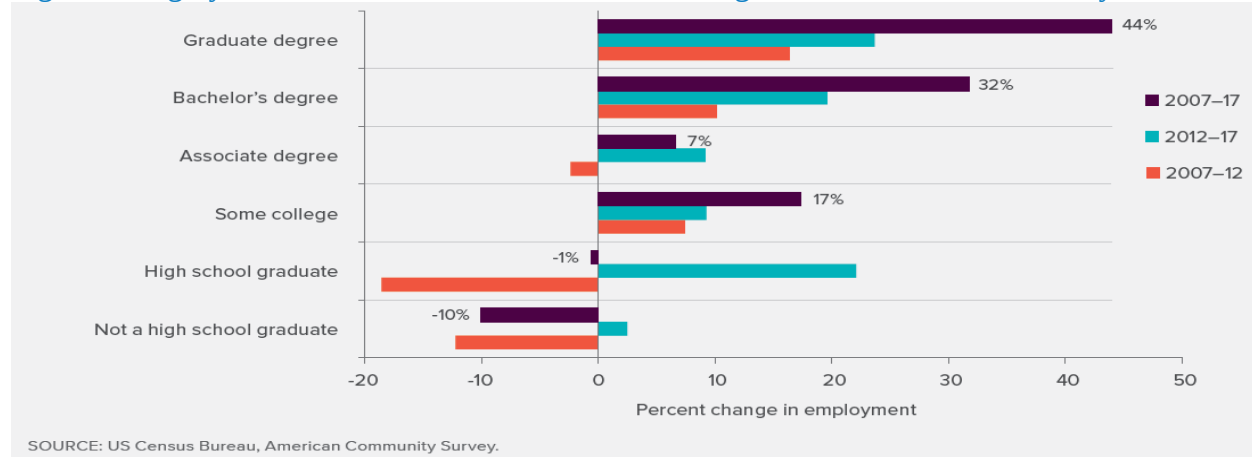
California is the fifth largest economy in the world. The State's workforce and economy rely on highly skilled and innovative workers, particularly those with graduate level education, and recent projections show that this will only increase in the future.

The Public Policy Institute of California (PPIC) warned in its October 2019 "Meeting California's Workforce Needs" report¹ that "(f)ailing to keep up with demand for skilled workers could curtail economic growth, limit economic mobility, and increased inequality." Not only is the "demand for skilled workers...increasing in the vast majority of occupations in fields that have traditionally required high levels of education, such as computer science and health care," but also with occupations which used to have lower shares of college educated workers (e.g., management in hospitality industry). In fact, some believe that today a master's degree has become the new bachelor's degree. Furthermore, PPIC reported workers with more education—especially graduate degrees—have fared better in both the recession and recovery periods (see Figure 1). Between 2007 and 2017, there has been a 44 percent growth in employment for

¹ <https://www.ppic.org/publication/higher-education-in-california-meeting-californias-workforce-needs/>

graduate degree recipients, compared to 32 percent for bachelor's degree recipients and a slight decline for high school graduates (i.e., a decrease of one point).

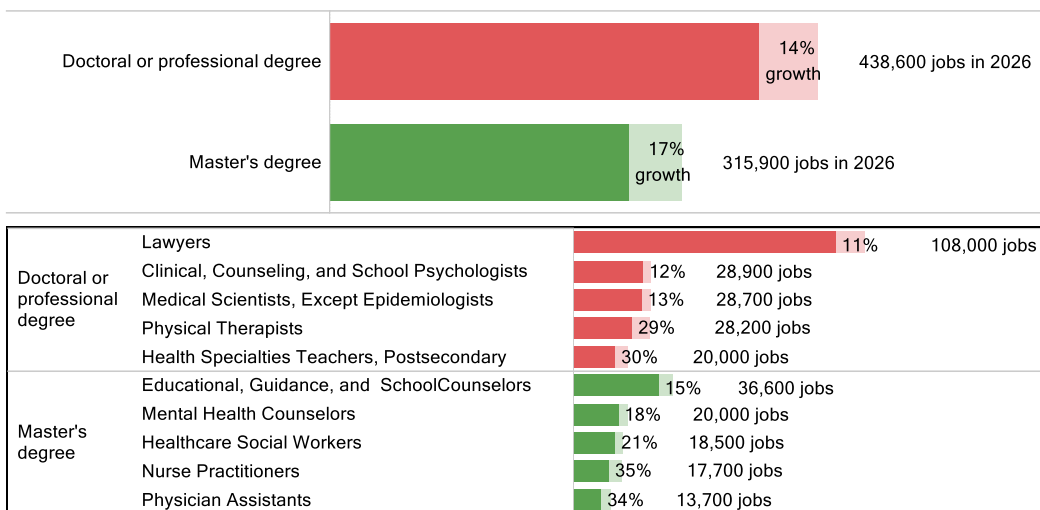
Figure 1: Highly educated workers have fared best through the recession and recovery



The California Employment Development Department (EDD) projects by 2026 there will be hundreds of thousands of new jobs that will require a bachelor's degree as an entry level education requirement. Some of these occupational areas include business and financial operations (121,200 more jobs); management (+116,300); computer and mathematical (+93,700); healthcare practitioners and technical (+51,300); education, training and library (+50,500) and architecture and engineering (+25,000). While the entry level requirement is only a bachelor's degree, Californians will likely be more competitive for hiring and advancement opportunities if they have a graduate degree in a relevant field.

In addition, California EDD projects by 2026 roughly 100,000 additional jobs will require a graduate degree, with jobs in the health, legal, and education fields being the fastest growing.

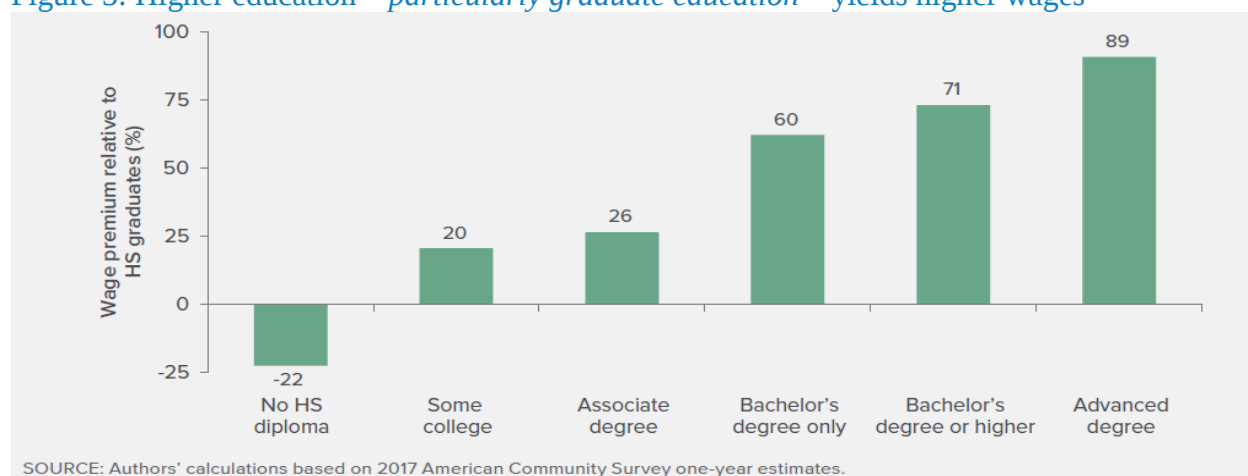
Figure 2: Projected 2026 California job growth by entry level education



Source: California Employment Development Department (EDD)

Increasing the number of graduate degree recipients is expected to promote economic mobility, with workers that have graduate degrees earning substantially more in California. PPIC reports an almost 90 percent wage differential for advanced degree (i.e., graduate degree) recipients, compared to high school graduates and almost a 50 percent wage differential to bachelor's degree recipients (see Figure 3). With California's low-income, first-generation, Latino and African American students (i.e., new generation students) making up most of the state's public high school student population, it is essential that California expand pathways to graduate education for new generation students to advance economic mobility, eliminate gaps, and maximize the state's potential on all fronts. New generation students represent California's majority populations thus their success is California's success.

Figure 3: Higher education – particularly graduate education – yields higher wages



Lastly, California baby boomers—who have higher college attainment levels when compared to other generations are beginning to retire—opening up hundreds of thousands of jobs which will require a college degree. PPIC states in its “Meeting California’s Workforce Needs” report:

- The number of retirees between 2008 and 2018 grew from 3.8 million to 5.2 million and
- The number of retirees with a bachelor's or graduate degree increased by more than 700,000 that same decade

Key California workforce areas that will require or benefit from a research-based graduate degree recipients from fields where UC is the sole public and/or highly-ranked provider, such as health care practitioners, lawyers, postsecondary faculty, and management. While in-migration of skilled workers will address some of the education to workforce gaps, California will bear the most significant responsibility for meeting future demand. This highlights the importance of investing in the state's existing graduate education enterprise at the University of California.

WHY UC IS UNIQUELY SITUATED TO SUPPORT CALIFORNIA'S NEED FOR GRADUATE DEGREE RECIPIENTS

As California's designated research university, UC has primary responsibility within the state's public higher education sector to produce Ph.D. students, the highest degree in higher education.

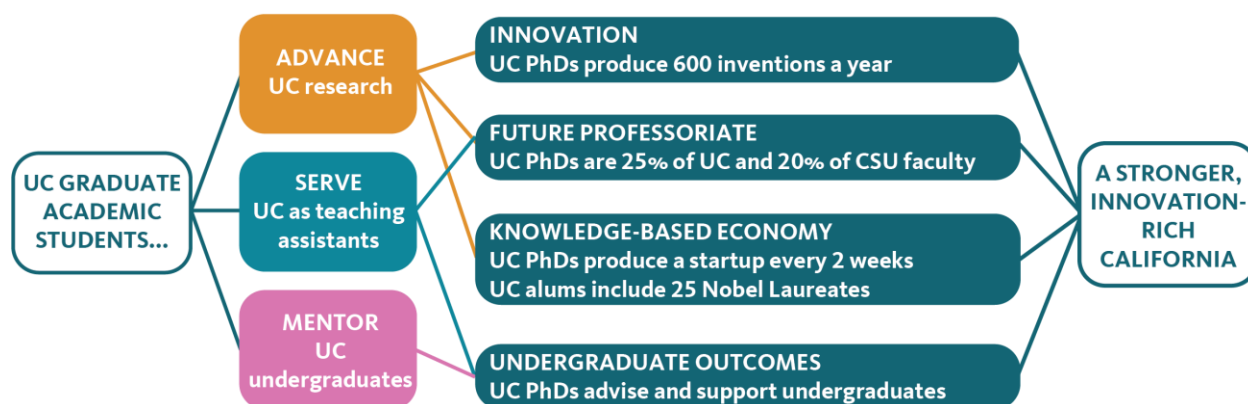
In 2017-18, UC produced 4,062 doctoral degrees, compared to 2,878 for private non-profit institutions (half of these came from Stanford and USC). In addition, UC is the state's sole public provider of law and medical (e.g., Medicine, Pharmacy, Veterinary Medicine and Optometry) degrees. UC also provides graduate professional degrees in a variety of areas, including but not limited to Business, Education, Architecture, Public Policy, Social Welfare and Journalism. By concentrating these programs within UC, the State has concentrated its investment and reduced duplication of these higher-cost programs, resulting in high-quality programs that are competitive with private institutions inside California and nationwide (see Appendix I and Appendix II).

Graduate academic education

Graduate academic education (research education) is the foundation of the University of California as a world-class research university and the education of these researchers is a centerpiece of UC's mission. UC seeks the best graduate students from a worldwide pool, which helps attract and retain top faculty members and advances UC scholarly productivity. Graduate academic students play a key role in undergraduate education, assisting faculty and providing hands-on teaching in labs, sections, and introductory courses that require substantial one-on-one work. Consistent with their critical role in the research mission, graduate academic students also supervise and mentor undergraduates engaged in research projects, enabling greater involvement of undergraduates in primary research activities. World class research exposure and experience is a unique strength of UC's undergraduate experience.

UC academic doctoral students become the next generation of the state's researchers and future professoriate, with 25 percent of UC faculty and 20 percent of California State University (CSU) faculty having a UC Ph.D. Increasingly, researchers trained at UC found or move directly into start-up companies based on research they began at UC, fueling California's innovation-based economy. UC Ph.D.'s produce 600 inventions a year, with a start-up created every two weeks. As the economy moves to knowledge-based work, the value of training students to carry out self-motivated research will become more important to California and the value of graduate academic education will grow. California should invest now to be ready.

Figure 4: Role of UC graduate academic students supporting UC operations and state outcomes



Graduate professional education

UC offers graduate professional school programs spanning an impressive range of areas with significant impact on the state, nation, and world.

UC is the nation's largest health science and medical instructional program, with approximately 72 percent of UC health science students and 61 percent of medical residents expected to remain in the state after completing training or education. This high rate of retention makes UC Health one of the principal sources for the training of California's health professionals. These UC Health programs include:

- six medical schools (UC Davis, UC San Francisco, UCLA, UC Riverside, UC Irvine and UC San Diego)
- four nursing school programs (UC Davis, UC San Francisco, UCLA and UC Irvine)
- two dentistry programs at UCLA and UC San Francisco
- two pharmacy programs at UC San Diego and San Francisco
- an optometry school at UC Berkeley
- a veterinary medicine program at UC Davis

UC also has three Schools of Public Health at UC Berkeley, UCLA, and UC San Diego, along with public health programs at UC Davis, UC Irvine, and UC Merced.

UC law schools are among the nation's most outstanding legal training grounds. Their distinguished faculty are recognized worldwide for their contributions to scholarship and legal reform in a broad spectrum of fields that affect our everyday life—from criminal and corporate law to employment and intellectual property issues to environmental and international policies. They offer research centers and initiatives where faculty and researchers seek solutions to wide-ranging national and global challenges. UC also acts as California's leading provider of practice aids and programs for lawyers through the *Continuing Education of the Bar*.

UC's schools of management are among the world's leading producers of new ideas and knowledge for all areas of business and provide cutting-edge management education. Programs provide training in areas such as accounting, finance, management, health management, information technology, marketing, information systems management, real estate, business economics, human resources and organizational behavior, environmental management, production, and operations management.

UC's schools of education are dedicated to improving the understanding of the processes of development, learning and teaching and the contexts in which they occur. The work of faculty and students is grounded in theory as well as practice. UC is on the frontlines of improving public education and training California educators. UC programs have forged stronger links with California's K-12 community to help public schools better respond to rising enrollments, increasing diversity and the demand for greater accountability. UC schools of education also provide professional development for teachers and administrators.

UC's professional schools have earned state and national prestige and train highly skilled professionals in both established and emerging fields. Examples range from public policy, social welfare, architecture, and environmental science to journalism, theater, film and television, library and information science, and more. UC also continues to add new professional programs in emerging fields such as data science and video gaming to ensure the state remains at the forefront of a rapidly changing economy.

HOW ADDITIONAL GRADUATE DEGREES ADVANCE UC 2030 GOALS

The University of California 2030 multiyear framework goals include:

- Producing 200,000 more undergraduate and graduate degrees by 2030
- Ensuring the California dream is for everyone
- Investing in the next generation of faculty and research

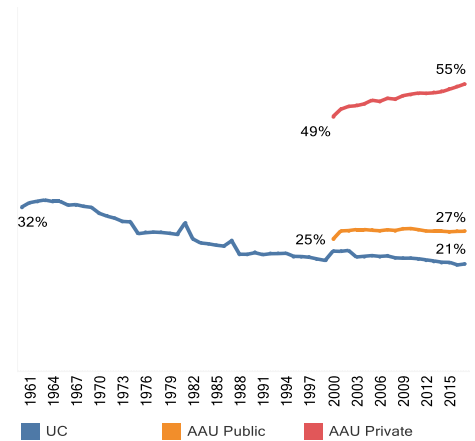
Expanding graduate enrollment is critical for the University to achieve these UC 2030 goals. To begin, 40,000 of the 200,000 degrees are at the graduate level, requiring additional graduate enrollment. A major aspect of ensuring the California Dream is for everyone is to eliminate graduation gaps for new generation students, decreasing obstacles for them to pursue graduate school. Additional slots for graduate enrollment will expand opportunities for these students to get a graduate degree, including a Ph.D., broadening the pool of those who are choosing to join the professoriate, helping increase the diversity of the next generation of faculty.

Maintaining a strong graduate education enterprise that can train the future professoriate and supply sufficient graduates to the high skilled professions of tomorrow requires sustained enrollment growth. UC had over 30 percent graduate students in the 1960s and today UC's graduate education enterprise represented 21 percent of total enrollment or 57,710 students. Just under half of those or 47 percent are enrolled at the doctoral level, 40 percent are enrolled in graduate professional programs and 13 percent are in academic masters programs.

However, the share of UC's total enrollment dedicated to graduate education has declined steadily over the past 50 years, falling to 21 percent. This places UC well below its American Association of University (AAU) peers in graduate enrollment, becoming increasingly less competitive with top private institutions that have steadily grown their graduate enrollment share to more than half of total enrollment.

Figure 5: UC Fall 2018 graduate enrollment and percent UC and AAU graduate enrollment

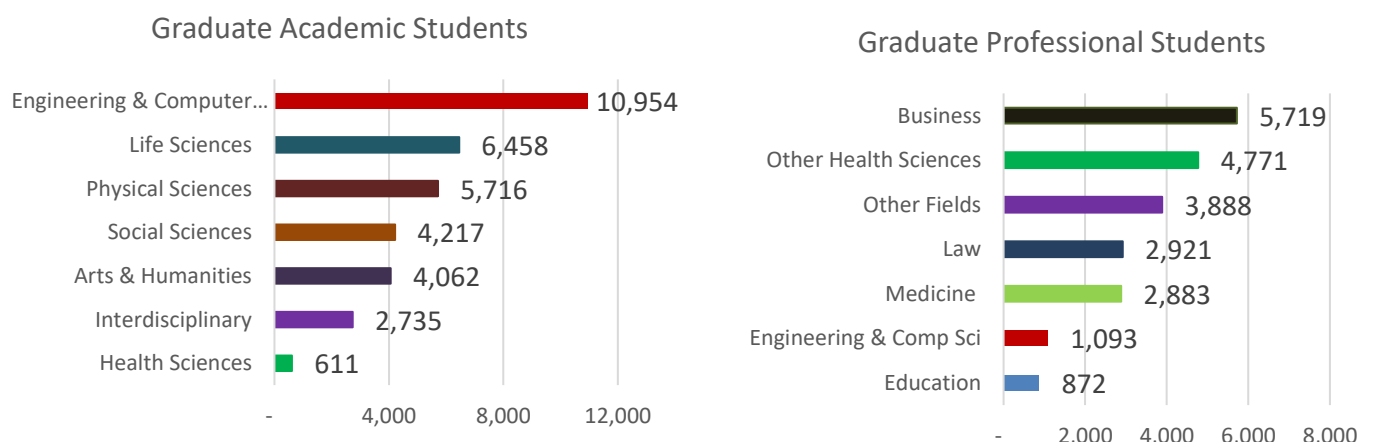
		Academic Doctoral	Academic Master	Graduate Professional	Graduate Total
UC System	Enrollments	27,266	7,487	22,957	57,710
	Pct of All Enroll	10%	3%	8%	21%
Berkeley	Enrollments	5,347	611	5,690	11,648
	Pct of All Enroll	13%	1%	13%	27%
Davis	Enrollments	3,583	1,033	2,675	7,291
	Pct of All Enroll	9%	3%	7%	19%
Irvine	Enrollments	2,898	789	2,609	6,296
	Pct of All Enroll	8%	2%	7%	17%
Los Angeles	Enrollments	4,678	1,277	7,005	12,960
	Pct of All Enroll	11%	3%	16%	29%
Merced	Enrollments	607	46	10	663
	Pct of All Enroll	7%	1%	0%	8%
Riverside	Enrollments	2,068	409	855	3,332
	Pct of All Enroll	9%	2%	4%	14%
San Diego	Enrollments	3,459	2,364	1,779	7,602
	Pct of All Enroll	9%	6%	5%	20%
San Francisco	Enrollments	853	57	2,204	3,114
	Pct of All Enroll	27%	2%	71%	100%
Santa Barbara	Enrollments	2,349	443	104	2,896
	Pct of All Enroll	9%	2%	0%	11%
Santa Cruz	Enrollments	1,424	458	26	1,908
	Pct of All Enroll	7%	2%	0%	10%



Source: UC Information Center and Integrated Postsecondary Education Data System (IPEDS) data

Furthermore, current graduate enrollment is concentrated in areas which are critical to the state, including engineering and computer sciences, followed by life sciences, which is almost half of the almost 35,000 enrollment in graduate academic programs. Business, law, and health science professional programs represent more than 75 percent of 23,000 graduate professional student enrollment.

Figure 6: UC graduate enrollment by disciplinary areas, 2018



Source: UC Data Warehouse

New graduate program development is also aligned with critical state workforce needs, such as the recent establishment of UC San Diego's School of Public Health (approved at the September 2019 Regents meeting).

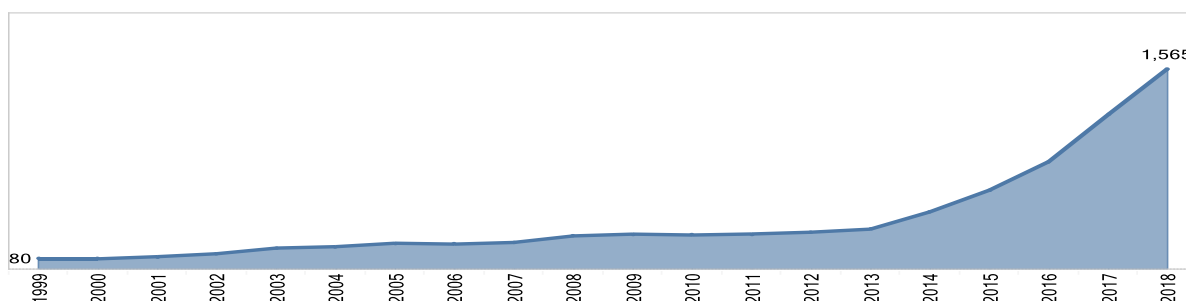
UC campuses are also creating graduate programs in new areas with significant and growing graduate student demand that may result in future economic industries for California. One example is the growth of data science-related programs on UC campuses, where more than 20 programs based in computational science or data science have been established since 2000-01 (see Figure 7). In the most recent academic planning cycle, UC Berkeley planned for a Division of Data Science with bachelor's and undergraduate minors programs in data science; UCLA planned for a data science bachelor's program and a M.S. in Data Science Engineering; and UC campuses at Merced, Davis, Santa Cruz, Irvine, and San Diego each planned for a master's programs in data science with demand for these kind of programs growing significantly across the system (see Figure 8).

Figure 7: New UC graduate academic and professional programs in data science related fields

	UCB	UCD	UCI	UCLA	UCM	UCSD	UCSB	UCSC
Bioinformatics (MA/PhD)				2007-08		2000-01		2002-03
Biostatistics (MS/PhD)		2000-01				14-15/17-18		
Biomathematics (MS)				2000-01				
Business Analytics (MS)		2014-15	2015-16	2015-16		2014-15		
Computational Biology (MS/PhD)	2011-12							
Computational Media (MS/PhD)								2015-16
Computational Science (MS/PhD)			2016-17			2008-09		
Data Science (Master)			2018-19					
Data Science & Engineering (Masters Adv Stdy)						2013-14		
Environmental Data Science (Master)							2018-19	
Information & Data Science (Master)	2012-13							
Math, Computational & Systems Bio (MS/PhD)			2013-14					
Quantitative & Systems Biology (MS/PhD)					2009-10			

Figure 8: Graduate enrollment growth in data science related programs

Annual Graduate Enrollments



Students Ever Enrolled by Program

Program Type	Program Name	Graduate Academic	Graduate Professional
Data Science, Machine Learning, and Computational Science	MASTER OF INFORMATION AND DATA SCIENCE	4	1,070
	DATA SCIENCE AND ENGINEERING		149
	COMPUTATIONAL SCIENCE	100	
	ELEC. ENGINEERING (MACHINE LEARNING AND DATA SCIEN..	42	
	COMPUTATIONAL MEDIA	38	
Biostatistics, Bioinformatics, and Computational Biology	BIOSTATISTICS	768	
	BIOINFORMATICS	360	
	QUANTITATIVE AND SYSTEMS BIOLOGY	219	
	MATHEMATICAL AND COMPUTATIONAL BIOLOGY	89	
	BIOMATHEMATICS	72	
	MATHEMATICAL, COMPUTATIONAL AND SYSTEMS BIOLOGY	46	
	COMPUTATIONAL BIOLOGY	29	
	BIOINFORMATICS & SYSTEMS BIOLOGY	6	
Business Analytics	BUSINESS ANALYTICS		327
	MASTERS OF SCIENCE IN BUSINESS ANALYTICS		85
Grand Total		1,754	1,630

Since 2014-15, the State of California in its annual budget acts has specified that UC should increase California resident undergraduate growth by 14,360 (which UC has exceeded, growing by more than 17,000). During that same period, the State Budget Act has funded increases in graduate student enrollments just once and for only 500 FTE. For the upcoming budget, the University of California is requesting state funding to grow graduate enrollment by 1,000 FTE.

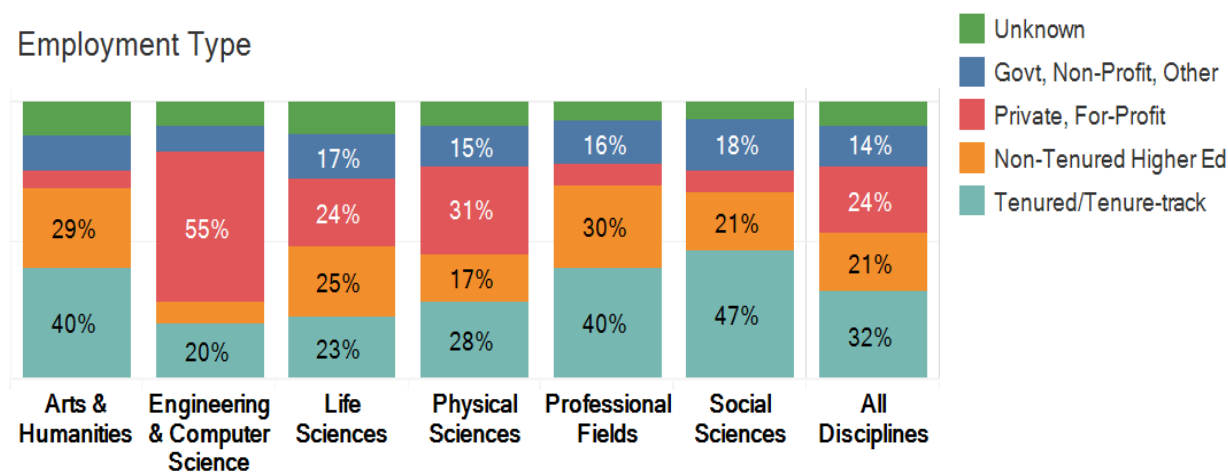
HOW UC GRADUATE DEGREE RECIPIENTS SUPPORT CALIFORNIA

More than 65 percent of UC graduate students who are California residents, along with more than half of nonresidents and international graduate students, stay and work in California. Data from EDD, doctoral alumni surveys, and LinkedIn profiles provide greater insight into what happens to UC graduate academic and professional degree recipients after graduation, along with how UC graduate degree recipients across programs collectively support major California companies.

UC graduate academic alumni

UC's doctoral programs train large numbers of graduates for the future professoriate in California and beyond. Recent alumni surveys have shown that a high proportion of UC doctoral alumni work in academia. As Figure 9 below shows, 53 percent of recent UC doctoral alumni currently work in academia, with 32 percent holding tenure-track positions. Doctorate recipients in the humanities and social sciences are the most likely to obtain tenure-track positions (40 percent and 47 percent respectively).

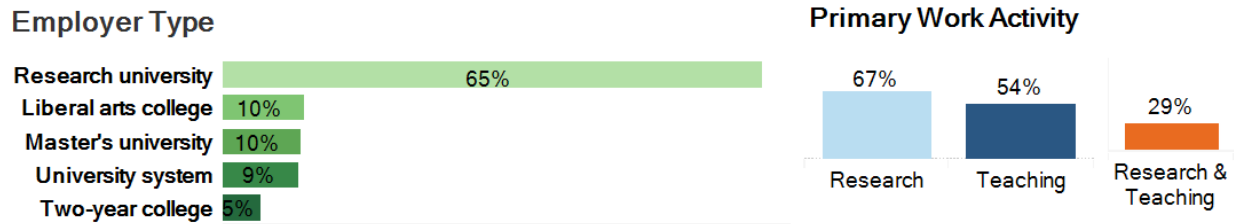
Figure 9: Most recent employment type for UC PhD alumni by discipline



Source: 2018 UC doctoral alumni survey, includes 2001, 2008, and 2013 graduating cohorts

For those working in higher education, Figure 10 shows that the majority (65 percent) of doctoral alumni working in higher education are doing so at major research universities serving primarily in research (67 percent) and teaching (54 percent) roles. As the University of California expands access for new generation students to doctoral education, UC can take the lead in expanding the availability pools and supporting efforts to diversify the professoriate, and these graduates will be in high demand within UC and at other major research universities.

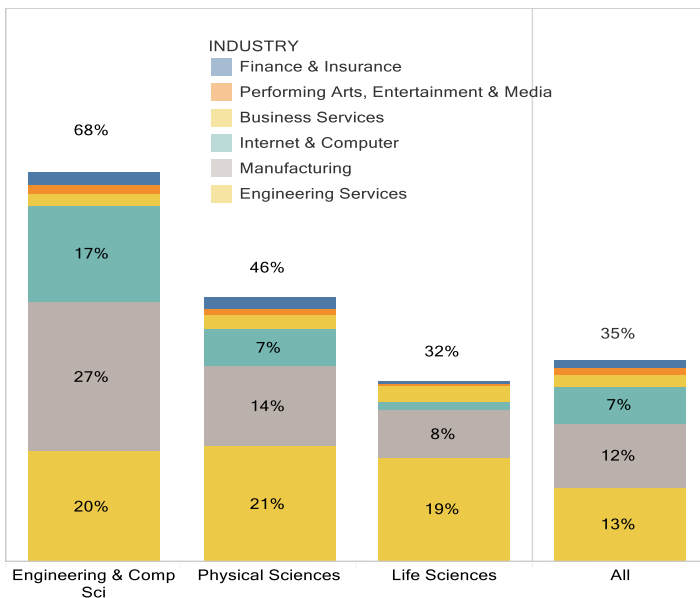
Figure 10: Most recent employment type for UC PhD alumni in higher education



Source: 2018 UC doctoral alumni survey, includes 2001, 2008, and 2013 graduating cohorts

The impact of UC's doctoral programs extends beyond academia and the professoriate. As Figure 9 shows, nearly a quarter of UC's doctoral recipients report working in the private for-profit sector. Graduates of UC's doctoral programs in STEM fields are the most likely to work in the private sector, with over half of engineering/computer science and nearly one-third of physical science graduates going on to do so. Figure 11 below shows these UC Ph.D. alumni employed in the private sector within California are most likely to be working in technology driven industries such as engineering and internet and computer systems. Anywhere from one-third to two-thirds of UC's STEM Ph.D. graduates work in these top private sector industries.

Figure 11: Top private sector industry of employment in California 5 years after UC Ph.D.



Source: California Employment Development Department (EDD) quarterly wage data and UCOP student data

UC Ph.D. alumni across disciplines work and lead in high skilled roles in some of the top private companies in California and beyond. Recently acquired self-reported employment data from LinkedIn show that UC Ph.D. alumni work in some of the top technology companies, including Google and Apple. They are also likely to hold high-skilled occupations such as software engineer, research scientist, and data scientist.

Figure 12: Top companies and occupations of recent UC Ph.D. STEM alumni in the private sector

Top Companies	Top Occupations
STEM	
GOOGLE	SOFTWARE ENGINEER
INTEL CORPORATION	SCIENTIST
APPLE	RESEARCH SCIENTIST
GENENTECH	SENIOR SCIENTIST
LAWRENCE LIVERMORE NATIONAL LABORAT..	DATA SCIENTIST

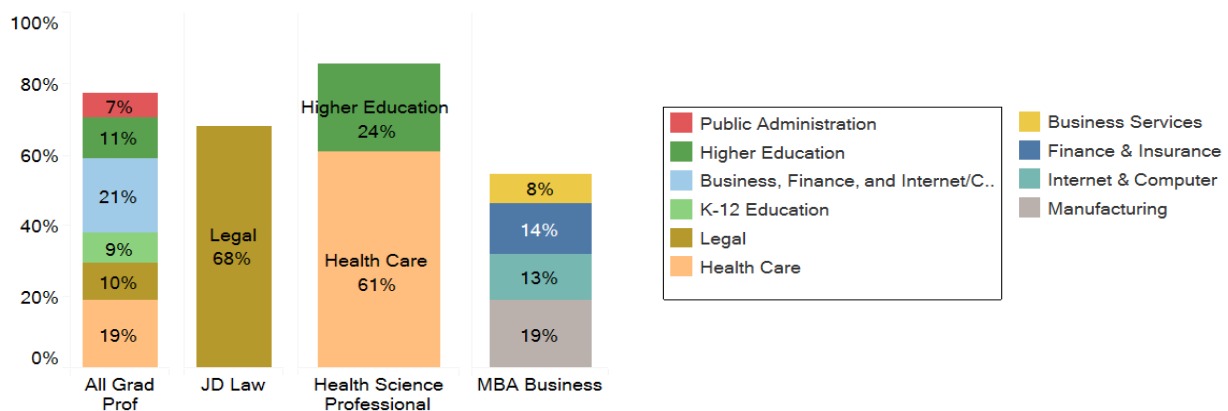
Source: LinkedIn Public Profiles as of Spring 2019. All data self-reported and based solely on those with LinkedIn profiles

UC graduate professional alumni

Graduates of UC's professional degree programs enter a wide range of professions and industries, both established and emerging. More than three-quarters of UC's graduate professional programs are in fields that overlap with the state's fastest growing professions, such as law and health sciences. Graduates of these programs are an important driver of California's high-skilled workforce, but their reach is also both national and global in scope. The industries and occupations that UC's graduates work in largely reflect the scope of UC's professional degree program offerings.

As Figure 13 shows, 38 percent of alumni of UC's graduate professional programs work in California's highest demand sectors (health care, legal, and K-12 education) requiring an advanced degree. An additional 11 percent go on to work in higher education where they train the next generation of high skilled workers. Notably, 24 percent of UC's health science professional graduates go on to work in higher education where they can train the next generation of doctors and other health science professionals.

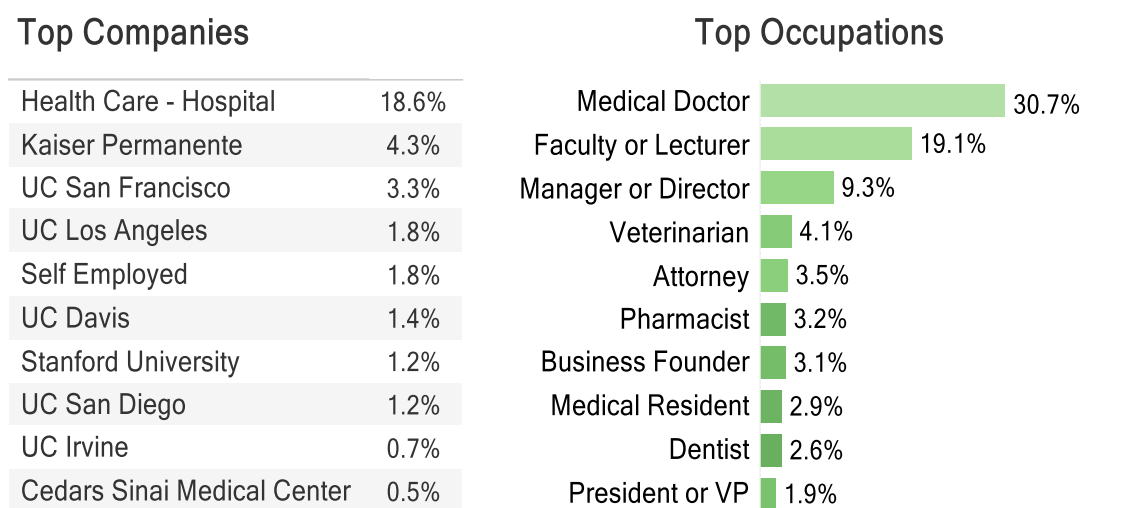
Figure 13: Industry of employment among California employed UC graduate professional alumni, 5 years after degree



Source: California Employment Development Department (EDD) quarterly wage data and UCOP student data

Additional data sources highlight the multiple health care related roles assumed by UC's health science professional school graduates. The top ten employers among those who have graduated in the past 40 years include several major health care providers such as Kaiser Permanente, Cedars Sinai, and other hospitals and health care facilities (Figure 14). Other top employers include UC campuses and top California universities, as well as business owners who own and manage their own health care practices. The occupations of those who work in these top employers include both health care providers (physician, veterinarian, etc.) as well as the professors who train the next generation of health care providers, educators, and small business owners.

Figure 14: Top companies of UC health science professional² alumni and their top occupations



Source: LinkedIn Public Profiles as of Spring 2019. All data self-reported and based solely on those with LinkedIn profiles

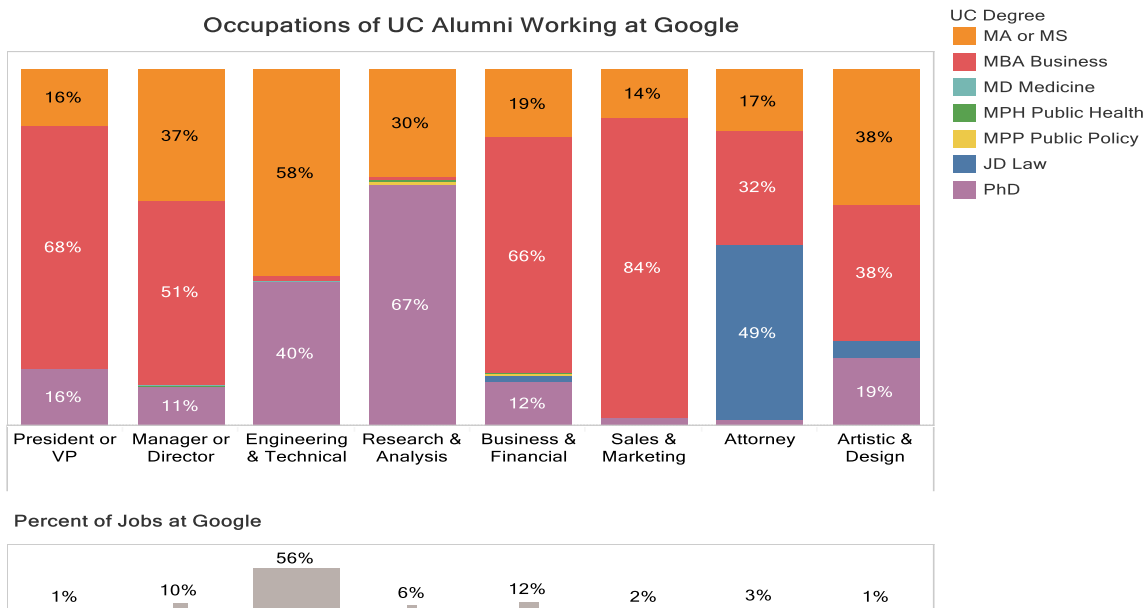
HOW UC GRADUATE DEGREE RECIPIENTS SUPPORT THREE MAJOR CALIFORNIA COMPANIES

The top companies rely on a wide range of UC graduate professional programs for their high-skilled workforce and leaders. Below are two examples which illustrate the range of UC graduate degree recipients that employed at these companies.

One example is Google, which is among the top five overall employers of UC graduates over the past twenty years. While nominally and primarily a technology company, Google has a wide range of occupations that employ UC graduates from a variety of graduate degree programs (see Figure 15). Graduate academic alumni (doctoral and MA/MS) comprise the majority of the engineering, technical, and research positions held by UC graduates at Google. Master of Business Administration graduates represent the largest share of UC alumni Google employees holding leadership roles.

² Includes graduates of UC medical, dental, optometry, veterinary medicine, pharmacy, physical therapy, and audiology programs

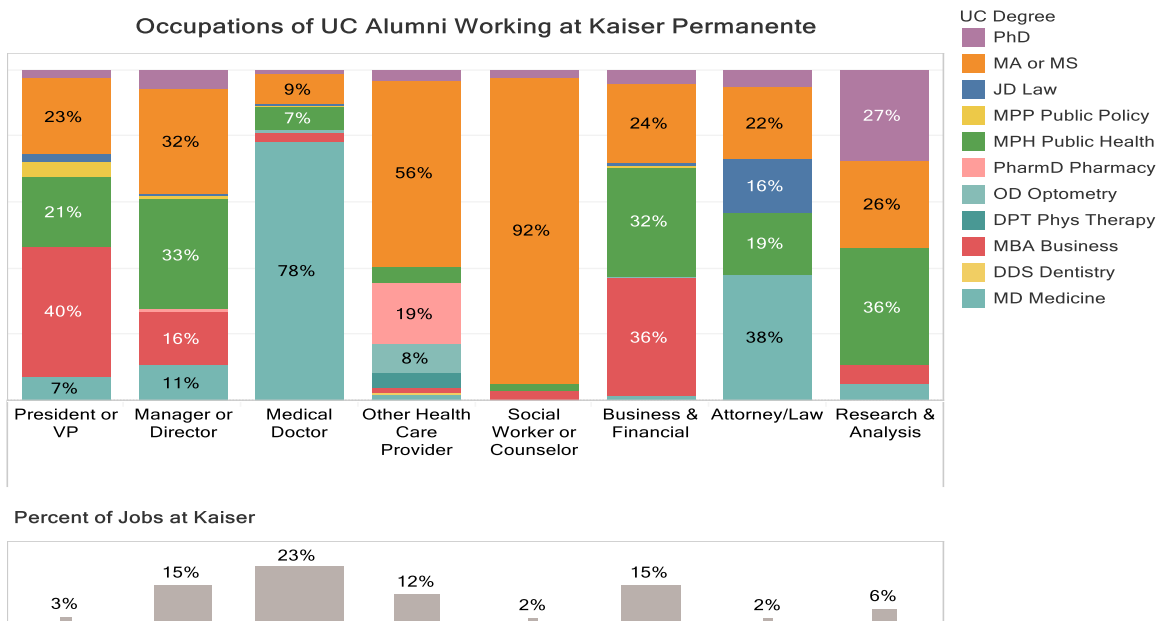
Figure 15: Type of degrees held by UC graduate degree alumni currently working at Google, by occupation



Source: LinkedIn Public Profiles as of Spring 2019. All data self-reported and based solely on those with LinkedIn profiles

Another example is Kaiser, where, in addition to M.D. recipients serving as doctors, a number of UC graduate professional alumni serve in leadership roles and support other administrative occupations. UC MBA recipients are in senior leadership; business, and financial positions and manager and director roles, while Master of Public Health alumni serve across the organization.

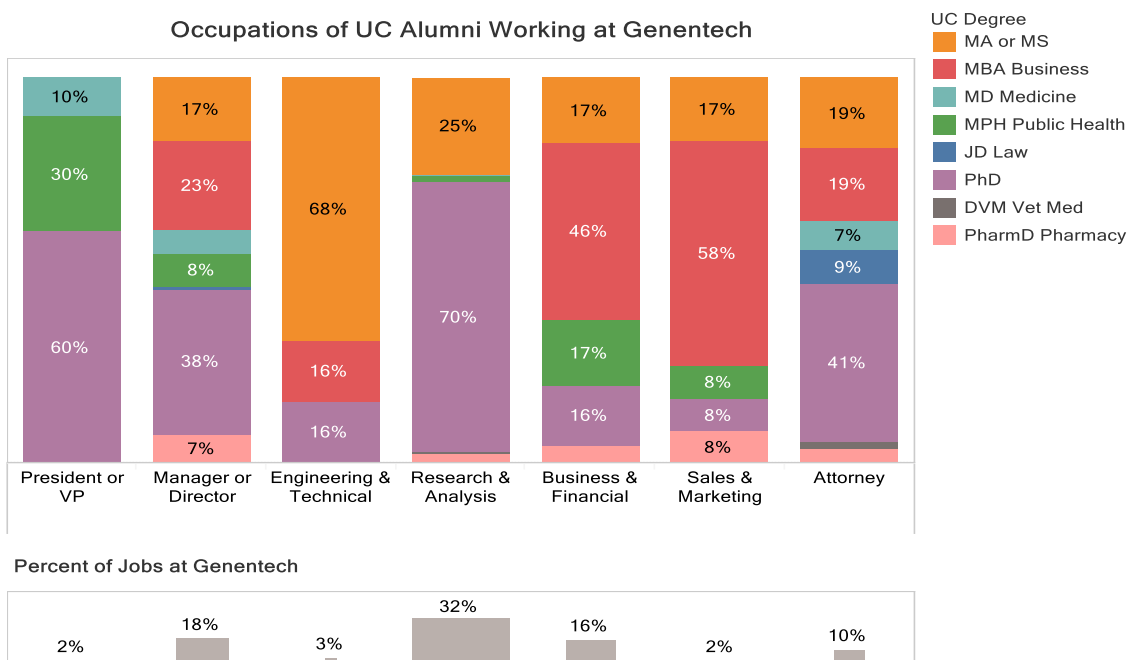
Figure 16: Type of degrees held by UC graduate degree alumni currently working at Kaiser, by occupation



Source: LinkedIn Public Profiles as of Spring 2019. All data self-reported and based solely on those with LinkedIn profiles

A third example is Genentech where the majority of UC graduate alumni are Ph.D.s, concentrated in research and analysis positions. But there are also other graduate professional students that support business and financial, along with sales and marketing and leadership positions.

Figure 17: Type of degrees held by UC graduate degree alumni currently working at Genentech, by occupation



Source: LinkedIn Public Profiles as of Spring 2019. All data self-reported and based solely on those with LinkedIn profiles

CONCLUSION

Much of the focus on enrollment and alumni outcomes has been on undergraduate students, but UC graduate academic and professional students and alumni make critical contributions to their campuses and the state. In fact, UC's stellar reputation (state, national and global) is fueled by its outstanding graduate academic and professional school programs.

California's economy and future workforce require the growth of graduate degrees for the state to remain competitive. The University of California is poised to address that need and through its UC 2030 goals is focused on ensuring tomorrow's graduates better reflect California's population, particularly the new generation of students.

This year's UC budget requests 1,000 additional graduate students and prior UC graduate alumni outcomes data demonstrate the positive return that California will receive from that investment.

Key to Acronyms

EDD	Employment Development Department
IPEDS	Integrated Postsecondary Data System
MA	Masters of Arts
MBA	Masters of Business Administration
MD	Medical Degree
MS	Masters of Science
PhD	Doctoral Degree
PPIC	Public Policy Institute of California
STEM	Science, Technology, Engineering and Mathematics

Appendix I – US News and World Report Graduate Professional School Rankings

School of Law	Type	Nation	California
Stanford University	Private	2	1
Berkeley Law	Public	10	2
UCLA	Public	15	3
Univ of Southern California	Private	17	4
UC Irvine	Public	23	5
UC Davis	Public	31	6
Pepperdine University	Private	51	7
UC Hastings	Public	62	8
Loyola Marymount University	Private	62	8
University of San Diego	Private	86	10
Santa Clara University	Private	104	11
Chapman University	Private	132	12
California Western School of Law	Private	146-192	13
Golden Gate University	Private	146-192	13
Southwestern Law School	Private	146-192	13
University of La Verne	Private	146-192	13
Univ of the Pacific (McGeorge)	Private	146-192	13
Western State College of Law	Private	146-192	13
Thomas Jefferson School of Law	Private	Unranked	

School of Engineering	Type	Nation	California
Stanford University	Private	2	1
UC Berkeley	Public	3	2
California Technology Institute	Private	5	3
Univ of Southern California (Viterbi)	Private	9	4
UC San Diego (Jacobs)	Public	11	5
UCLA (Samueli)	Public	16	6
UC Santa Barbara	Public	24	7
UC Davis	Public	31	8
UC Irvine (Samueli)	Public	36	9
UC Riverside (Bourns)	Public	75	10
UC Santa Cruz (Baskin)	Public	87	11
Naval Postgraduate School	Public	118	12
Santa Clara University	Private	128	13
UC Merced	Public	134	14
San Diego State University	Public	141	15
CSU- Long Beach	Public	156-199	16

School of Business	Type	Nation	California
Stanford University	Private	2	1
UC Berkeley (Haas)	Public	6	2
UCLA (Anderson)	Public	16	3
Univ of Southern California (Marshall)	Private	17	4
UC Irvine (Paul Merage)	Public	43	5
UC Davis	Public	47	6
UC San Diego (Rady)	Public	69	7
Pepperdine University (Graziadio)	Private	74	8
Chapman University (Argyros)	Private	85	9
UC Riverside (Anderson)	Public	91	10
San Diego State University (Fowler)	Public	99-131	11
University of San Diego	Private	99-131	11
University of San Francisco	Private	99-131	11
Cal Poly - San Luis Obispo (Orfalea)	Public	Unranked	
CSU - Bakersfield	Public	Unranked	
CSU - Chico	Public	Unranked	
CSU - East Bay	Public	Unranked	
CSU - Fresno (Craig)	Public	Unranked	
CSU - Fullerton (Mihaylo)	Public	Unranked	

School of Education Rankings	Type	Nation	California
UCLA	Public	3	1
Stanford University	Private	3	1
Univ of Southern California (Rossier)	Private	12	3
UC Berkeley	Public	18	4
UC Irvine	Public	23	5
UC Davis	Public	36	6
UC Santa Barbara (Gervitz)	Public	53	7
San Diego State University	Public	53	7
Loyola Marymount University	Private	57	9
UC Riverside	Public	66	10
UC San Diego	Public	71	11
UC Santa Cruz	Public	85	12
Claremont Graduate University	Private	105	13
University of San Diego	Private	134	14
Chapman University	Private	143	15
University of San Francisco	Private	143	15
Mills College	Private	152	17
CSU - Sacramento	Public	172	18
Pepperdine University	Private	186	19
Alliant International University	Private	195-258	20

Appendix II – US News and World Report Medical and Nursing School Rankings

Medical Primary Care	Type	Nation	California	Medical Research	Type	Nation	California
UC San Francisco	Public	3	1	Stanford University	Private	3	1
UCLA (David Geffen)	Public	5	2	UC San Francisco	Public	5	2
UC Davis	Public	9	3	UCLA (David Geffen)	Public	6	3
UC San Diego	Public	30	4	UC San Diego	Public	21	4
Stanford University	Private	48	5	UC Davis	Public	30	5
Univ of Southern California (Keck)	Private	53	6	Univ of Southern California (Keck)	Private	30	5
UC Irvine	Public	74	7	UC Irvine	Public	45	7
UC Riverside	Public	91-120	8	UC Riverside	Public	89	8
Touro University California	Private	91-120	8	Touro University California	Private	93-120	9
Western University of Health Sciences	Private	91-120	8	Western University of Health Sciences	Private	93-120	9
California Northstate University	Private	Unranked		California Northstate University	Private	Unranked	
Cal Univ of Science & Medicine	Private	Unranked		Cal Univ of Science & Medicine	Private	Unranked	
Loma Linda University	Private	Unranked		Loma Linda University	Private	Unranked	
School of Nursing	Type	Nation	California				
UC San Francisco	Public	18	1				
UCLA (David Geffen)	Public	20	2				
University of San Diego	Private	43	3				
UC Davis	Public	46	4				
San Diego State University	Public	56	5				
CSU - Los Angeles	Public	64	6				
University of San Francisco	Private	77	7				
UC Irvine	Public	87	8				
CSU - Fullerton	Public	90	9				
Azusa Pacific University	Private	115	10				
Western Univ of Health Sciences	Private	149	11				
California Baptist University	Private	153	12				
Point Loma Nazarene University	Private	173	13				
Charles Drew University	Private	189	14				
Holy Names University	Private	199-252	15				
Vanguard University of So Cal	Private	199-252	15				
California Southern University	Private	Unranked					
CSU - Bakersfield	Public	Unranked					
CSU - Chico	Public	Unranked					
CSU - Dominguez Hills	Public	Unranked					