

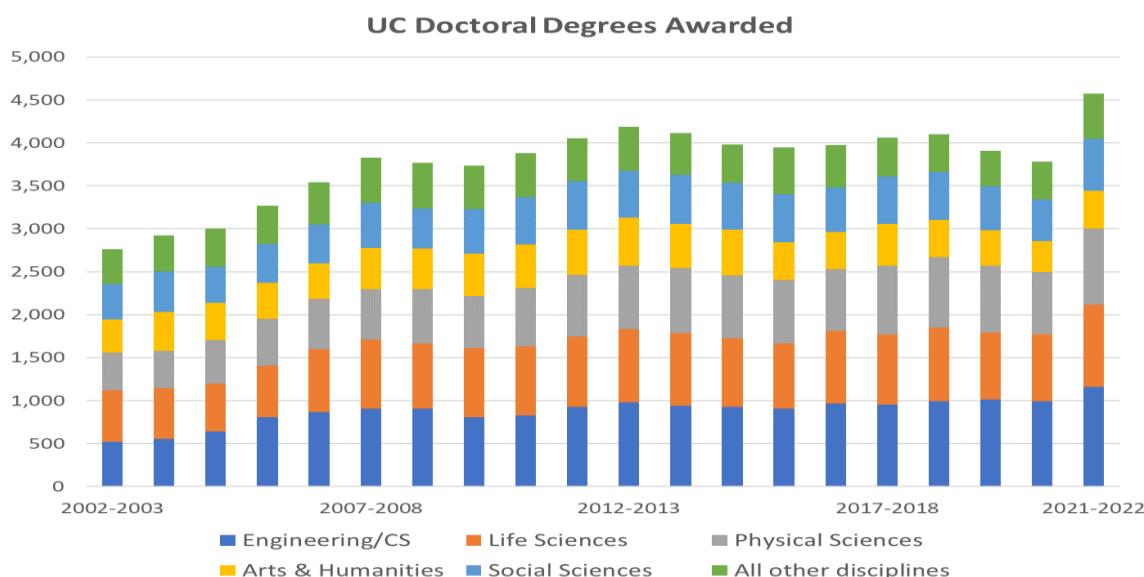
Ready for the Systemwide Congress on Innovations in Graduate Education?

10 facts on UC PhD programs, students, and degrees to help you prepare.

1. UC produces 64 percent of PhDs in California and seven percent in the nation (nine percent of all R1 doctorates awarded nationally).

Under the California Master Plan, UC has primary responsibility in public higher education for PhD degrees. However, the California State University (CSU) system has been increasing its requests to receive authority to issue doctoral degrees.

After growth in UC PhD degrees awarded in the early 2000s, PhD awards fluctuated around 4,000 annually with an uptick to 4,576 in 2021-22, which may be due to a delay in some PhDs graduating during the pandemic. STEM degrees increased as a proportion of all UC PhDs from 55 to over 65 percent over this period.

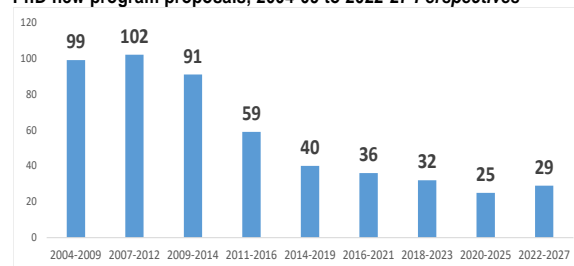


Over the last twenty years, new proposals for academic doctoral programs have dropped by just over 70 percent, from around 100 to 29 and with UC Merced having almost a third of the most recent new PhD program proposal submissions.

For additional doctoral program and proposal data by campus, go to

- [UC doctoral program statistics dashboard, including entry cohorts and program size](#)
- [UC PhDs awarded data dashboard](#)
- [Trends in PhD programs in five-year planning perspectives](#)

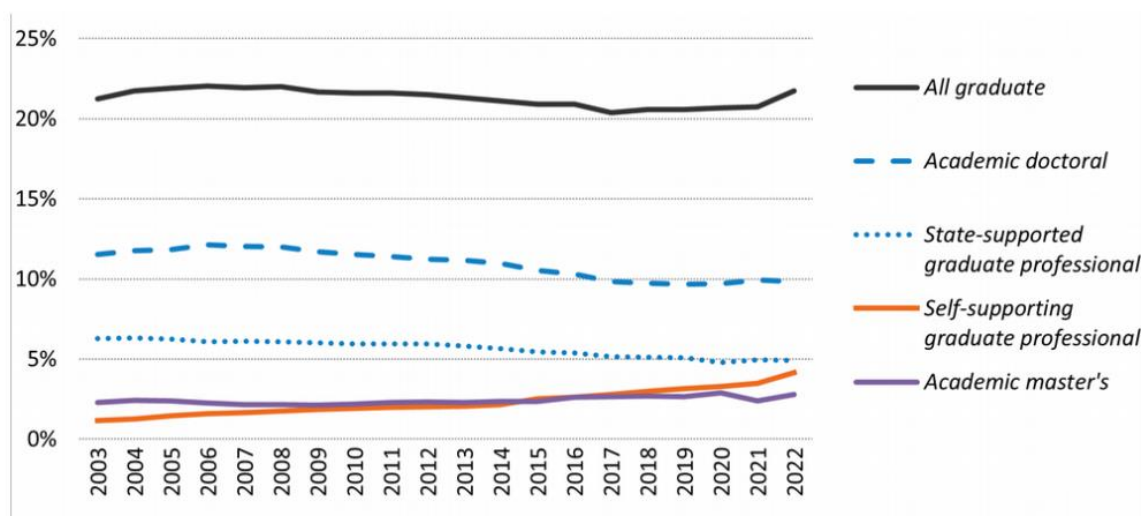
PhD new program proposals, 2004-09 to 2022-27 Perspectives



2. One-tenth of all UC students are academic doctoral students.

With 22 percent graduate enrollment in 2022, including health science students, UC has a lower percent compared to non-UC AA public institutions' 28 percent, and the AAU private institutions' 57 percent average. Growth in UC academic master's and professional self-supporting programs has been the most robust in recent years, with academic doctoral enrollments remaining around ten percent over the last few years.

UC graduate enrollment share of total, Fall 2003 to Fall 2022



Academic Doctoral Students (Number and Percent of All Students)

Campus	Fall 2010		Fall 2022		Change	
	#	%	#	%	#	%
Berkeley	5,834	17%	5,044	12%	(790)	-5%
Davis	3,343	11%	3,672	10%	329	-1%
Irvine	2,660	10%	3,263	10%	603	-1%
Los Angeles	4,657	13%	4,628	11%	(29)	-2%
Merced	200	5%	715	8%	515	3%
Riverside	1,841	9%	2,047	8%	206	-1%
San Diego	3,058	11%	3,814	9%	756	-1%
San Francisco	792	29%	920	34%	128	5%
Santa Barbara	2,395	11%	2,376	9%	(19)	-2%
Santa Cruz	1,191	7%	1,450	7%	259	1%
UC Total	25,971	12%	27,929	10%	1,958	-2%

PhD students have grown in total and at most campuses, except UCB, UCLA, and UCSB.

The percent of PhD students is declining at most campuses as undergraduate and other graduate students (e.g., self-supporting graduate students) is increasing.

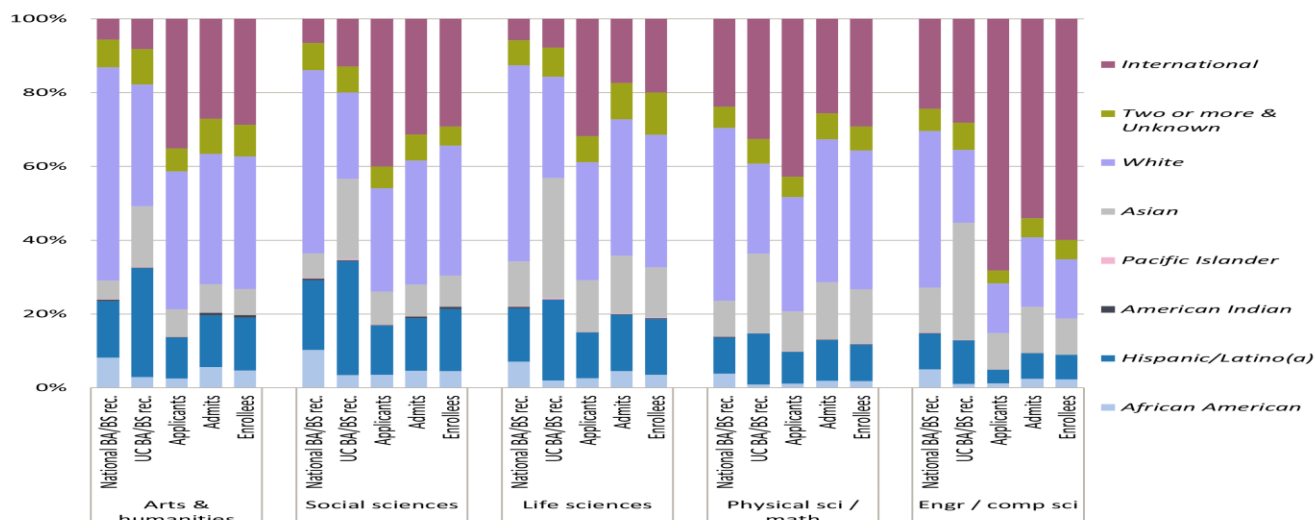
UCM, UCSF, and UCSC have seen an increase in the number and proportion of PhD students.

3. Seventeen percent of PhDs identify as students from underrepresented groups and 45 percent as female.

UC academic doctoral programs are a strong draw for international students who did not earn their bachelor's degree in the United States. Seventeen percent of PhD students report being from underrepresented groups (i.e., African American, American Indian, Hispanic/Latino, and Pacific Islander), compared to twice that, or 34 percent being international students.

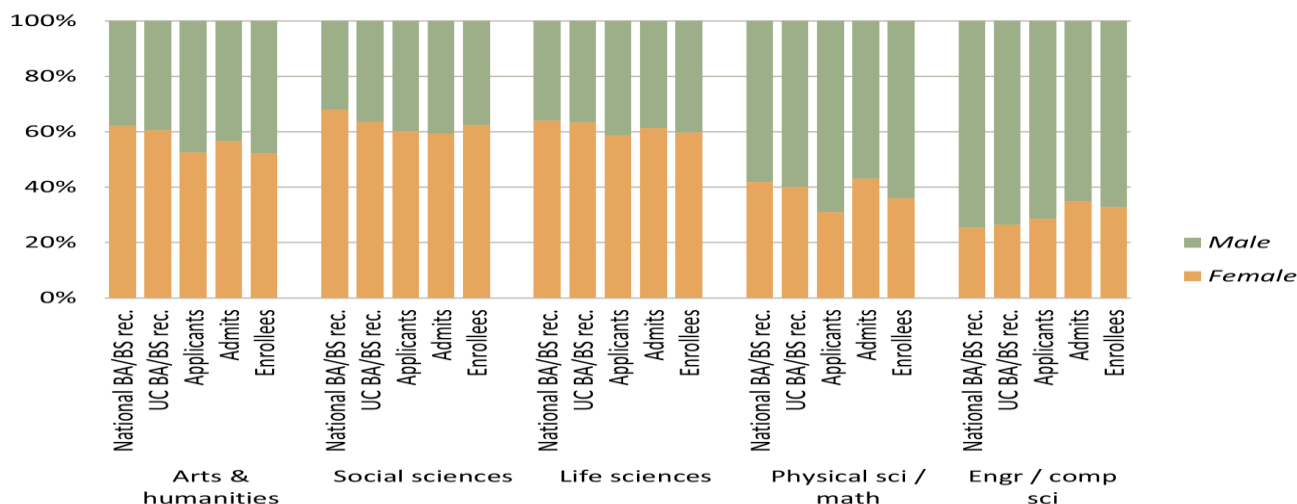
Across all disciplines, the percent of PhD students from underrepresented groups range from nine percent in Engineering/Computer Science and twelve percent in Physical Science/Math to 22 percent in the Social Sciences.

Racial/ethnic distribution of U.S. BA/BS degree recipients from U.S. and UC institutions compared to UC doctoral applicants, admits, and enrollees, 2021-22



In graduate academic doctoral programs, UC is approaching parity with the gender diversity of U.S. institutions, except in some disciplines. The percent of women PhDs range from 33 percent in Engineering/Computer Science and 36 percent in Physical Sciences/Math to 62 percent in Social Sciences.

Gender distribution of U.S. BA/BS degree recipients from U.S. and UC institutions compared to UC doctoral applicants, admits, and enrollees, 2021-22



For additional information, go to

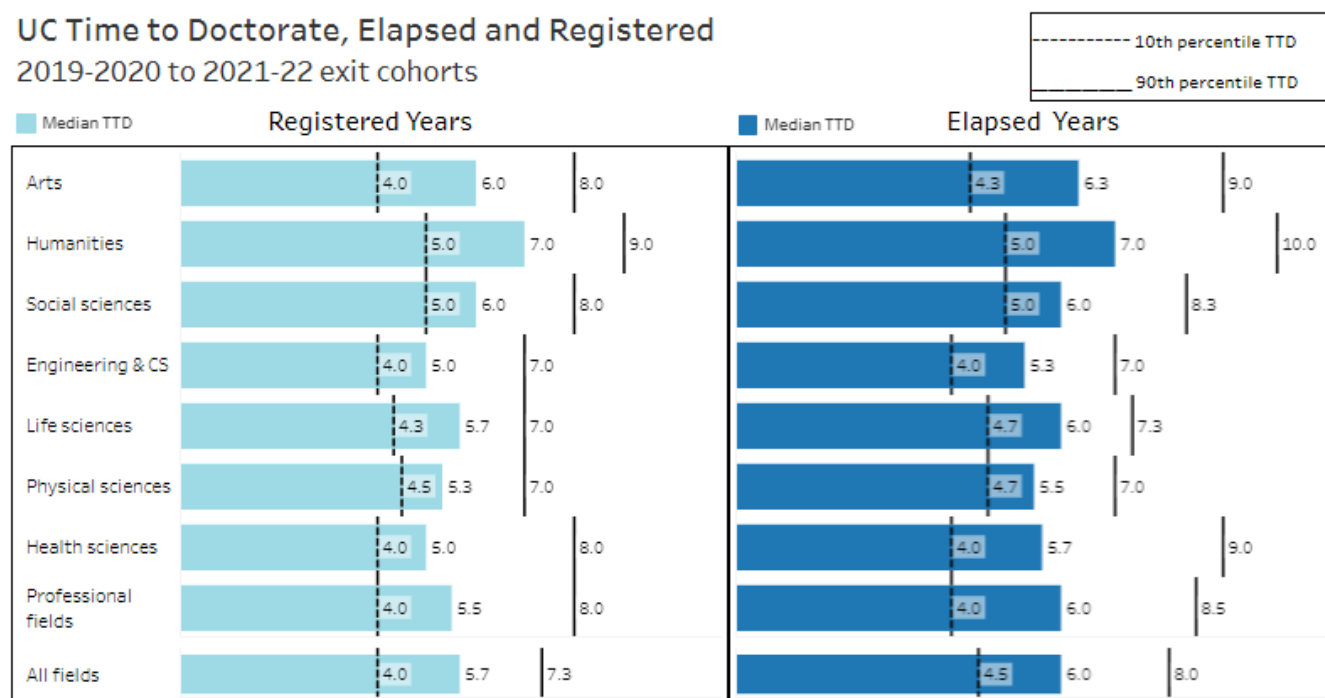
- [UC doctoral program statistics dashboard, including gender and race/ethnicity data](#)
- [UC Accountability Report Diversity chapter indicator on pathway to PhD](#)

4. UC median registered time to doctorate is 5.7 years and elapsed time to doctorate is six years, ranging from five to seven years across disciplines.

UC's median number of years required to complete a doctoral degree is comparable to that at other major research universities. Registered and elapsed time-to-doctorate vary by discipline, with most students requiring about six years of total time and five to six years of registered time. International students have shorter elapsed time-to-doctorate and registered time-to-doctorate in most disciplines. Men and women generally have comparable time-to-doctorate and students from underrepresented groups (URG) have longer time-to-doctorate at UC and comparison institutions. In addition, the range of experience for individuals can be as much as five years when comparing the 10th to 90th percentiles.

UC Time to Doctorate, Elapsed and Registered

2019-2020 to 2021-22 exit cohorts

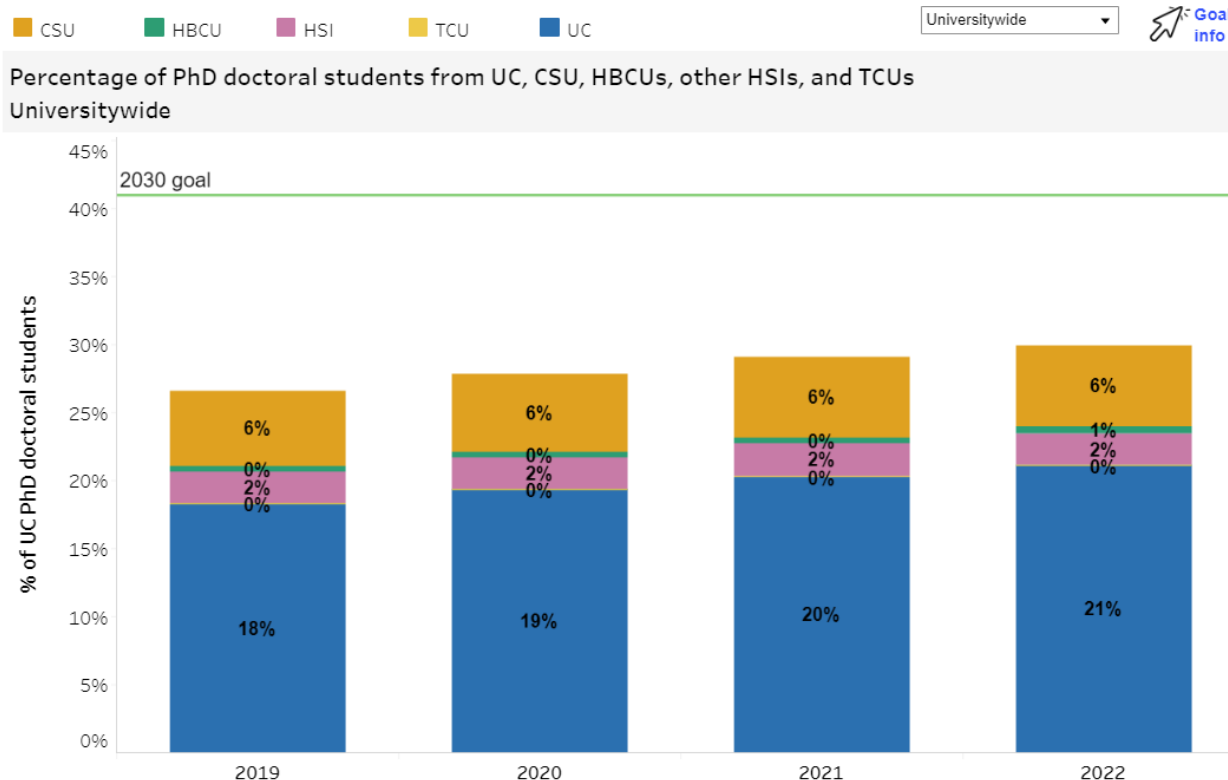


For additional data by campus, discipline, and student demographics, go to

- [UC time-to-doctorate dashboard](#)
- [UC doctoral persistence and completion dashboard](#)
- [UC doctoral program statistics dashboard, including time to degree and completion rates](#)

5. Twenty-five percent of UC faculty and twenty percent of CSU faculty received their PhD from the University of California.

With UC's Grow our Own Initiative, the University seeks to enroll 40 percent of academic doctoral students from a UC, California State University (CSU), Historically Black College and Universities (HBCU), Hispanic Serving Institutions (HSI; non-UC/CSU), or Tribal Colleges and Universities (TCU). Students from these institutions are nearly twice as likely to be from underrepresented groups, thus helping UC achieve its goals of diversifying both its doctoral student population and the California professoriate.



Since 2022, UC has moved closer to this goal by increasing the share of new doctoral students from these target institutions from 27 percent to 29 percent. Increasing the diversity of UC PhD students can help diversify the future professoriate, including faculty at UC and CSU where the latest data show 25 percent and 20 percent received their PhD from UC.

By 2030, the Bureau of Labor Statistics projects 166,700 new jobs nationwide, and the Employment Development Department (EDD) projects 7,300 new jobs in California, will require PhDs for teachers/faculty in postsecondary institutions.

For additional data by campus, go to

- [UC 2030 grow our own initiative goal dashboard](#)
- [UC undergraduate alumni graduate degree outcomes dashboard](#)
- [UC doctoral program statistics dashboard, including admissions by undergraduate school](#)

6. Around 60 percent of UC PhDs remain in California, frequently employed in higher education and key STEM industries (e.g., engineering services, manufacturing, and internet & computer systems).

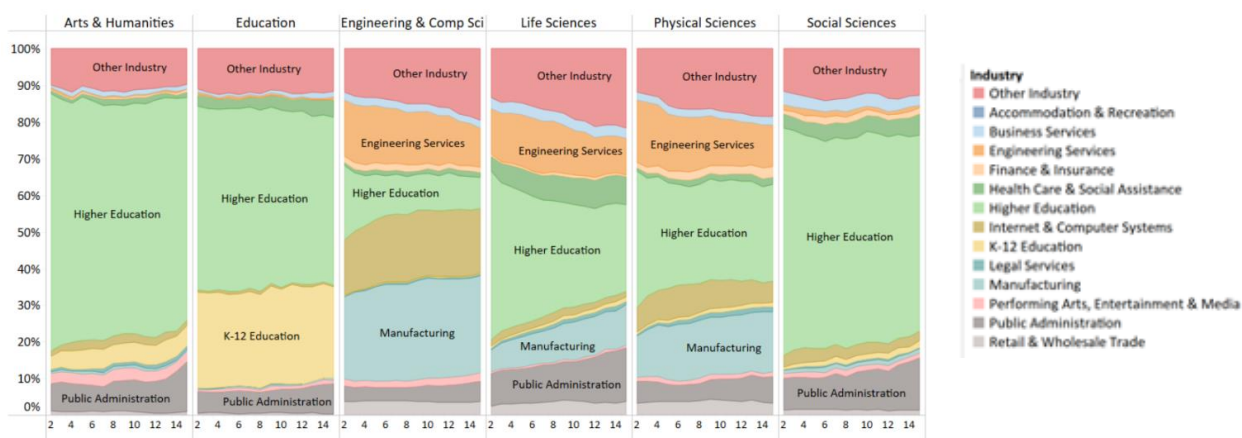
UC alumni data show that around 60 percent of UC PhDs remain in California, ranging from just over 50 percent of UC Berkeley PhDs to almost 75 percent of UC Merced PhDs. The percent remaining within the state also varies by discipline with just over 50 percent for Humanities, Social Sciences, and Physical Sciences and between 65 and 75 percent for Life Sciences, Engineering & Computer Sciences, and Health Science PhD recipients.

Percent of UC PhD alumni remaining in California

	All PhDs	Arts	Humanities	Social Sciences	Engineering & Comp Sci	Life Sciences	Physical Science	Health Science	Professional Fields
UC Berkeley	51%	44%	46%	45%	57%	57%	43%	62%	51%
UC Davis	63%	61%	54%	56%	67%	64%	59%	83%	72%
UC Irvine	64%	46%	56%	56%	74%	70%	57%	69%	64%
UCLA	66%	62%	56%	57%	72%	74%	63%	76%	64%
UC Merced	74%		69%	91%	77%	69%	68%		82%
UC Riverside	61%	56%	68%	53%	58%	63%	57%		83%
UC San Diego	64%	60%	59%	52%	75%	69%	56%	78%	53%
UC San Francisco	66%		67%	57%	74%	62%		72%	52%
UC Santa Barbara	52%	49%	46%	51%	52%	57%	45%		68%
UC Santa Cruz	67%	73%	69%	57%	81%	65%	67%		66%
UC System	59%	54%	52%	52%	65%	65%	53%	73%	60%

California EDD data show that UC PhDs in Arts & Humanities, Education, and Social Sciences primarily work in education, particularly higher education, industries. UC PhD alumni in STEM fields are more likely employed outside of academia, in industries like engineering services, manufacturing, and internet and computer services.

Industry of employment of UC graduate academic doctoral students in California, by year after graduation, 2000 to 2018 graduating cohorts



UC's Understanding PhD Career Pathways survey found similar results, particularly for Engineering and Computer Science PhD alumni who were more likely employed at a business or for/profit organization. Other disciplines were more likely employed at education institutions, with Social Science graduates more likely employed at a research university.

Employment and Doctoral Experience of UC PhD Recipients

	Research University	Other Education	Business/For Profit	Government/NGO
Social Sciences	45%	24%	8%	15%
Health Sci/Prof Fields	42%	26%	8%	11%
Humanities	36%	41%	5%	3%
Life Sci/Physical Sci	36%	13%	25%	16%
All Fields	35%	20%	22%	12%
Arts	31%	31%	10%	10%
Engineering/Comp Sci	21%	9%	50%	10%

An earlier UC Doctoral Alumni surveyed which elements of doctoral education are important for students entering my job field. Practice of writing skills and research methods were in the

top three for all respondents. Conference presentation experience was more important for those in tenure track positions and collaborative work with colleagues for other employment types. Teaching assistant experience was more important for tenure track positions, particularly compared to other employment types.

Elements of PhD Important in my Field

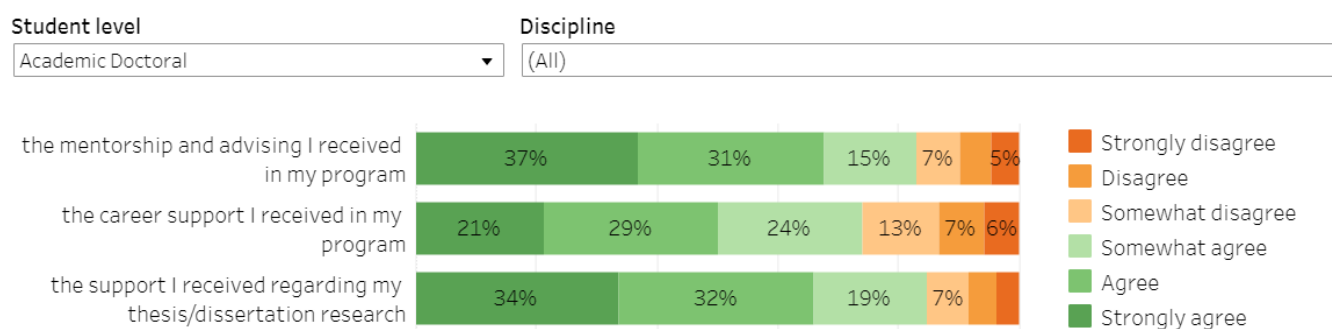
	Tenure Track	Other Education	Business/For-Profit	Government/NGO
Practice writing skills	70%	59%	43%	59%
Practice research methods	66%	51%	42%	50%
Presentation at conference	57%	45%	36%	43%
Teaching assistant experience	40%	25%	10%	14%
Collaborative work with colleagues	36%	47%	47%	49%
Research assistant experience	35%	28%	24%	24%

For additional data by campus, go to

- [Employment and doctoral experience of PhD recipients dashboard](#)
- [UC doctoral alumni survey dashboard](#)

7. Over 80 percent of PhD students report some levels of agreement on being satisfaction with mentorship and advising in their program.

The Spring 2021 UC Graduate Student Experience Survey (UCGSES) included questions about mentorship and advising, with 83 percent of PhD student reporting some level of satisfaction and 37 percent reporting a great level of satisfaction (i.e., strong agreement that they are satisfied with mentorship and advising). PhD respondents also reported higher levels of satisfaction with thesis/dissertation support, compared to career support. Results for the Spring 2023 UCGSES show similar findings to the Spring 2021 survey.



Satisfaction with mentorship and advising, along with career support was higher in STEM fields.

UC research also showed that graduate students reporting higher levels of agreement about satisfaction with mentorship and advising were more likely to also report being on

	Mentorship and advising in program		Career support received	
	Strongly to Somewhat Agree	Strongly Agree	Strongly to Somewhat Agree	Strongly Agree
Engineering/CS	86%	39%	79%	26%
Health Sciences	86%	45%	79%	28%
Life Sciences	84%	35%	75%	21%
Physical Sci/Math	84%	34%	78%	20%
All Fields	83%	37%	74%	21%
Social Sciences	82%	38%	70%	20%
Humanities	81%	38%	68%	18%
Arts	80%	39%	70%	20%

track to complete their degree, having a stronger sense of direction with their career post-graduation, and feeling upbeat about post-graduation career prospects.

For additional data by campus, go to

- [Spring 2021 UC Graduate Student Experience Survey mentorship responses by campus, discipline and student demographics dashboard](#)
- [UC Graduate Student Experience topic brief on mentorship and advising](#)

8. Student teaching and research assistant FTE grew by more than 3,100 (i.e., 35 percent) over the last decade.

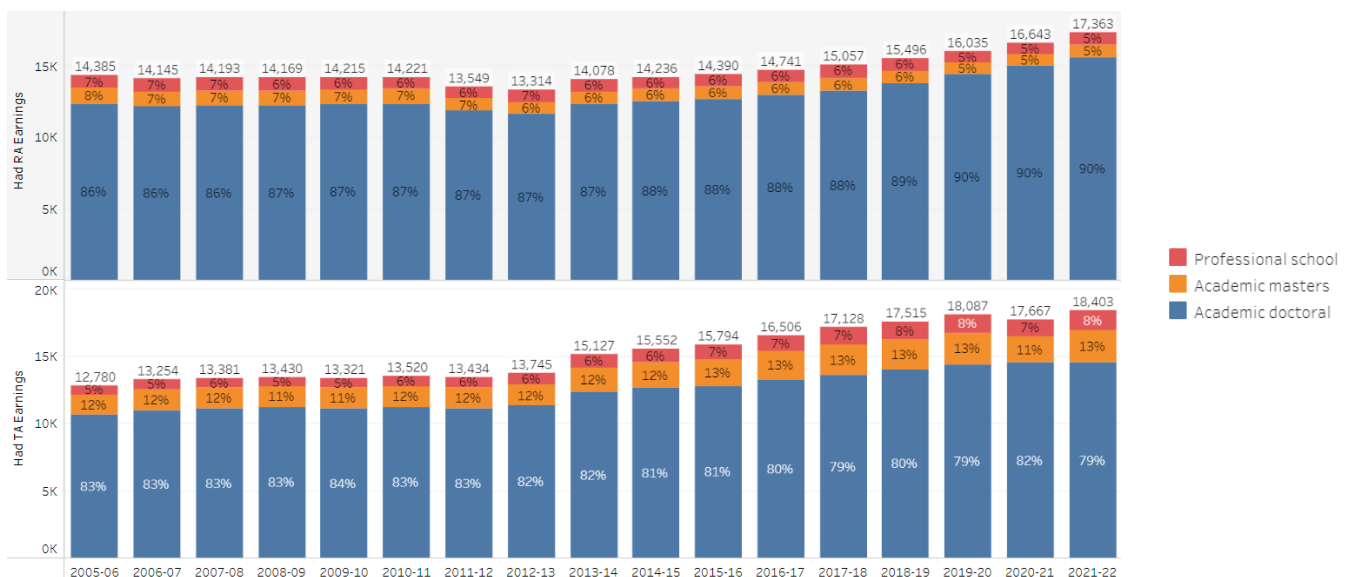
Most academic employee groupings grew over the last decade, but the biggest increase was with student teaching/research assistants that became the largest academic employee FTE grouping, compared to other academic titles. Faculty – ladder rank equivalent FTE were the largest title code grouping in October 2012. But since then, student teaching/research assistants and clinical/in-residence/adjunct faculty FTE have grown more.

Academic Employee Full-Time-Equivalent (FTE)

	October 2012	October 2022	Change	
Faculty - Ladder-rank and Equivalent	9,137	10,737	1,600	18%
Faculty - Clinical/In-Residence/Adjunct	5,580	8,495	2,915	52%
Faculty - Lecturers	1,790	2,440	650	36%
Other Academic Employees	6,572	6,306	-267	-4%
Postdoctoral Scholars	4,845	5,253	408	8%
Medical Interns/Residents	5,069	6,309	1,240	24%
Student Teaching/Research Assistants	8,994	12,098	3,104	35%
Total	41,987	51,638	9,651	23%

PhD students comprise around 80 percent of student teaching (TA) and 90 percent of research assistant (RA) positions, with varying support from academic masters and professional school students.

State Supported Graduate Enrollment by RA and TA Employment



Financial support data show greater usage of TA support for Arts, Humanities and Social Sciences and greater usage of RA support for STEM disciplines.

	Arts	Humanities	Social Sciences	Engineering/C Sci	Life Sciences	Physical sciences	Health science	Professional fields	All fields
PhD recipients	318	995	1,766	3,458	2,738	2,589	280	904	13,048
Avg. years enrolled	6.5	7.0	6.3	5.4	5.8	5.7	5.5	6.0	5.9
Pct ever on fellowship support	99.7%	98.9%	99.2%	96.3%	99.1%	99.7%	97.9%	99.0%	98.4%
Avg. years fellowship support	5.8	6.2	5.6	3.7	4.9	4.5	4.8	5.3	4.7
Pct ever on TA support	98.4%	99.0%	94.9%	78.8%	72.8%	95.8%	55.0%	86.2%	85.1%
Avg. years on TA support	4.5	5.0	4.4	2.6	2.7	3.6	3.1	3.9	3.5
Pct ever on RA support	49.4%	54.1%	73.9%	92.9%	90.0%	91.9%	67.5%	76.5%	83.8%
Avg. years on RA support	2.3	2.4	3.1	4.2	4.1	4.0	3.4	3.6	3.9

Fellowship includes any scholarship, grant, or fellowship from any funding source. RA and TA support identified as receipt of earnings from a RA or TA appointment.

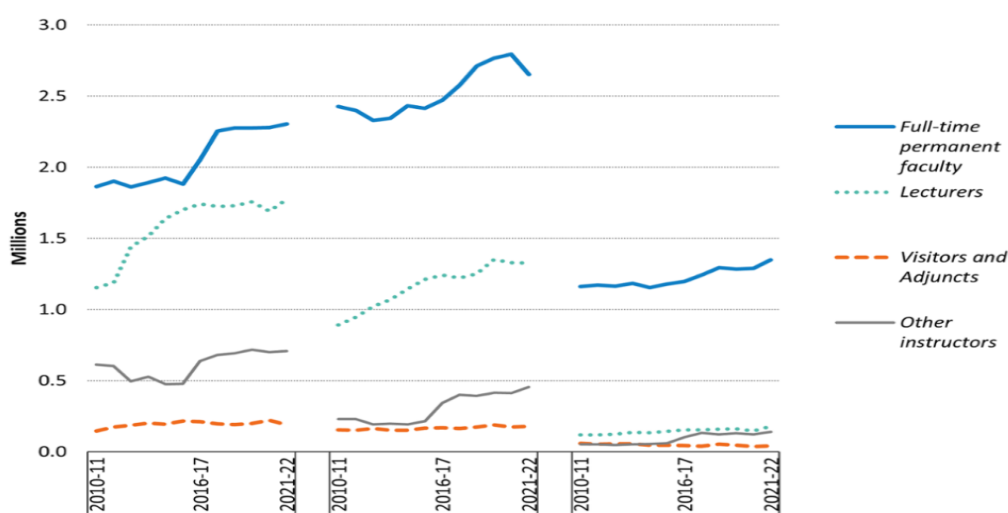
For additional data by campus, go to

- [UC employee full-time equivalent dashboard](#)

9. Undergraduate student interaction with ladder rank faculty is decreasing, as measured by overall SCH (Student credit hours) taught and particularly SCH in smaller courses.

Ladder-rank full-time permanent faculty are more likely to teach graduate courses, followed by upper division and lower division. These percentages have declined slightly over the last 20 years: 66 to 57 percent of upper division SCH and 49 to 46 percent of lower division SCH. For undergraduate courses, the percent of SCH taught by lecturers increased from 31 to 36 percent of lower division courses and 24 to 29 percent of upper division courses. (Note: these data only cover the primary instructor of record, which rarely, if ever, are TAs or GSIs).

Student credit hours, by instructional staff and class type (LD, UD and G), 2010–11 to 2021–22



In the lower division, full-time permanent faculty generally teach large lecture classes (e.g., 55 percent of SCH generated in classes over 150 students, though down from 60 in 2010-11); lecturers generally and increasingly teach smaller courses (e.g., from 40 to 48 percent of classes under 50). In the upper division, student contact with full-time permanent faculty is fairly evenly distributed across classes of all sizes (e.g., 55 to 60 percent of SCH generated).

Student credit hours, by instructional staff, class type, and class size, 2010–11 to 2021–22



For additional information, go to

- [UC Accountability Report Teaching & Learning chapter instructional workload indicator](#) ([link](#))

10. UC PhDs mentor and inspire countless undergraduates who report slightly higher satisfaction on the quality of their instruction compared to faculty instruction.

Spring 2022 UC Undergraduate Experience Survey respondents report slightly higher overall satisfaction in the quality of instruction by teaching assistants/graduate student instructors, compared to faculty instructors. The gap is greater for the percent reporting they were very satisfied (i.e., 20 percent very satisfied for TA/GSIs compared to 15 percent for faculty).

	Faculty Instruction		TA/GSI Instruction	
	Somewhat - Very Satisfied	Very Satisfied	Somewhat - Very Satisfied	Very Satisfied
Arts	92%	21%	90%	23%
Humanities	91%	23%	91%	25%
Social Sciences	91%	18%	90%	20%
All Fields	88%	15%	90%	20%
Life Sciences	87%	11%	90%	17%
Engineering/CS	84%	11%	87%	16%
Physical Sci/Math	82%	13%	88%	20%

For additional data by campus, go to

- [UC Undergraduate Experience Survey \(UCUES\) 2022 data tables by major dashboard](#)