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Report of the Administrative/Senate Workgroup on Academic Graduate Student Issues

Introduction

Graduate students are key to the University of California's ability to meet its three-part mission of research, instruction, and public service under the California Master Plan for Higher Education. As students, they gain deep knowledge of a scholarly discipline and contribute ideas and vitality to the intellectual and cultural life of the University. As research assistants, they conduct original research that expands the domain of human knowledge and has far-reaching implications for industry, culture, and society. As teaching assistants, they enhance the instructional experience of UC undergraduates and gain training to enter the workforce as future teachers. As alumni, they go on to make important contributions to the California economy and to help the State meet its workforce needs for both private- and public-sector jobs requiring advanced training.

The national need for students with advanced degrees is growing. According to a recent report by the Council of Graduate Schools and the Educational Testing Service, *Pathways Through Graduate School and Into Careers* (http://pathwaysreport.org/rsc/pdf/19089_PathwaysRept_Links.pdf), between 2010 and 2020, about 2.6 million new and replacement jobs are expected to require an advanced degree. The number of jobs requiring a master's degree will increase by about 22%, while the number of jobs requiring a doctorate or professional degree is expected to increase by 20%.

Moreover, the value of an advanced degree to an individual is substantial. According to the same report, the expected lifetime earnings for someone with a doctoral degree (excluding a professional degree) is \$3.3 million – far higher than the expected lifetime earnings for someone with a master's degree (\$2.7 million) or a bachelor's degree (\$2.3 million).

Academic doctoral students are particularly important to the University's research enterprise. Indeed, the achievements, prestige, and international renown of the University and its faculty would not be possible without them. Moreover, the importance of academic doctoral education at UC extends far beyond any single campus:

- Graduate education actively supports the University's ability to attract \$4.3 billion of external support annually for research, which generates new insights and industries that transform the world.
- UC awards over 3,500 PhDs annually, or 7% of the PhDs awarded nationwide.
- UC awards over 8% of all PhDs awarded in the U.S. to students who traditionally are underrepresented in higher education (African Americans, Latinos, Pacific Islanders and Native Americans).
- In California, UC awards 60% of all PhDs and 70% of all PhDs in STEM fields: science technology, engineering and mathematics.
- UC's graduate programs produce 25% of all CSU and UC tenure-track faculty.
- With the benefit of graduate and post-doctoral research, UC has produced more than 500 start-up companies based on UC inventions and more patents than any other university in the nation.

Enrolling the most talented students is an essential goal of every great research university. While the primary aim of UC's undergraduate programs is to educate California residents, UC's academic doctoral programs compete with universities nationally and internationally to enroll the very best students in the world and this constitutes an important factor in the recognition of UC as a global brand.

Graduate Student Financial Support at UC

While universities compete based on a variety of factors – the quality of a given program, opportunities to work with specific faculty members, etc. – student financial support is an important tool for attracting the best students. For academic doctoral students, institutions are generally expected to fully cover a student’s tuition and fees and provide a competitive net stipend (financial support in excess of tuition and fees, to be used for living expenses) to enroll top talent.

The competitiveness of graduate student support for UC academic graduate students and its impact on the ability of the University to enroll the best students from the USA and abroad have been a longstanding concern at the University. Several administrative and faculty groups and committees have taken up the issue over time and concluded that both the size and composition of UC’s financial awards for academic graduate students are not fully comparable to the best offers UC students receive from competitor institutions.

Recently, concern about the competitiveness of UC’s awards has been joined by three related concerns:

- Tuition increases, which have been instituted in response to declining State support for the University’s budget, result in higher charges to faculty research grants unless those increases are offset with other resources. For certain grants, such as NIH-funded grants, total compensation levels are limited by federal guidelines. This restriction applies both to UC and its competitors; however, because many non UC campuses discount tuition charged to grants, this issue is more likely to arise at UC.
- Tuition increases potentially influence the University’s ability to attract top students and to provide them with essential employment opportunities at UC, such as teaching assistant and graduate student researcher appointments.
- Nonresident tuition, which is assessed in addition to UC’s in-state tuition, makes it especially challenging to support international students or to employ them as graduate student researchers, because they do not qualify for residency in one year like most domestic nonresident students, making their support packages more expensive. This nonresident student tuition (NRST) does add revenues to the UC campuses, but to the extent that it is not returned to the departments and faculty to reduce grant costs, these support packages are a direct cost to the units or faculty that recruit these students. As a result, we are significantly more selective when it comes to international students than domestic ones. In other words, we admit some domestic students who are less qualified than some international students we do not admit. We thus miss important opportunities to attract top talent that would enrich the diversity and enhance the productivity of our graduate programs. This constraint on our ability to create a global community of scholars makes the UC less attractive to faculty. We discuss in our recommendations ways to ameliorate this problem and to make UC more competitive.
- To address these concerns, an Administrative/Senate Workgroup on Academic Graduate Student Issues was formed in Fall 2011. This report summarizes the Workgroup’s findings and recommendations. The remainder of the report is organized into sections that focus on the following topics:
 - Trends in the enrollment of academic doctoral students at UC
 - Graduate student support and UC’s competitiveness
 - The impact of rising tuition on graduate student stipends, employment opportunities, and debt

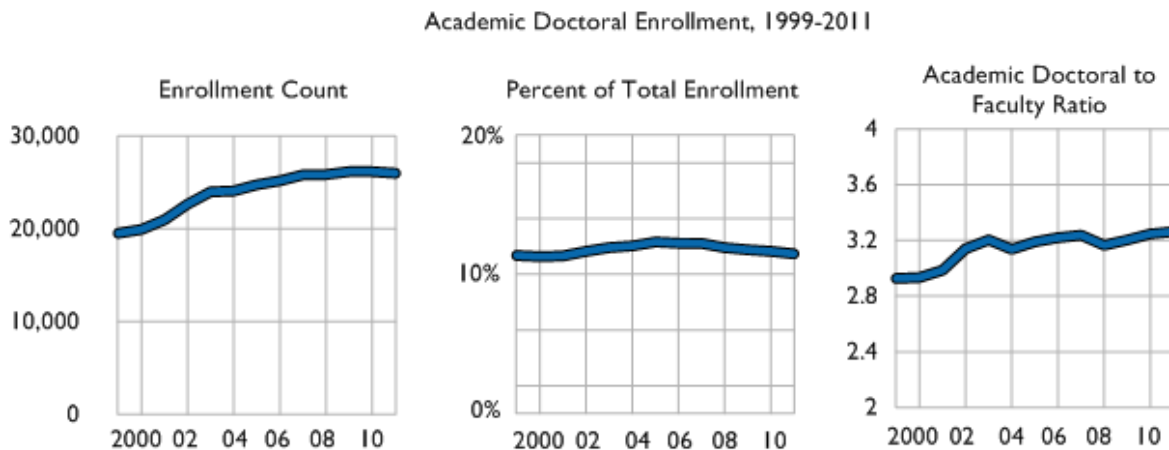
- Nonresident tuition and its impact on graduate student support
- Efforts to improve graduate student diversity
- Expanding career opportunities for academic doctoral students
- Recommended options to be considered at the system-wide, campus, and department level.

The Workgroup acknowledged that, while several improvements in graduate student support can be achieved by using current resources in more strategic ways, other improvements would require additional University resources. The latter will be difficult or impossible in the current budgetary environment, in which many priority needs are currently going unmet. However, the Regents and Administration periodically compile a list of urgent priorities to support calls for additional funding. The Workgroup felt it was important to include recommendations for enhanced graduate student funding on that list.

Academic Doctoral Student Enrollment

As shown in Display 1, UC's doctoral student population has grown less slowly in recent years compared to growth in the undergraduate student body and thus has declined as a percentage of UC's total enrollment. Academic doctoral student enrollment has grown by about 2 percent per year since 1999, slightly below the 3 percent annual growth rate for undergraduate students. Doctoral enrollment as a percent of total enrollment and doctoral degrees as a percent of total degrees awarded (Display 2) have declined slightly over the past five years, despite rising applications for admission.

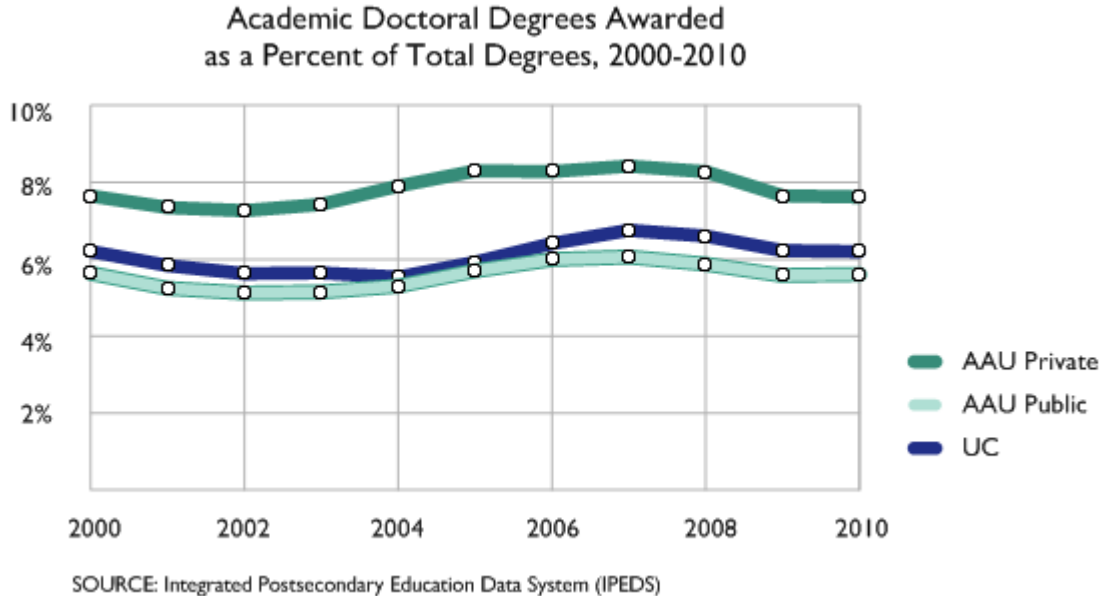
Display 1



SOURCE: UCOP Corporate Personnel System, Corporate Student System

While comparable enrollment figures are not available for comparison institutions, data are available for degrees awarded. UC's doctoral production as a percent of total degree production is slightly higher than at other AAU public institutions and lower than AAU privates, as shown in Display 2.

Display 2



Graduate students fuel UC's remarkable research engine. Faculty have long understood the critical role of graduate students in pushing the boundaries of discovery and innovation, and are attracted to research institutions with the best and brightest graduate students. International integration is a core element of effective research and education in the 21st century. This sentiment is strongly echoed across the national graduate education community as it recognizes the importance of enrolling international students to ensure the best educational experience for *all* students. Many countries tend to send or encourage only their best and brightest to do their graduate study abroad. Thus UC must compete with rival institutions throughout the nation to attract these high-quality, highly-recruited students. Our current practice of denying admission to international students who are better qualified than a subset of admitted domestic students is one of the factors that directly impacts our top-tier status.

The quality of the graduate programs in US graduate schools has enjoyed a remarkable pre-eminence for many decades. US graduate schools and their research facilities have been consistently ranked among the best in the world (e.g., the *Times of London* Rankings and the Shanghai Jiao Tong University Rankings), and from 1997 to 2009 over half of the Nobel Prize winners in chemistry, physics, medicine, and economics had received their graduate degrees in the US. The UCs, particularly as the top public institutions, have contributed significantly to the pre-eminence of graduate programs in American universities (from *The Path Forward - The Future of Graduate Education in the United States* - http://www.fgereport.org/rsc/pdf/CFGE_report.pdf)

The dominant position of U.S. graduate education is now threatened as the rest of the world rapidly catches up. Europe has made major strides in restructuring its graduate education programs and by 2000 produced more doctorates in science and engineering than the US (National Science Board. (2008). *Science and engineering indicators 2008* (NSB No. 04-01). Arlington, VA: National Science Foundation. Retrieved from <http://www.nsf.gov/statistics/seind08/>)

Other countries, such as China and India, are investing substantially in improving their graduate education systems and in the undergraduate programs that feed those graduate programs. The growing competition

points to the need for changes in the competitiveness of U.S., and by implication UC, graduate education so that UC does not lag or decline in the production or quality of graduate degree recipients.

Academic Doctoral enrollment and importance of international students for the UC brand

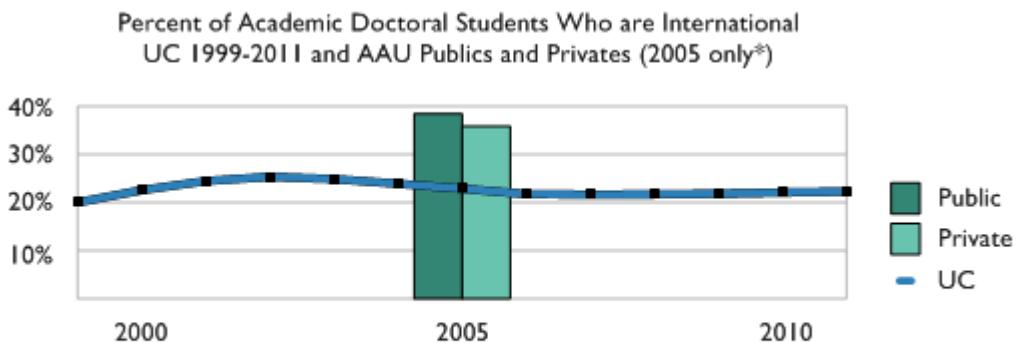
In the face of serious global competition, international students add a critical dimension to the educational experience of domestic students, undergraduate and graduate. Working with international students allows faculty and students to develop a more global perspective and approach to their work that are critical to an increasingly global society. They also learn more about diverse cultures, as well as perceptions of their own backgrounds and identity, which can serve to enhance their capacity to operate more effectively and lead within a global society. International scholars broaden the research perspective and contribute to the intellectual, social, cultural and global diversity of a campus.

International students completing Ph.D.s at UC frequently seek to remain in the U.S. A recent report shows that the percentage of international students remaining in the US five years after completing doctorates has increased significantly between 1995 and 2005 for Asian students; in 2005, 92% of Chinese and 85% of Indians were in the US, five years after completing the doctorate (from The Path Forward - The Future of Graduate Education in the United States -

http://www.fgereport.org/rsc/pdf/CFGE_report.pdf). The best international Ph.D.s find U.S. jobs that result in permanent residence. In other words, the enrollment of international Ph.D. students serves the U.S. national interest by attracting and selecting highly skilled immigrants. Those students who return to their home countries retain strong links to the U.S. and to the University of California. For example, UC graduates who take up faculty positions in their home countries steer their best undergraduates to graduate programs at UC, and in doing so enhance the UC brand name and its globalization.

As a percentage of UC academic doctoral students, international enrollment has declined in recent years, as shown in Display 3, and represents only about 25% of our academic doctoral student population. New international students declined significantly at UC (and nationwide) in the wake of 9/11. Although new international enrollment has recovered to pre-9/11 levels, total international enrollment as a percentage of UC doctoral students remains low by historical standards, and is well below average for other AAU Public and Private institutions.

Display 3



SOURCE: UCOP Corporate Data System

*2005 AAU Public and Private Institution data obtained from the National Research Council

For UC, enrolling international students is especially challenging because their tuition is higher than that of in-state students. Moreover, unlike domestic nonresident students, international students cannot convert to resident status at UC (although they are exempt from Nonresident Supplemental Tuition for up to three years once they advance to candidacy; see “Tuition and Fee Levels at UC and Other Institutions,” below). Depending on campus funding practices and priorities, covering those higher charges creates a burden for departments, faculty research grants, and other fund sources.

The low international student enrollment as a percent of all UC academic doctoral students is particularly troublesome because, in many disciplines, these students are often considered to be among the most highly talented students recruited by UC. Indeed, as noted above, departments frequently are significantly more selective among international applicants than among domestic applicants – due, in part, to the substantially higher resources required to support an international student compared to a domestic student.

The net result is that UC Ph.D. programs enroll a significantly smaller percentage of international students than do our public or private competitors. In the UC system, International Ph.D. students represented 24.4% of all Ph.D. students in the fall of 2005. This ranged from a low of 5.1% at UCSF to a high of 37.0% at UC Riverside. By contrast, the percentage of International Ph.D. students averaged 38.4% at the AAU public universities and 35.9% at the AAU private universities. At the four public institutions in the Comparison 8 institutions used to benchmark faculty salaries, the percentages were 48.9% (SUNY Buffalo), 47.8% (Illinois Urbana-Champaign), 38.0% (Michigan), and 26.0% (Virginia). At the four private Comparison 8 institutions, the percentages were 28.2% (Harvard), 37.8% (MIT), 30.1% (Yale) and 37.2% (Stanford). UC would need to increase the number of international Ph.D. students by roughly 50% to achieve a mix comparable to the Comparison 8 institutions or to all AAU institutions. Put another way, it appears that UC loses roughly one-third of the international students we *could* attract if we had the same overall success rate as the Comparison 8 or the AAU institutions.

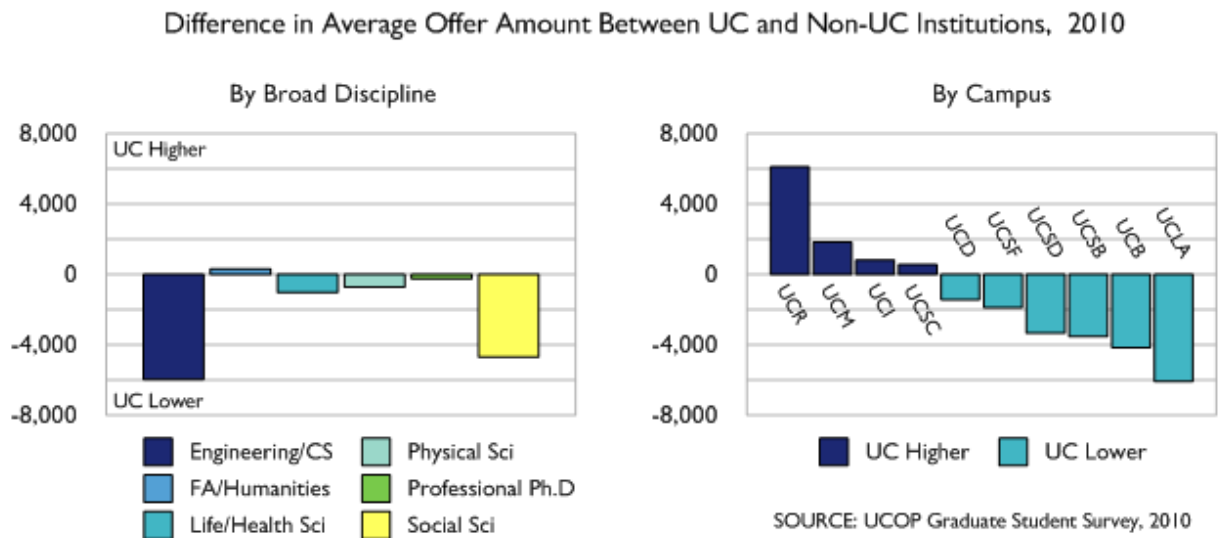
Another benchmark is UC’s own hiring of Assistant Professors. In each of the five years between 2006-07 and 2010-11, between 36.73% and 38.61% of Assistant Professors hired were not U.S. citizens at the time of hire.¹ International scholars are a significantly smaller proportion of UC Ph.D. students than of newly hired UC Assistant Professors.

Graduate Student Support and UC’s Competitiveness

As shown in Display 4, multiple surveys conducted since 2004 indicate that the net stipends (financial support in excess of tuition and fees, to be used for living expenses) offered by UC to students admitted to its doctoral programs are lower, on average, than those offered by students’ top-choice alternative institution.

¹ Data supplied by UCOP Academic Personnel.

Display 4

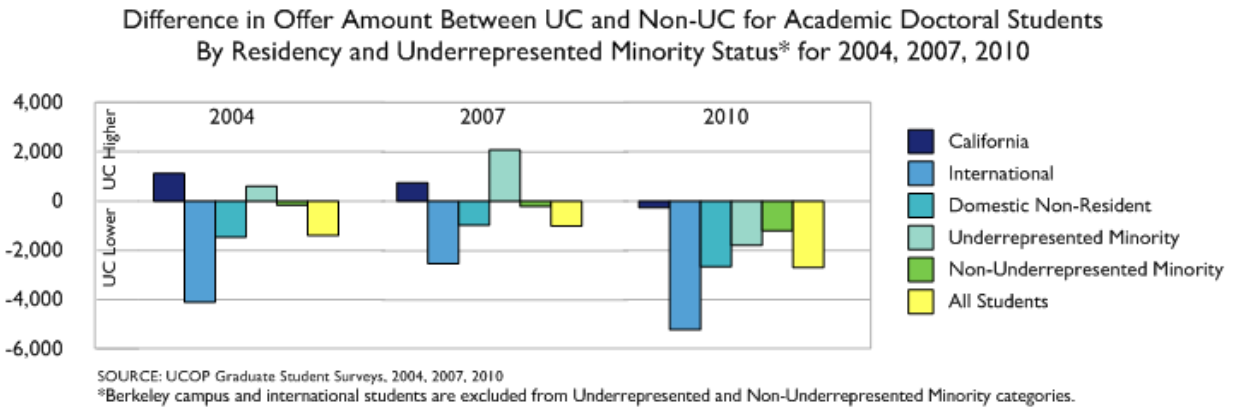


Much of the variation between campuses shown in Display 4 is attributable to the wide range of competitor offerings more than it is to disparity in net stipend between the UC campuses. All of the UC campuses average between 15,000 and 20,000 in net stipend, except for Berkeley (21,000), SF (27,000), and UCLA (14,000). Campus competitors' stipends have greater variation, with Riverside's competitors being the lowest at 13,700 and SF's competitors having the highest at over \$28,000. However, the large difference in stipend for UCLA is attributed to it having the lowest stipend in the system.

UC's competitive gap varies considerably by discipline and campus, but is especially large and getting worse for international students, as shown in Display 5. Between 2007 and 2010, despite the fact that NRST was unchanged during this period; UC net stipends remained the same for international students, while competitor offers increased, resulting in a widening of the gap.

UC was somewhat ahead of the competition for under-represented minority students in 2004 and 2007, but fell behind in 2010. This may have resulted from tuition increases, because only 50% of the additional tuition revenue was returned to aid. UC's competitive disadvantage for these populations makes it particularly difficult for UC to enroll a highly talented, diverse student body.

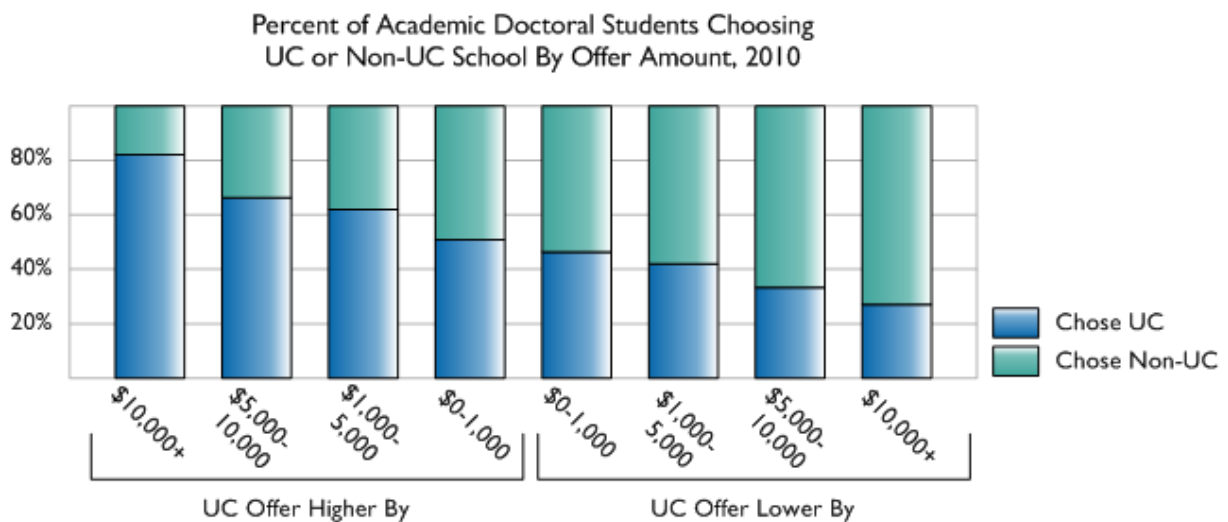
Display 5



The figures shown above do not take into account differences in the cost of living at UC campuses compared to other institution. Those differences tend to make a bad situation worse: after taking into account differences in local cost of living, the overall competitive gap grows from \$2,697 to \$4,978 based on the 2010 survey results.

The survey results also indicate that differences in financial support packages, among several other factors, influence students' enrollment decisions. As shown in Display 6, the likelihood that a student enrolled at UC varied with the value of UC's offer of support relative to that of competing institutions. Also, students who ranked financial support considerations particularly important were less likely than other students to enroll at UC.

Display 6



SOURCE: UCOP Graduate Student Survey, 2010

Note that among financial considerations facing prospective students, a competitive net stipend (financial support in excess of tuition and fees, to be used for living expenses) appears to be more important than a low tuition “sticker price”. As shown in Display 7, below, the institutions which were most successful in competing against the UC for the same student tended to be private institutions with higher tuition levels, so tuition itself is not nearly so important as net stipend to students when choosing a graduate program. These institutions allocated sufficient resources from a combination of internal and external sources (e.g., endowment earnings and research grants) to provide a competitive net stipend on top of their higher tuition; the resulting net stipend is often higher than that offered by the student’s top-choice UC campus. The typical private competitor discounts the tuition that is charged to research grants. Of course, reputation, quality of faculty and other academic considerations are also important in the applicant’s decision.

Display 7

Competitors’ Tuition Levels

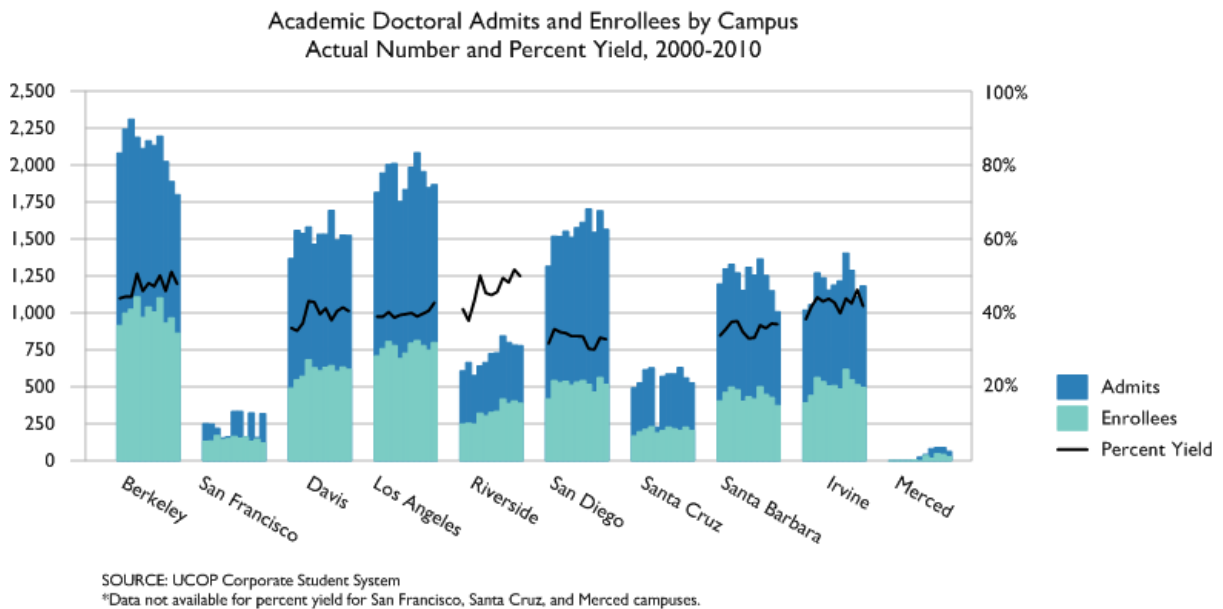
Top Competitor Public Institutions*	Resident Tuition	Nonresident Tuition
University of Texas at Austin	\$ 10,642	\$ 21,164
University of Illinois at Urbana-Champaign	\$ 10,908	\$ 24,174
University of Wisconsin-Madison	\$ 11,375	\$ 25,133
Ohio State University, Main Campus	\$ 11,400	\$ 28,125
University of Washington - Seattle	\$ 12,670	\$ 25,540
University of Minnesota - Twin Cities	\$ 14,012	\$ 21,466
UNIVERSITY OF CALIFORNIA AVERAGE	\$ 14,770	\$ 29,872
University of Michigan at Ann Arbor	\$ 18,666	\$ 37,726
Top Competitor Private Institutions*	Tuition	
University of Pennsylvania	\$ 30,060	
New York University	\$ 34,078	
Yale University	\$ 34,500	
Columbia University	\$ 37,556	
California Institute of Technology	\$ 37,563	
Princeton University	\$ 38,620	
Harvard University	\$ 39,324	
Stanford University	\$ 40,050	
Massachusetts Institute of Technology	\$ 40,460	
Duke University	\$ 40,720	

Cornell University	\$	41,600	
Johns Hopkins University	\$	42,280	
University of Chicago	\$	44,568	

*Top competitor institutions were determined by the 2010 Graduate Student Survey as the schools most frequently chosen over UC to attend.

As shown in Display 8 below, UC’s yield among students admitted to its academic doctoral programs (i.e., the percentage of admitted students who decide to enroll at UC) remains virtually unchanged over time, and did not change even with tuition increases. Systematically collected information or quantitative data are not available to assess trends in the quality of students enrolling in UC academic doctoral programs over time, however. As an example, we do not know if UC’s stable yield masks any trends in acceptances from the top, middle or bottom of the admitted pool of students. Thus, the data are not sufficient to quantify any potential impact of UC’s observed lag in net stipends on the quality of UC academic doctoral students. Interpreting this figure is complicated further by the decline in the number of students admitted in recent years.

Display 8

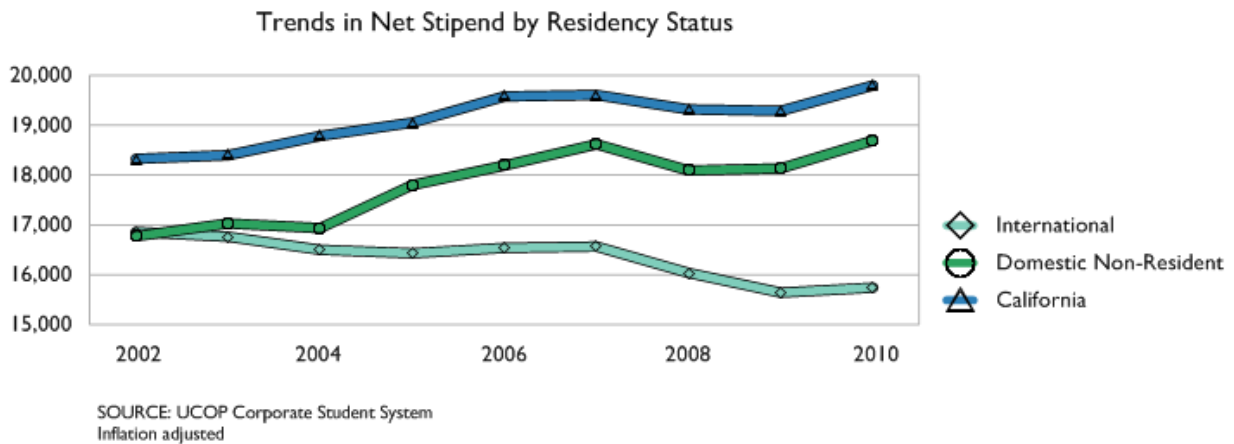


Each bar for a particular campus represents a particular year starting in 2001

The Impact of Tuition Increases on Graduate Academic Doctoral Students

Despite rising tuition costs, the per capita net stipend has increased for UC academic doctoral students who are California residents and domestic nonresidents, over time and across disciplines. It has, however, decreased slightly for international students. See Display 9.

Display 9

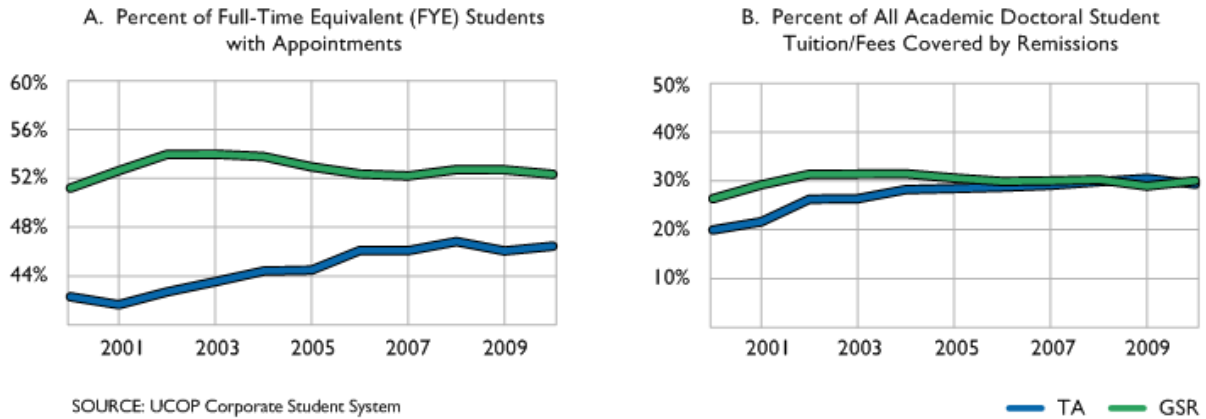


While rising tuition has not resulted in any significant erosion in graduate student net stipends, it has increased the cost of supporting academic doctoral students as teaching assistants and research assistants.

Display 10A shows the percentage of all academic Ph.D. students who had an appointment as a Graduate Student Researcher or Teaching Assistant at some point during the academic year; the percentages changed little over time. Display 10B shows total fee remission dollars as a percent of total fees, which is a proxy for estimating the extent to which teaching assistants and graduate student researchers had appointments that qualified for tuition/fee remissions. Display 10B shows there is little change over the years in the percent of students receiving fee remissions.

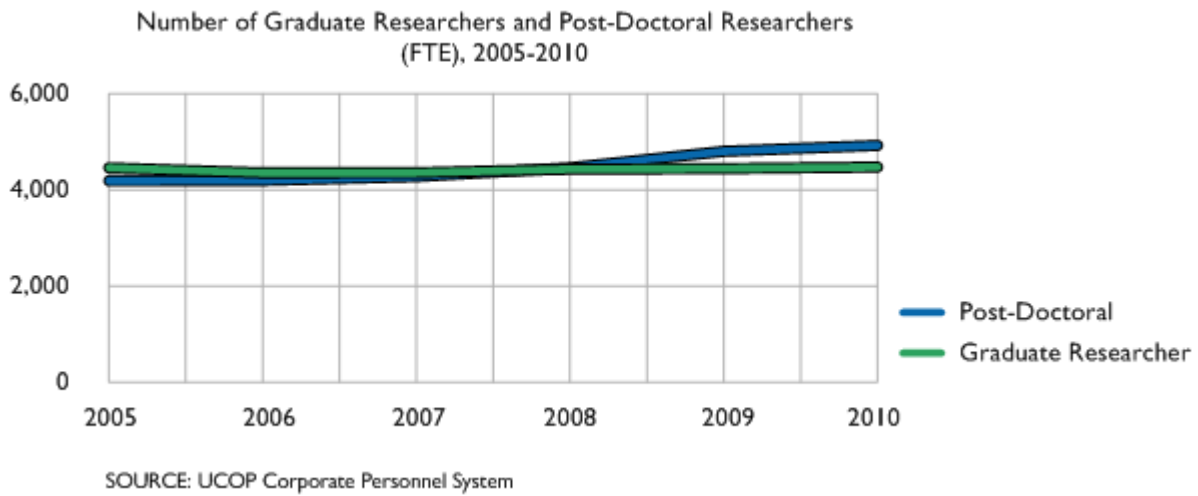
Display 10

Financial Support for Academic Doctoral Students Working as Graduate Student Researchers and Teaching Assistants, 2000-2010



Although the number of positions for graduate student researchers has remained virtually flat in recent years, the number of positions for postdoctoral scholars has increased during the same period; see Display 11. The shift in the mix toward postdoctoral scholars is what an economist would expect as a result of the increase in the relative cost of supporting a GSR, with rising tuition, which does represent revenue for the campuses. The growth in postdoctoral positions has been greatest in the health sciences, where academic doctoral student enrollment is small relative to the size of funded research. Anecdotal reports from both students and faculty in the health sciences indicate that the lower relative cost of hiring a postdoctoral scholar is a significant factor, although other factors such as level of training and the sole focus of post-doctoral fellows on research could also be contributing. National Institute of Health restrictions on the amount that can be charged to a research grant for a graduate student’s stipend and tuition are another significant factor affecting both UC and its competitors; however, as noted above, non-UC institutions often discount tuition charged to grants, lessening the impact.

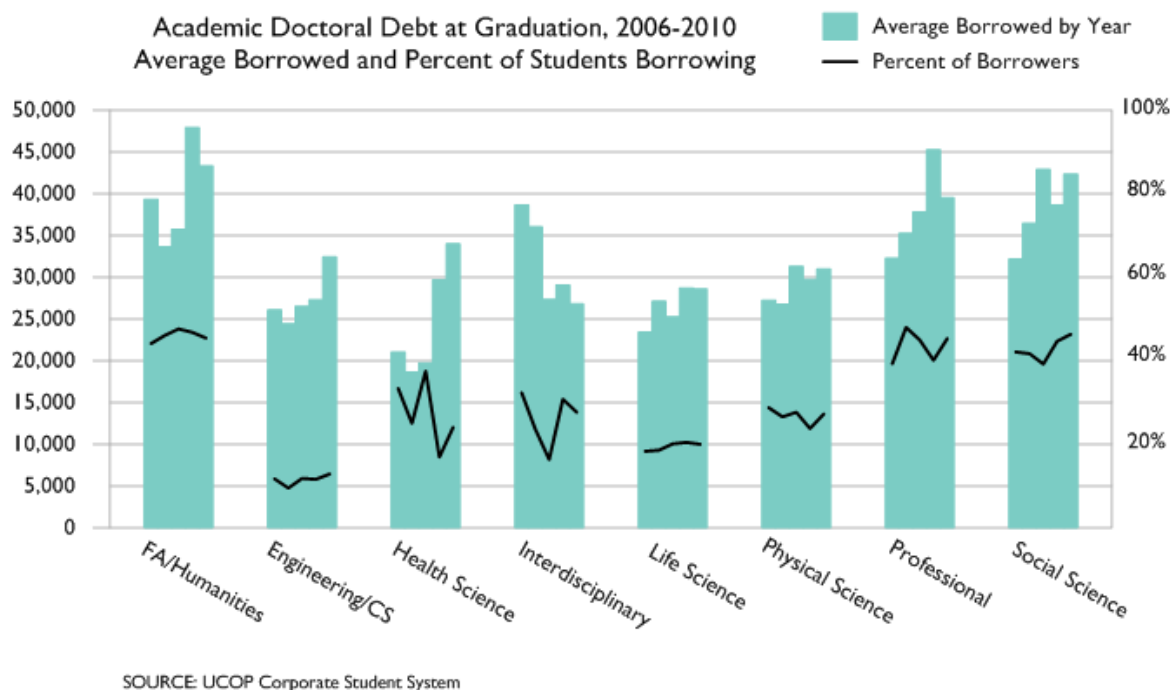
Display 11



Student loans play a less central role for academic graduate students than they do for students in professional degree programs. Students in every discipline do, however, rely on loans to some extent. The amount and extent of doctoral student borrowing varies greatly by discipline. Only about 20 to 25 percent of STEM students find it necessary to borrow to complete their doctorates, while 45 to 50 percent of Social Sciences and Humanities students borrow during the course of their studies. Typical debt levels upon graduation among students who borrow range from \$25,000 to \$30,000 for STEM students to \$45,000 to \$50,000 for Social Science and Humanities students. This variation underlines the importance of taking discipline into account in crafting new support policies.

As shown in Display 12, there has been no significant increase in either the amount or frequency of academic doctoral student borrowing since 2006; each of the vertical bars represents a year between 2006 and 2010. The figures suggest that higher tuition costs have largely been offset by increased support from fellowships, teaching assistantships, and GSR appointments during this period. This is consistent with the upward trend in graduate students' net stipends shown earlier in Display 9.

Display 12



Nonresident Tuition and Graduate Student Support

As noted above, nonresident students are subject to Nonresident Supplemental Tuition (NRST) in addition to the tuition and fees assessed for all students. NRST for academic graduate students was \$15,402 in 2011-12 and has not increased since 2006-07.

Domestic nonresident students typically qualify for California residency after their first year and hence avoid subsequent NRST charges. By University policy, international students are exempt from paying NRST for a period of 3 years after they advance to candidacy on average about 2.5 years after admission, in comparison with domestic students who take 3-3.5 years, but are otherwise subject to NRST throughout their enrollment.

Until international students advance to candidacy, the extra cost associated with NRST creates a funding challenge.

- For students supported by UC fellowships, the cost of covering NRST represents a larger drain on limited fellowship budgets than covering only in-state tuition. The University has periodically set aside additional fellowship funds specifically earmarked for nonresident students in order to partially offset this cost. This has occurred both at the systemwide level and at individual campuses.
- External fellowship programs generally do not provide sufficient funding to cover both tuition and NRST.
- Federal training grants cannot be used to fund international students.
- For students hired as GSRs, to the extent that campuses choose not to discount NRST fees to grants from the tuition revenues they accrue, the need to provide NRST remissions increases the

cost to departments and faculty of employing these academic doctoral students. UC faculty members must weigh the desirable aspects of enrolling international students against their higher departmental or personal grant cost as employees, compared to domestic students or, in some cases, postdoctoral scholars. In addition, the combined amount of NRST remission, in-state tuition remission, and wages that may be charged to certain research grants is limited by federal guidelines, as stated earlier.

The financial disincentive that exists at most UC campuses for hiring international students onto research grants is not inevitable, or even typical. For example,

- No such disincentive exists at most private institutions, where international students are assessed the same tuition charges as other students, and where the amount charged to research grants is generally less than the tuition “sticker price” for all students. This is typically less than what is charged for international students at UC.
- Nearly every public AAU university (except UC) charges the in-state tuition level to research grants for international and resident students alike. These universities either allocate other institutional resources or forego the revenue entirely from the tuition differential for all nonresident students on research grants.
- Some public institutions (including UC San Diego) charge a common, blended tuition rate to research grants for students in similar departments that represents the weighted average resident and nonresident tuition level for all students in those discipline. This practice eliminates the financial disincentive against hiring international students as GSRs while still capturing the same aggregate of nonresident tuition revenue from all research grants in that department. However, it maintains incentives to limit the number of international students admitted to Ph.D. programs.

Some of these practices could be adopted by UC campuses and are explored further in the section on recommendations.

Display 13, below, compares both the tuition sticker price and the amount charged to grants for UC and selected comparison institutions. (Rates are for 2011-12. See Appendix 1 for additional data.)

Display 13

Charges to Research Grants

Institution	Resident Tuition	Nonresident Tuition	Amount Charged to Grant
Publics			
University of Michigan	\$18,666	\$37,726	\$18,666
Rutgers, The State University of New Jersey	\$16,237	\$24,925	\$16,237/24,925
University of Virginia	\$15,108	\$25,104	\$15,108
The Pennsylvania State University	\$17,172	\$29,656	\$14,630
University of Oregon	\$14,220	\$20,619	\$14,220
University of Washington	\$12,670	\$25,540	\$12,670
University of Maryland at College Park	\$12,600	\$27,144	\$12,600
University of Missouri-Columbia	\$12,600	\$29,140	\$12,600

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University of Florida	\$11,950	\$29,344	\$11,950
The Ohio State University	\$11,400	\$28,125	\$11,400
Georgia Institute of Technology	\$11,171	\$26,606	\$11,146
University of Colorado at Boulder	\$10,991	\$26,867	\$10,991
The University of Arizona	\$10,840	\$25,802	\$10,840
Indiana University	\$10,523	\$30,668	\$10,523/30,668
Purdue University	\$9,478	\$27,646	\$9,478
The University of Iowa	\$8,810	\$24,168	\$8,810
The University of North Carolina at Chapel Hill	\$8,646	\$24,332	\$8,646
Iowa State University	\$8,508	\$20,224	\$8,508
The University of Wisconsin-Madison	\$11,375	\$25,133	\$8,000
The University of Kansas	\$7,532	\$17,618	\$7,532
University of Illinois at Urbana Champaign	\$10,908	\$24,174	\$6,545 to 14,504
Texas A&M University	\$6,348	\$11,982	\$6,348
Stony Brook University-State University of New York	\$11,498	\$17,788	\$5,084
Michigan State University	\$13,691	\$26,855	\$13,691
University at Buffalo, The State University of New York	\$10,536	\$16,826	not specified
University of Minnesota, Twin Cities	\$14,012	\$21,466	\$14,012
University of Texas at Austin	\$10,642	\$21,164	\$10,642/21,164
Privates			
Case Western Reserve University	\$56,750	\$56,750	\$42,563
Rice University	\$34,900	\$34,900	\$34,900/13,262
Stanford University	\$40,050	\$40,050	\$26,032
California Institute of Technology	\$37,563	\$37,563	\$24,416
University of Rochester	\$43,100	\$43,100	\$21,550
Cornell University	\$41,600	\$41,600	\$20,800
Massachusetts Institute of Technology	\$40,460	\$40,460	\$20,460
Princeton University	\$38,620	\$38,620	\$19,310

Report of the Administrative/Senate Workgroup on Academic Graduate Student Issues - 2012

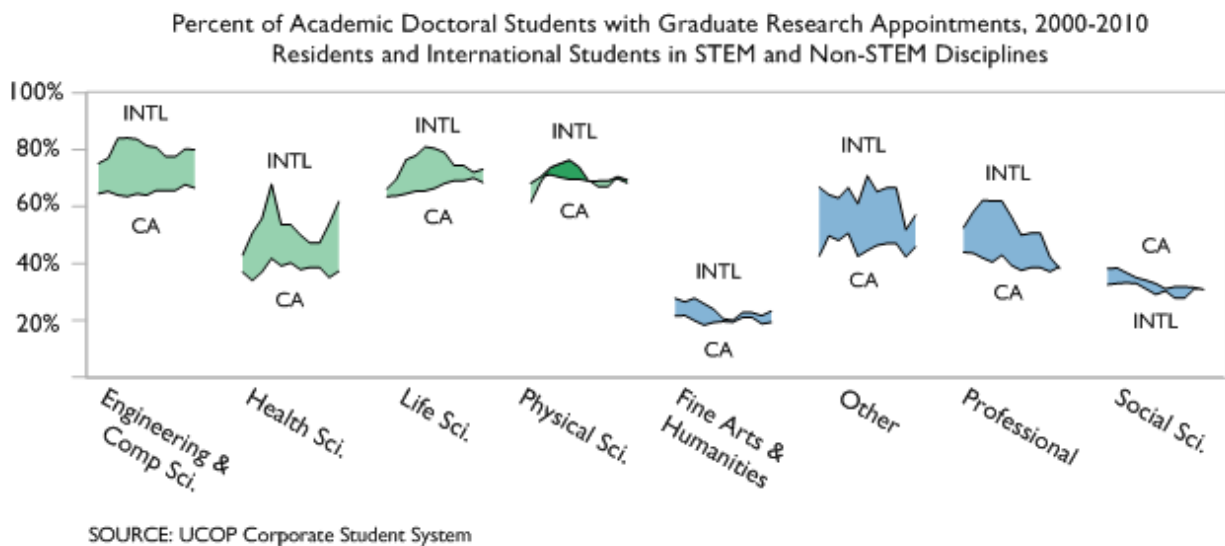
Columbia University	\$37,556	\$37,556	\$18,230
New York University	\$34,078	\$34,078	\$17,379
Yale University	\$34,500	\$34,500	\$17,250
University of Pennsylvania	\$30,060	\$30,060	\$15,030
Vanderbilt University	\$40,320	\$40,320	\$14,112
The University of Chicago	\$44,568	\$44,568	\$11,142
Brown University	\$41,328	\$41,328	\$10,332
The Johns Hopkins University	\$42,280	\$42,280	\$8,456
Duke University	\$40,720	\$40,720	\$5,701
Emory University	\$36,050	\$36,050	\$3,750
Tulane University	\$43,494	\$43,494	0
Washington University in St. Louis	\$40,950	\$40,950	0
Harvard University	\$39,324	\$39,324	not specified
UCs			
UC San Diego	\$14,381	\$29,483	\$15,813 ²
UC Santa Barbara	\$15,300	\$30,402	\$15,300/30,402
UC Berkeley	\$14,985	\$30,087	\$14,985/30,087
UC Irvine	\$14,944	\$30,046	\$14,944/30,046
UC Los Angeles	\$14,618	\$29,720	\$14,618/29,720
UC Davis	\$15,271	\$30,373	\$11,453/22,779 ³
UC Santa Cruz	\$15,946	\$31,048	\$15,946/31,048
UC San Francisco	\$14,892	\$29,994	\$14,892/29,994
UC Riverside	\$14,554	\$29,656	\$14,554/29,656
UC Merced	\$12,809	\$27,911	\$12,809/27,911

Note that at UC, the impact of NRST on research grants is *partially* mitigated by two factors: UC's policy of allowing domestic students to establish residency after their first year (which is more favorable than at most other public institutions) and UC's policy of exempting international students from nonresident tuition for up to three years once they advance to candidacy. The latter policy may partly explain why, over time, trends in the percentage of international students with GSR appointments are generally comparable to those of resident students, and have changed little over time. See Display 14, below. Note, however, that our data do not indicate the percentage time or number of quarters of appointment of GSRs, only a count of how many students had a GSR appointment at some point during the year.

² UC San Diego charges a single blended rate to grants, regardless of whether the GSR is resident or nonresident.

³ UC Davis discounts tuition charges, both resident and nonresident, to grants.

Display 14



In 2010-11 – the latest year for which figures are available – \$70 million in NRST was charged for academic doctoral students. Of this amount, \$41 million (58%) was paid from University-funded fellowships and GSR remissions. The remaining \$29 million (42%) reflected net NRST revenue from external sources such as external fellowship programs, research grants and out-of-pocket payments by students.

Elimination of NRST would result in a loss of revenue to each campus. Some of the \$29 Million that comes from external fund sources would be retained by the grant recipient and used for other research purposes. For example, a grant that previously funded tuition and NRST for one nonresident student might now fund tuition for two students; this has obvious benefits to the grantee and the additional student, and the tuition money still goes to the central campus administration. On the other hand, a grant that previously funded tuition and NRST for one nonresident student might now fund tuition only for that student, plus purchase of research equipment; in that case, the grantee benefits, but the central campus administration loses funding. Thus, it is difficult to predict with any precision the net loss in grant revenue to central campus administrations. None of the \$41 million in internal funds would be lost to UC, although it might be redirected to different budgets. Thus, it seems reasonable to estimate that in such a scenario UC would retain \$50-60 million and lose \$10-20 million.

The internal funds retained could end up being used for different purposes. For example, money currently paid from an endowment for graduate student support for NRST becomes available for general campus purposes, if the funds are unrestricted; if NRST were reduced or eliminated, the internal UC funds could, in principle, be used for graduate student support, including supporting additional graduate students and/or increasing net stipends. However, this in turn might free up unrestricted funds that are currently being used for graduate student support for general campus purposes.

Efforts to Improve Graduate Student Diversity

As stated earlier, UC's academic doctoral programs compete with universities globally to enroll the very best students in the world. A point of excellence for any top research university is its ability to offer a challenging experience reflective of the diversity of the nation and the world.

The diversity of the US and California population continues to grow. The U.S. Census Bureau estimates that between 2000 and 2015, international migration will account for more than half of the nation's population growth. This growth will especially impact the Hispanic and Asian populations, which are expected to triple over the next half century (U.S. Census Bureau. *U.S. Interim Projections by Age, Sex, Race, and Hispanic Origin: 2000-2050* Washington, DC: Author. Retrieved from <http://www.census.gov/population/www/projections/usinterimproj/>)

In the recent report, *America's Perfect Storm: Three Forces Changing Our Nation's Future* (Kirsch et al. 2007), a number of emerging sociological and economical will challenge U.S. universities. In particular, demographic shifts will result in a population with less education and lower math and reading skill levels. The population of domestic students available to pursue higher education will be more diverse. More first-generation college students will emerge from this pool, and many are likely to require additional language and skill resources.

Underrepresented minority (URM) students (defined for this purpose as domestic African Americans/blacks, Chicano/Latinos and Native Americans) are highly recruited at top ranked institutions. The proportions of URMs enrolled in UC's graduate academic degree programs have changed little over the course of the last decade. From 2006-2010 URM doctoral enrollment averaged 10.1% with a notable small yet steady increase in Chicano/Latino enrollment, while American Indian and African American enrollments have remained flat. In particular, African American/black graduate students at UC are represented at proportions lower than those at our comparable competitor institutions. African Americans averaged only 2.5% of UC's academic doctoral enrollment from 2006-2010. In order for UC to attract, enroll and graduate increasing numbers of URM students it must make consistent, substantive and proactive efforts. That said there are some bright spots with UC performance in the difficult national landscape of producing underrepresented scholars at the upper end of the pipeline. For example, in 2009-10 four UC campuses were included in the top twenty-five AAU producers of URM research doctorate recipients, with UC Berkeley ranked as the top producer and UCLA in the number three spot. With the passage of Proposition 209, the state constitution was amended to prohibit state government institutions from considering race, sex or ethnicity in public education (and other areas). Often it is thought that Proposition 209 prohibits institutions from actively seeking to outreach and recruit underrepresented minority students. Institutions can indeed actively seek to increase cultural diversity; the key is the mechanisms by which the goal is pursued. UC employs a wide range of programs, activities and initiatives designed to cultivate and encourage greater diversity on behalf of graduate education. These efforts are in compliance with Proposition 209.

Appendix 2 contains a summary overview of efforts, activities and initiatives currently being employed at UC in an effort to cultivate greater diversity in the graduate community. These are examples of long-term efforts and new initiatives such as the UC-HBCU Initiative launched in 2011. This is a competitive grants program designed to support UC faculty interested in actively collaborating and working with faculty and students at Historically Black Colleges and Universities. They create summer research opportunities at UC that expose HBCU scholars to the University of California and encourage them to consider attending UC for graduate school. The UC-HBCU Initiative is designed to support any HBCU

student selected, based on faculty review criteria, irrespective of race, ethnicity, national origin, sex or gender identity.

In considering issues of diversity the workgroup does not offer any new findings as there is significant relatively recent UC analysis on this issue that remains current (“Report of the Work Team on Graduate and Professional School Diversity” 2007 http://diversity.universityofcalifornia.edu/documents/07grad-prof_rpt.pdf). The workgroup advises continued awareness of the importance of diversity in the broadest sense, but encourages a particular commitment for UC to improve the representation of URM students in academic doctoral programs. This also requires greater vigilance in improving URM representation at the undergraduate level as UC is its own top feeder for underrepresented students enrolling in graduate programs. Having a diverse pool of academic doctoral students is critical to employing a diverse group of postdoctoral scholars and ultimately for faculty hires. UC is generally not a pacesetter on this issue as it has been for many other aspects of higher education, although the President’s Postdoctoral Fellows Program (PPFP) has had notable success in helping many URM Ph.D.’s enter the ladder rank faculty at our campuses and, usually, earn tenure. For example, in 2003 UC initiated a faculty hiring incentive for UC campuses that hire PPFP fellows appointed since 1996. Since then, 94 former fellows have received UC faculty appointments and 6 are under consideration for 2012. Of the PPFP fellows appointed to UC since 1995, 43/44 eligible have achieved tenure. Of 94 fellows hired since 2003, 95% are still at UC. This program has also received national visibility. Former PPFP fellows are also serving at many top universities around the country.

It is regrettable that, in the current financial climate, funding for the PPFP has been reduced, despite its significant success. The workgroup encourages protecting and enhancing resources to cultivate diversity at UC. During difficult economic times it is important that diversity efforts be considered a critical element of maintaining academic excellence and integral to the University’s success at every level. The workgroup encourages creative and proactive efforts that will allow UC to be an undisputed leader in diversity at all levels. Please see the recommendations in the **Recommended Options to be Considered at the System-wide, Campus, and Department Level** section.

Enhancing Career Preparation Opportunities for Academic Doctoral Students

A recent Biomedical Research Workforce Working Group report released on June 14, 2012 by the NIH stated that although the vast majority of biomedical Ph.D.s are employed, the proportion of Ph. D.s that move into tenure or tenure-track faculty positions has declined from ~34% in 1993 to ~26% today. The report goes on to state that the categories that have seen growth are science related occupations. The variety of professional goals and interests among academic doctoral students, coupled with a challenged world economy and the changing landscape of higher education, dictates, as suggested by the report cited above, that research universities support a broad set of career paths for students beyond the traditional focus on jobs in the academy. Analyses and efforts on behalf of multiple career pathways for Ph.D. recipients is an area of great importance in the academic graduate community. It is becoming a critical element in the reputation and competitiveness of academic programs as departments come under increasing scrutiny by industry, prospective students and the public at large with respect to viable job opportunities and professional readiness of their graduates. UC has varying levels of structured efforts in this regard and, like other research institutions, very limited information about the long-term career paths of its graduates. The workgroup feels strongly that this is an area in need of greater attention and support. Support of this will benefit students and in return greatly benefit the University.

The workgroup encourages greater campus and even systemwide effort and coordination toward raising awareness of multiple career opportunities and efforts to strategically equip students for a wide range of careers. The workgroup encourages UC campus communities to work together, when possible, and learn from successful efforts at other institutions. A useful resource is the recent report from the Council of

Graduate Schools on “Pathways Through Graduate School and Into Careers” (<http://pathwaysreport.org/>). Appendix 3 is a summary of efforts at each of the ten UC campuses that help academic doctoral students explore and prepare for a wide range of careers. The workgroup is pleased to learn of the current efforts across the system, but suggests that more can be done.

The workgroup refrained from suggesting a systemwide review or requesting that each campus establish a task force to examine this issue as the campuses may be at different stages of progress in this area. However, the workgroup considers it critical that campuses improve UC’s performance in professional workforce development and preparing Ph.D. students for careers outside of academia. The workgroup urges each campus to critically examine the resources, programs and guidance available to educate students and faculty about the range of career options for doctoral recipients across all disciplines and activate mechanisms to prepare students for such opportunities. It also encourages the campuses to study other recommendations made by organizations such as the National Institutes of Health and the Council of Graduate Schools. The NIH’s Biomedical Research Workforce Working Group released a draft report on June 14, 2012 (http://acd.od.nih.gov/bmw_report.pdf). UC’s performance in this area will have a direct impact on the long-term competitiveness of its academic doctoral programs. The workgroup offers specific recommendations for campuses to consider in improving efforts to prepare Ph.D. students for multiple career opportunities. Please see the recommendations in the **Recommended Options to be Considered at the System-wide, Campus, and Department Level** section.

Recommended Options to be Considered at the System-wide, Campus, and Department Level.

We emphasize that different campuses, and different departments within the same campus, face different competitive situations, so flexibility is needed. Additionally, to the extent that several of these recommendations cause a net loss of revenue to the campuses, the difficult decisions regarding what might be cut in order to provide enhanced support to academic Ph.D. programs might vary on each campus. Thus the following options describe pathways the different campuses may wish to explore.

- **Charge only resident tuition to research grants.**

Public AAU institutions (other than UC campuses) generally charge resident tuition to research grants, regardless of whether the GSR is a resident or nonresident student. UC could adopt a similar policy – either systemwide or by campus – in order to both reduce total costs charged to research grants and to eliminate the current economic disadvantage associated with hiring nonresident students as GSRs.

In 2010-11 (the last year for which data are available), an estimated \$13.9 million in NRST revenue was charged to research grants. Of this amount, \$4.1 million was charged to UC-funded research grants; the remaining \$9.8 million was charged to external grants.

Considerations: This would result in a loss of net external revenue to campuses. However, given that nearly all other AAU public institutions charge only resident tuition to grants, this should be a very high priority, along with other priorities such as PEB, elimination of faculty salary inequities within each campus, making faculty and staff salaries competitive, hiring new faculty, etc. for the Regents in the allocation of any new revenue in the future.

- **Actively manage graduate student enrollment by program, linking enrollment to the program’s demonstrated ability to provide competitive support.**

Certain UC campuses including Berkeley currently require departments to demonstrate that they are providing adequate levels of support to their enrolled graduate students through fellowships, grants, assistantships and other sources. This effectively requires departments to maintain or improve the competitiveness of the support that they provide, if necessary by reducing the

number of students admitted. It also cultivates an environment of department responsibility for supporting admitted students, which may influence recruitment/yield success, completion rates, time to degree, and student indebtedness. Some departments at Berkeley have found that increasing net stipend offers significantly increases the acceptance rate among the very top applicants.

Considerations: This strategy maintains or improves competitiveness at the expense of enrollment unless new fund sources are identified. However, campuses that wish to actively grow their graduate programs may opt to do so by choosing a stipend that makes them most competitive with their peers, which may vary between UC campuses and by discipline, while also trying to optimize the size of their graduate program.

- **Elevate graduate student support as a high priority for campus fundraising efforts.**

Fundraising can generate new funding to improve competitiveness and/or support enrollment growth objectives.

Considerations: Campuses and disciplines vary widely in their potential and demonstrated success in raising funds for graduate support. Fundraising for graduate education would also compete with fundraising for other campus objectives. Since significant gifts are often the result of sustained efforts, fundraising is unlikely to be a short-term solution.

- **Elevate the need to improve graduate student support to be a very high priority for the Regents.**

The need to enhance graduate student support has been among the Regents' priorities for many years. Funding constraints have limited – and continue to limit – the extent that systemwide funds can be earmarked for this purpose. As the economy improves, however, and as additional systemwide revenue from the State or other sources becomes available, the Regents should be encouraged to consider the need for enhanced graduate student support to be a very high priority. Doing so would send a strong signal of the importance of graduate education and the need for systemwide action to enhance it.

- **Create a culture and mechanisms to increase support from extramural funding agencies.**

Every UC campus offers workshops and provides basic assistance to students seeking funding from outside foundations (e.g., fellowships). This can result in additional funding for students and help students develop grant-writing skills that will serve them well throughout their career. Several universities – including some UC campuses – take further steps to create a culture that encourages both students and faculty members to maximize the amount of graduate student support obtained from these sources. Examples include requiring students to prepare a grant proposal as a formal part of their training, providing financial incentives to students for applying to significant fellowship programs, and providing financial incentives to both students and faculty members for actually securing outside awards, for example, by providing matching funds to increase the number of students benefiting from research training programs.

Considerations: The availability of outside funding likely varies by discipline.

- **Charge a blended rate of resident/nonresident tuition and fees to research grants.**

The current difference in tuition levels between resident and nonresident students creates an economic incentive for Principal Investigators to hire resident students instead of nonresident students, thus placing talented nonresident students at a disadvantage when seeking GSR appointments. Moreover, the cost of covering nonresident tuition and fees, combined with the cost of providing competitive wages, raises the total compensation of nonresident GSRs to levels that may be considered unreasonable under some interpretations of federal guidelines.

Some public institutions (including UC San Diego) have addressed this problem by charging the same, blended tuition rate to research grants for both resident and nonresident students. The rate is set at the weighted average resident and nonresident tuition charge among all students in a particular program or college. Such an approach is revenue-neutral to the institution because, in the aggregate, the same total amount of tuition is charged to grants. However, it avoids the economic disincentive to favor resident students over nonresident students for any particular grant. The approach also moderates total charges to individual grants since no single grant is expected to cover the full cost of nonresident tuition.

Considerations: Note that although this approach creates a more level playing field between resident and nonresident students in obtaining a GSR appointment, it does not reduce the aggregate tuition cost charged to grants; it just spreads the cost more evenly across grants. As a result, it is revenue-neutral to the institution, but administratively complex. Granting agency approval may be required. This approach maintains the incentive to be more selective in admitting international students, because increasing the number of international students would result in an increase in the blended tuition rate. However, if this approach were combined with the following proposal (return to aid any *growth* in NRST), it would level the playing field at admission also.

- **Return 100% of any nonresident tuition revenue from *growth* in nonresident enrollment in the academic doctoral population to graduate student support.**

Reducing the NRST charged to currently enrolled academic doctoral students would result in some net revenue loss to the University. However, one or more campuses could decide to forego (and effectively return to the units) any *new* revenue from nonresident enrollment *growth* in Ph. D. students, which would allow units to enroll more nonresident students without incurring any additional cost associated with covering NRST. Put another way, if 100% of the NRST revenue from this growth in nonresident enrollment were directed back to the unit that enrolls them, the unit would be no worse off than if it had enrolled an in-state student instead.

To implement this, the Graduate Division on a campus could, for example, establish a baseline nonresident enrollment for each unit, based on recent experience. The Graduate Division could then commit to provide to the unit one additional nonresident tuition fellowship for each nonresident student above the baseline; the unit would retain the right to determine which nonresident students would actually receive the fellowships, subject to general Graduate Division policies and federal Grants and Contracts rules.

Considerations: While the State provided UC with marginal cost funding for California resident students (including domestic nonresident students once they achieve residency) until 2007-08, and may do so again in the future, it provides no funding for international students. Consequently, to the extent that the UC system “swaps out” an in-state student for an international student, it would reduce the number of unfunded in-state students that UC reports to the Legislature. If the state were to substantially restore UC funding, including providing marginal cost funding for the currently unfunded resident undergraduates, this would potentially reduce the growth of state funding. The effect on the specific campus funding would be determined under the Funding Streams and Rebenching processes and would depend on the actual implementation of the Rebenching process.

- **Eliminate nonresident tuition for academic doctoral students after their first year.**

This could be done in either of two ways: through a Regental decision applying uniformly across UC campuses; or as a campus option, in which a campus could decide to direct nonresident tuition revenue to graduate student aid, thus providing fellowships offsetting the nonresident

tuition. It could be partially implemented by either eliminating nonresident tuition after the second year, or by reducing rather than eliminating nonresident tuition.

As noted above, the workgroup agreed that nonresident tuition impedes the recruitment of international students, and that this has detrimental effects on the quality of UC Ph.D. programs. If the NRST were reduced or eliminated, it would represent a revenue loss to the campuses. However, in light of this revenue loss, there were divergent views on the wisdom of eliminating nonresident tuition after the first year:

- Some members of the workgroup felt strongly that the benefits for UC's recruitment of international students justified the revenue loss that would result from eliminating nonresident tuition after the first year. They noted that much of the revenue generated by NRST comes from internal UC sources, and would not be lost to UC. Of the amount coming from external sources, the bulk comes from research grants and from the students themselves. They argued that competitive considerations require UC to limit the grant charges to resident tuition, as noted in the previous recommendation. Charges to the students themselves directly impair our competitiveness for those students, and this justified foregoing the \$7.4 million obtained from the students. Additionally, there would be a revenue loss of \$4.2 million from external fellowships and other external forms of support. Thus, these members felt that elimination of nonresident tuition after the first year, should be a priority for the Regents.
- Other members felt strongly that any Regental action resulting in the loss of this revenue would be a great hardship for the campuses under the current fiscal constraints. Instead, they favored encouraging campuses to develop alternatives to addressing the cost pressures associated with nonresident tuition through fundraising, selective rebates, and alternative funding sources that can ameliorate the burden of paying nonresident tuition.

Considerations: In 2010-11 (the last year for which data are available), an estimated \$34.5 million in NRST revenue was attributable to nonresident students enrolled beyond their first year. Of this amount, an estimated \$16 million was covered by UC fund sources: \$13.3 million by UC fellowships and \$2.7 million by UC-funded research grants. The remaining \$18.5 million was covered by a variety of external fund sources, including external fellowships (\$2.1 million), remissions charged to external grants (\$7.0 million), other forms of support (\$2.1 million) such as employer sponsors, and students' earnings or out-of-pocket expenditures (\$7.4 million).

Recommendations related to diversity

- Despite budget challenges the workgroup encourages UC to maintain and enhance its commitment and resources to improve the representation of URM students in academic doctoral programs. This requires greater vigilance in improving URM representation at the undergraduate level as UC is its own top feeder for underrepresented students enrolling in graduate programs.
- The workgroup also advises that having a diverse pool of academic doctoral students is critical to employing a diverse group of postdoctoral scholars and ultimately necessary in hiring faculty more reflective of the cultural diversity of our state and nation.

Recommendations related to Ph.D. career pathways

- Enhance support for graduate career services
 - Provide career services resources to students at various stages of their academic program. Services should include training students on how to search and effectively compete for internship positions and career opportunities across a wide spectrum of potential careers
 - Implement or support graduate internship efforts

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- Offer department-specific workshops on diverse career paths (or groups of related departments could hold workshops collaboratively.)
- Ensure there is a campus infrastructure that not only allows but supports students enrolling in courses outside of their departments. Students should have access to classes and other opportunities for training that may fall outside their department (such as introductory level business and law classes)
- Survey companies and organizations that frequently hire Ph.D. recipients to determine the skills these places typically look for and make an effort to ensure graduate students are trained appropriately to compete for positions.
- Provide faculty with opportunities to learn and acquire tools to assist students in exploring a variety of career options. Develop lists of resources for faculty that they can share with all students, but especially those who show an interest in non-academic career options.

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List of Appendices

1. Graduate Tuition Remission Survey 2011 for Workgroup Rev 06 2012
2. UC Diversity Efforts
3. UC Efforts on Multiple Career Pathways for Ph.D. Students

Appendix 1: Graduate Tuition Remission Survey 2011 for Workgroup Rev 06 2012 (p. 27-64)

Background:

At the July 2011 Regents' meeting particular questions and concerns were raised regarding how graduate academic doctoral students are funded. Emphasis was placed on understanding the potential impact of tuition increases on the adequacy of the University's graduate student support, faculty research grants, and students whose support may not increase to fully offset the higher tuition rates.

Objective:

The purpose of this information collection was to replicate an effort from March 2004 where an Association of American Universities Data Exchange (AAUDE) inquiry asked: 'If graduate research assistants are included in federal contract/grant proposals, what amount of tuition is charged to the grant? How do you determine the amount of tuition & fees to include in the contract/grant proposal? If an amount less than tuition is charged to the grant, who pays for the remaining amount?'

In 2011 survey, an additional question was added for the public institution inquiry:

'Is the full cost of out-of-state tuition requested, or do you use a standard formula (for example, weighted averages to account for in-state, out-of-state, etc)? If the full cost of out-of-state tuition is not charged to the grant, who pays for it?'

Association of American Universities:

Of the sixty-one Association of American Universities (AAU) institutions, fifty-seven institutions were web searched and/or contacted, via a listing from the Institution's Office of Sponsor Projects or Research Administration website or from the AAU directory contact list. The six University of California campuses along with the two Canadian institutions were excluded from this inquiry.

Note: There are sixty-one AAU institutions as of spring 2011. Recently, Georgia Institute of Technology was added as a member to the association and both Syracuse University and Nebraska University were removed.

Inquiry Summary:

AAU publics

Of the 27 public institutions surveyed,
2 charge a flat amount to the grant that's less than resident tuition
2 charge a rate between resident and non-resident tuition
3 charge non-resident tuition where applicable
20 charge resident tuition

AAU privates

Of the 21 private AAU institutions surveyed, Columbia charges a flat rate. Case Western Reserve charges 75% of tuition to research grants; both Stanford and Cal Tech charge 65%, while 8 private institutions charge within a range of 50% to 35% of tuition to research grants. Three charge 20-25%. Duke charges 14%. Rice charges a varied amount. Emory charges the enrollment fee only, and two institutions do charge not tuition. Harvard did not provide a percentage; they did confirm that tuition may be added to the award but only in proportion to their effort.

UC Campuses

Of the ten UC campuses, eight campuses charge full resident and nonresident tuition. Davis charges 75% of both resident and nonresident tuition amounts and San Diego charges a blended rate, higher than resident tuition but lower than non-resident tuition amount. All UC tuition rates include student health insurance.

Item 3A.20

Institution	Exactly what is charged to the grant?	How is the amount charged to the grant computed?	If an amount less than tuition is charged to the grant, who pays for the remaining amount?	Is the full costs of out-of-state tuition charged?	If the full cost of out-of-state tuition is not charged to the grant, who pays for it?	Tuition Website
Georgia Institute of Technology	<p>Costs are based on number of credits taken.</p> <p>Annual Rates for 12 or more credits: Resident \$9,986, plus \$1,185 mandatory fees= \$11,171</p> <p>Nonresident \$25,421</p>	<p>Currently, our in-state graduate tuition rate is charged to the grant, less \$25 per semester, based on the allocation of salary charges to the grant. It is based on the graduate student tuition rate that is proposed each year and approved by the Office of Naval Research. The monthly charge rate is based on the in-state graduate student tuition rate (less \$25) per semester, divided by the number of months in the semester. Tuition increases of 5%-8% on the in-state rate are generally built into the multi-year proposals.</p>	<p>All but \$25 will be charged to the grant for in-state students. The out-of-state portion of the tuition is waived for non-resident students. All GRAs pay \$25 per semester for their tuition.</p>	No	<p>As of now, we use the in-state graduate tuition rate (less \$25) exclusively. The out-of-state portion of the tuition is currently waived in its entirety.</p>	<p>http://www.bursar.gatech.edu/student/tuition/Fall2011/Fall11-1-all-fees.pdf</p>
Michigan State University	<p>Per credit- hour basis: Resident \$569, Nonresident \$1,118</p> <p>*Need annual tuition amounts. Annual tuition: \$13,691 for 12 credits resident, \$26,855 for 12 credits nonresident</p>	<p>Tuition and Fee waivers are part of a “specific identification” (SI) charge applied to accounts on which graduate assistants are employed. The charges are calculated across the University using a formula for estimated cost and divided up on an equal per graduate assistant head basis (i.e., every assistantship gets charged a set undifferentiated fee regardless of employment time or credits enrolled).</p>	<p>The tuition and fee waiver at Michigan State University is up to 9 credits per semester (Fall and Spring, but only 5 credits in Summer) at in-state rates. If a graduate research assistant is employed on a federal contract/grant, the SI fee is charged to that grant. If the assistant is employed on more than one account (whether the same grant with multiple funding sources or different grants) the SI fee is split proportionally. Graduate assistants taking more than the waived amount of credits pay the additional tuition and fees themselves.</p>	No	<p>All graduate assistants at Michigan State University qualify for tuition and fees at the in-state rate and the SI calculation is based on that amount.</p>	<p>http://www.ctr.msu.edu/costudentaccounts/Tuition_Fees.aspx</p>

Institution	Exactly what is charged to the grant?	How is the amount charged to the grant computed?	If an amount less than tuition is charged to the grant, who pays for the remaining amount?	Is the full costs of out-of-state tuition charged?	If the full cost of out-of-state tuition is not charged to the grant, who pays for it?	Tuition Website
Ohio State University	Annual Rates: Resident tuition \$11,400, Nonresident \$28,125	OSU charges actual in state tuition for GRAs. Those who have not passed their admission to candidacy exam enroll for 10 credit hours /quarter. Those post admission enroll for 3 credit hours.	In creating proposal budgets we try to estimate which students will be supported by the award and budget tuition accordingly. Any under-recovery is charged back to the student's department.	No	The out of state component of fees is waived for all students supported as GRAs. GTAs or those with externally funded fellowships.	http://www.osu.edu/osu_today/stuinfo.php#tuition_fees
Rutgers, The State University of New Jersey	Both resident \$14,664 (\$16,237 with fees)and non-resident tuition \$22,352 (\$24,925 with fees); rate based on 2011-12 tuition	Currently, the student's actual tuition, based on credits enrolled, is fully charged to the grant, even if the student is non-resident, which most are. In practice, this may range from one to 12 credits per term, but probably averages about six. All this is under review here and the hope is that it will change to reduce the cost of students on grants.	Did not indicate.		Did not indicate.	http://studentabc.rutgers.edu/forms/tuition/FY11-12Tuition-NBGraduate.pdf

Institution	Exactly what is charged to the grant?	How is the amount charged to the grant computed?	If an amount less than tuition is charged to the grant, who pays for the remaining amount?	Is the full costs of out-of-state tuition charged?	If the full cost of out-of-state tuition is not charged to the grant, who pays for it?	Tuition Website
Texas A&M University	A graduate student with any kind of assistantship is charged resident tuition. Estimated tuition Resident \$6,348, Nonresident \$11,982	REVISED RESPONSE, 6/6/2012: (Debbie Guess, Data Analyst, Office of Institutional Studies) A graduate student with any kind of assistantship is charged resident tuition. ORIGINAL RESPONSE: Since tuition remission is still part of the University's policy for all TAMU graduate students paid on qualifying assistantships, faculty are still required to budget tuition and fees remission (compensation) in lieu of or in addition to the salaries budgeted for the graduate student's assistantship on the project. I don't think that the OGS's new allocation methodology for resource support for students affects the requirement for consistency on the tuition and fee remission programs and the need for the faculty to budget full tuition and fee remission for tuition and "all" required fees. Although the tuition and required fee schedules as published as on TAMU's finance website can be used, the PI can use an average rate of \$352/semester hour. For a student budgeted at 50%effort we typically budget 24 hours/year (9 hours each fall and spring semester and 6 for the summer). But the proposal administrators can help faculty with this.	Did not indicate.	No	Paying for tuition remission only is a partial tuition and fee remission while paying for tuition and all required fees is full tuition and fee remission. As you may know TEES has made changes and limited the amounts of funding that College of Engineering graduate students can receive in tuition and fee remission based on their interpretation of an NSF audit. No other research entity agrees with the TEES interpretation of A-21 but we are trying to get a ruling from the System as all TAMU graduate students whether working in qualifying graduate assistantships in TEES, AgriLife, or TTI are subject to the rules of the University's established program and if we do not treat all of our graduate assistantships consistently, we are out of compliance. But we hope to have this fixed soon and restore the COE students back to where other graduate student benefits.	https://financialaid.tamu.edu/Cost/COA_Grad.aspx

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University at Buffalo, The State University of New York	Blended Tuition Rate; based on discipline see website; Resident \$10,536, Out-of-State \$16,826	The amount of tuition charged to federal grants is based off of a per credit hour blended tuition rate schedule (weighted average) by School, multiplied by the number of credit hours included in the proposal. The blended rate calculated by the School is the actual tuition per credit hour rate (minus all fees) multiplied by a weighted ratio of in-state/out-of-state students the previous year. The higher the number of out-of-state students, the higher the blended rate will be for that specific school for that year. At proposal time, the current blended rate figured for that year for the applicable school is used for budget submission to the sponsor. When the sponsored research grant is awarded, the blended rate in effect at the time of proposal submission is used. The only accounts that we don't use the blended rate are training grants. These types of grants are charged the full actual tuition.	We currently use a "dummy" tuition remission account that we established that covers the difference between the old blended rate (+/-) if the rate used at the time of the proposal is different than the actual amount of tuition. This process, however, is currently under review, being that the rates used at proposal, which may be several years old, have been quite a bit lower than the actual tuition, as unanticipated increases in actual tuition have occurred in recent years. This has resulted in a significant amount of positive entries to the "dummy" account, which then has to be <u>covered by the institution.</u>	No	Did not indicate.	http://studentaccounts.buffalo.edu/tuition/fall.php
University of Arizona	Resident tuition \$10,840, Nonresident \$25,802	For GRAs who are at least .5 FTE, full resident tuition and fringe benefits are charged to the grant.	For GRAs at less than .5 FTE, the grant will pay a proportionate share of their tuition—the student is responsible for the rest.	No	All GRAs are considered in-state students for purposes of tuition by Arizona Board of Regents policy—the non-resident portion, then, is simply foregone revenue and is not reported in most of our financial reports.	
University of Colorado at Boulder	Resident Rate plus insurance - \$4777, resident tuition (up to \$4689 plus insurance \$88	The budget usually consists of the maximum of resident portion of tuition for a student plus a fringe benefit rate of 8% for insurance. What is charged to the grant is the actual amount of the RESIDENT portion of the student's tuition and a fringe benefit rate.	Did not indicate.	No	Since all students on RA's are covered under the tuition remission policy, whomever is paying for the student's salary (in this case the grant) will only be charged the resident portion.	http://bursar.colorado.edu/tuition-fees/tuition-and-fees-rate-sheets/

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University of Florida	Resident Graduate Rate: \$11,950; did not list Nonresident rate	The amount charged to the grant varies according to the expectation on how much of the student's time will be spent on the activities funded by the grant. The PI determines that amount of time (and associated costs) when preparing the grant proposal.	Did not indicate.	No	There is no standard rule, but often the University will pay for instate tuition and the project will pay for the out of state portion.	http://www.sfa.ufl.edu/basic/cost-of-attendance/
University of Illinois at Urbana Champaign	Blended Tuition Rate 60%/\$6545 to \$14,504 (Tuition for 2011-12 -In-State \$10,908, Out-of-State \$24,174	The FY12 rate is 60%. We use a formula to calculate the rate, as follows: Value of tuition for graduate students with tuition waivers. Salaries paid to the students who receive tuition waivers = Tuition Remission Rate (TRR). For the value of tuition, our government costing section calculates three rates using a combination of in and out of state scenarios and then our campus makes a decision on the rate to use in our request to the federal government. This tuition remission charge is not in the MTDC base, and it is charged strictly in proportion to the salary of graduate assistants with waivers.	Did not indicate.	No	Did not indicate.	http://registrar.illinois.edu/financial/grad_base.html

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University of Iowa	Full-Time Rates: Resident tuition and fees \$4405 per semester, Nonresident \$12,084	The same amount as covered in the Graduate Assistant Union agreement, which this year will be 100% of tuition costs for those with 25% appointment or greater.	Did not indicate.	No	Our non-resident graduate students with research assistant appointments of 25% pay the in-state tuition rate, so in-state rate is requested only.	http://www.registrar.uiowa.edu/LinkClick.aspx?fileticket=%2Fgw5LMbt%2bM%3d&tabid=95
University of Kansas	Annual Tuition Resident \$7,532, Nonresident \$17,618	The full cost of tuition for graduate research assistants must be included in all proposals, renewals, and contracts as part of the proposal budget when permissible by the granting agency or funding source. from the Graduate Research Assistant (GRA) Tuition Assistance Policy, https://documents.ku.edu/policies/Graduate_Studies/gratuitionassistancepol.htm	The amount is commonly paid from the Graduate Research Assistant Tuition Assistance Pool when not allowed by the grant. For specific amounts, please see this website: http://www.rgs.ku.edu/proposals/tuition_fees.shtml	No	GRAs at KU who hold a .40 FTE or higher position qualify for in-state tuition rates.	http://affordability.ku.edu/cs/costs.shtml

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University of Maryland at College Park	Full-Time Rates: Resident tuition \$6,300, Nonresident \$13,572 per term	Graduate Assistants on a full-time appointment (20 hours per week) are eligible for 10 credits of tuition remission in the Fall and Spring semesters and 4 credits in Winter Term. GAs on a half-time appointment (10 hours per week) are eligible for 5 credits of tuition remission in the Fall and Spring semesters and 2 credits in Winter Term. GAs on a full-time 12-month appointment are also eligible for up to 8 credits of tuition remission during Summer; and GAs on a half-time 12-month appointment are eligible for up to 4 credits during Summer.	Tuition remission is credited at the prevailing standard in-state credit hour rate at the time the class is taken. Some programs, such as the MBA, have higher credit hour rates or flat fee pricing. The tuition remission benefit does not cover the difference, which remains the responsibility of the GA.	No	All Graduate Assistants on a full-time or half-time appointment are billed at the in-state rate for credits taken during their appointment, including any credits taken over the tuition remission allowance. Official residency classification, however, does not change. Consequently, at any time when a graduate student is no longer supported by an assistantship—including summer months if the student is on a 9.5-month assistantship—he or she will be billed according to the official residency status that was assigned upon admission. Thus, a student may pay in-state rates during the academic year but out-of-state rates during the summer if the student is classified as out-of-state. Graduate students are urged to be aware of their official residency classification status and to address any problems immediately.	http://www.umd.edu/bursar/t_grd112.html

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University of Michigan	Resident tuition \$9,333, Nonresident \$18,863 per term	Graduate student research assistants are budgeted at standard average rates that are published annually. The website address is listed below. This takes the guesswork out of what to budget and to charge. Our office calculates this average each year based on tuition assessed and the number of average credit hours taken. Resident tuition is charged to the grant.	The unit is responsible for paying the tuition differential and any deviation from the average from other sources. Most choose to use their general funds for this purpose.	No	We only assess resident tuition and the units pick up the remaining costs. This helps the researchers in building their initial budgets and makes it possible for them to support students more easily on grants.	http://ro.umich.edu/tuition/full.php#Rack_LSA
University of Minnesota, Twin Cities	Full-time Rate - Resident \$7,006, Nonresident \$10,733 per semester	Tuition is not charged to the grant. We have negotiated a fringe benefit (for tuition) that can be charged to federal contract/grant proposals.	This tuition amount is backed out of Facilities and Administration Costs (F&A) . The fringe benefit cost included in the contract/grant proposal is based on an approved hourly rate for the number of hours worked. This hourly rate is adjusted each year. The department is responsible for monitoring expenses compared to the approved budget.	No	A waiver is applied to out of state students to bring their tuition down to the resident rate. The waiver is considered lost tuition.	http://onestop.umn.edu/finances/costs_and_tuition_and_tuition_and_fees/graduate_school_tuition.html
University of Wisconsin-Madison	Blended - flat charge of \$8000. (Costs are based on number of credits taken.) For 8+ credits: Resident \$5,687.56 Nonresident \$12,566.68 Minnesota \$7,545.48	There is a flat charge of \$8000 annually per graduate research assistant who holds at least a 0.33 FTE appointment. Charged \$4000 per fall and spring semester. Pro-rated if a student is split among multiple grants. Same for resident and non-resident students.	Given that tuition is more than \$8000, the remainder of the student's tuition bill is paid out of other university funds.	No	The student does not pay the tuition - the student gets a full tuition waiver whether they are a resident or non-resident. (Grad students without at least a 0.33FTE RA or TA appointment do not get tuition waivers.)	http://register.wisc.edu/tuition_and_fees.htm

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Indiana University	Tuition varies by school. Graduate School--Resident: \$309.50 / credit hour (\$5,261.50 for 17 credit hours) Nonresident: \$902.00 / credit hour (\$15,334 for 17 credit hours)	According to website: "Tuition and fees paid for graduate students as research assistants on sponsored projects are considered a fringe benefit and should be called a "fee remission" and be paid with the 5400 object code. Full fee remissions are mandatory (less the amount of the dedicated fee paid by the student) for a maximum of 30 hours per academic year if the appointment is 50% or greater. Fee remissions may be charged to federal and federal pass-through sponsored programs only if the graduate student is working 50% FTE or more; for other sources of funding, schools may elect to award fee remissions (less the dedicated fee paid by the student) to graduate student employees with appointments less than 50% FTE." http://researchadmin.iu.edu/Policies/Payments_and_Fee_Remissions_to_Graduate_Students_on_Sponsored_Programs_2011.10.03.pdf	Full fee remissions are mandatory (less the amount of the dedicated fee paid by the student) for a maximum of 30 hours per academic year if the appointment is 50% or greater.	?	Does not indicate	http://bursar.indiana.edu/fee_schedule.php

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Iowa State University	<p>Non-engineering PhD/MFA students (50% time) 100% of tuition charged to grant: \$3,738 per semester plus stipend http://www.ospa.iastate.edu/news/tuition/</p> <p>Total Resident tuition and fees (most majors): \$8,507.60</p> <p>Total Nonresident tuition and fees (most majors): \$20,223.60</p>	<p>The 2010-2011 monthly stipend ranges for graduate assistants are as follows: $\frac{1}{4}$ time (10 hrs/wk) \$700-\$1675 $\frac{1}{2}$ time (20 hrs/wk) \$1400 - \$3250 $\frac{3}{4}$ time (30 hrs/wk) \$2100 - \$4875</p> <p>Beginning master's students can anticipate receiving the minimum amount listed while doctoral students and advanced master's students may receive a slightly higher rate. Stipends may also vary by department and unit.</p> <p>Graduate assistants also receive health insurance as part of their compensation package.</p> <p>All graduate assistants working for Iowa State also qualify for in-state tuition. Doctoral students receive full tuition remission while master's students receive $\frac{1}{2}$ tuition remission. Thus, master's students pay \$1,992.76 per semester in tuition and fees.</p>	Does not indicate	No	<p>All graduate assistants working for Iowa State also qualify for in-state tuition. Doctoral students receive full tuition remission while master's students receive $\frac{1}{2}$ tuition remission. Thus, master's students pay \$1992.76 per semester in tuition and fees.</p>	<p>http://www.registrar.iastate.edu/fees/; http://www.elps.hs.iastate.edu/documents/highered/Tuition1011.pdf</p>

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Pennsylvania State University	The amount charged to grants is the same (\$7,315/semester) regardless of the student's program or residency status. Tuition varies by location and major. Full tuition at University Park location, non business majors: Resident: \$17,172; Nonresident: \$29,656	As you can see, there are different graduate student tuition rates for different programs. There also are different rates for PA residents and non-residents. But all that is irrelevant when charging tuition to research grants. As you can see from the tuition schedule, the amount charged to grants is the same (\$7,315/semester) regardless of the student's program or residency status. My understanding is that this is to ensure that hiring decisions don't depend on residency status. I have no insight into the occult methods used to calculate the graduate assistantship tuition rate, but I know that the entire tuition schedule is approved each summer by the PSU Board of Trustees.	We have had some sponsors who were reluctant to pay graduate student tuition, including our own state government. We try to address their concerns by explaining that graduate student tuition is a part of a graduate student's total compensation package (including the student's stipend, fringe benefits, and tuition). Since we can't pay the tuition of some of our graduate research assistants and not pay the tuition of others, we probably would have to replace a graduate student with a faculty member or a postdoctoral scholar if the sponsor was unwilling to pay the tuition. (And as we explain to our sponsors, it generally costs a lot more to have a faculty member or postdoc do the work than it would to have a grad student do the work.) This argument is usually successful at convincing our sponsors to pay graduate student tuition. However, in some cases a college or department might choose to pay the graduate student's tuition out of its own general funds, especially if it is trying to meet a	No	See D	http://tuition.psu.edu/tuitiondynamic/rates.aspx?location=up

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Purdue University	<p>In-state tuition is charged to the grant. Tuition varies by location and major. Tuition at West Lafayette location, full-time regular students: Resident: \$ 4,739.00 per semester ; Nonresident: \$13,823.00 per semester</p>	<p>The fee remission is a rate that is calculated annually based upon the remissions granted from the prior year, projections of the number of graduate student staff and an projected estimate of the general service fee. The rate charged each pay period pro-rated to all of the accounts that the salary for that Graduate Student Staff was charged to during that pay period. The rate is not pro-rated based on the number of days that the Grad Student Staff worked in the pay period. If a Grad Student Staff works any one day during the pay period the full monthly rate is charged for that pay period. (Note: all of our Grad Student Staff are paid monthly) Only the general service fee is included in the remissions calculation since our Grad Student Staff are responsible for paying the other fees themselves (i.e. Student Fitness & Wellness Fee, Repair & Rehabilitation Fee, etc...)</p>	Not indicated	No	<p>Purdue University defined a specific tuition category for Grad Student Staff employed as teaching or research assistant and those classified as graduate student administrative and professionals that is regardless of residency status. The tuition remission calculated for that tuition category is based upon the in-state tuition rate. (Therefore, effectively we forego the out of state portion for our Graduate Student Staff)</p>	<p>http://www.purdue.edu/bursar/FeeRates/2011-2012/2011-2012_page1.html#WLLFuILTime</p>

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Stony Brook University-SUNY	Fees vary by # of credits: Resident \$2,542 for 6 credits, \$5,749 for 12 credits Nonresident \$4,114 for 6 credits, \$8,894 12 credits	Tuition remission for graduate students will be charged at six (6) credits per semester (Fall and Spring only), per RA, at the NYS tuition rate. Two thirds of tuition remission collected will be allocated to and used by the graduate program under which the funded graduate student is enrolled (either to the Chair or Graduate Program Director, depending on where fiscal responsibility for the salary resides). Use of these funds is restricted to graduate program support. One third of the tuition remission revenue will be allocated to and administered by the Graduate School and the use of these funds will be restricted to stipends or salary support for graduate students (e.g. supplements or program expansion through additional lines). http://www.stonybrook.edu/research/ogm/gradtuition.shtml	Not indicated	No	Not indicated	http://www.stonybrook.edu/bursar/tuition/grad.shtml
University of Missouri-Columbia	In-state tuition is charged to the grant. Tuition per academic year Resident: \$12,600, Nonresident: \$29,140	If remission of educational fees is not specifically prohibited according to the guidelines of a funding source, it is required that in-state educational fees be included as a fringe benefit in the budgets of all proposals that include graduate student stipends. http://gradschool.missouri.edu/financial/assistantships-fellowships/tuition-waivers/obtaining-waiver.php	Not indicated	No	Not indicated	http://financialaid.missouri.edu/cost-of-attendance/graduate.php

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University of North Carolina at Chapel Hill	<p>Partial tuition waiver based on the percentage of effort the individual graduate student will work on the project. Resident: \$8646 , Nonresident: \$24,332 "Graduate School does have state based funding to provide tuition to qualified out-of-state students (we call this the tuition remission budget, where remission is defined as the dollar amount difference between the instate and out-of-state rates of tuition). The full tuition cost for out of state tuition is</p>	<p>"Our tuition remission program is measured by the in-state portion only to ensure a consistent base and application. If funds are available (state appropriations specifically for tuition remission or from sponsored agreements) we can direct-charge the in-state portion for individuals who qualify for remission, to awards where tuition is allowed by the sponsor. That makes the computation fairly easy as the amount is determined by the in-state portion regardless of the particular tuition amount as determined by the school/department for the particular program, discipline, degree sought, etc. Departments are responsible for differences." Kevin Maynor As with other salaries supported by sponsored funding, eligible graduate students of research project teams may be compensated with a partial tuition waiver based on the percentage of effort the individual graduate student will work on the project. The tuition rates differ depending on the applicable graduate program. Tuition is calculated by multiplying the graduate student's predicted</p>	<p>Departments are responsible for differences</p>	<p>Depends on % effort</p>	<p>According to the website, http://gradschool.unc.edu/policies/tuitionsupport/ "Eligible out-of-state students may receive both a tuition remission award that reduces their tuition to the in-state rate, as well as an in-state tuition award. These two funding sources, used in combination, provide full tuition support for graduate students serving as University-supported TAs, RAs, or fellow/trainees. Out-of-state students must receive an out-of-state tuition remission to be eligible for an in-state tuition award. This benefit includes tuition only, not student fees. Eligible in-state students may receive an in-state tuition award that provides full tuition support for graduate students serving as University-supported TAs, RAs, or fellow/trainees. This benefit includes tuition only, not student fees." but it looks like only partial fees may be charged to the grant. It is unclear who pays the difference.</p>	<p>http://www.unc.edu/finance/fd/c/sa/docs/11_12_tuitionfees.pdf</p>

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University of Oregon	Full-time tuition is charged to the grant. Resident: \$6,804, Nonresident: \$20,916	(2002-03 and on) Grants should budget for full-time tuition, as listed below, for GTF appointments. *The Academic Year (AY) covers three terms-fall/winter/spring. Tuition rates in future years should be budgeted with an estimated increase of 7% annually. Example: Resident graduate tuition in 2002-03 is \$2180/term, and in 2003-04 is \$2333/term. For grants that provide student support for research training, such as NIH Institutional National Research Service training grants, four (4) terms of tuition and fees should be budgeted each year. Training grants may include both resident and non-resident tuition rates, non-instructional fees of \$436/term, and insurance costs, if allowable under the grant. http://orsa.uoregon.edu/web/news/Archive/msg00102.html	not applicable	No	Not applicable	http://ir.uoregon.edu/sites/ir/files/tui2011.pdf , http://registrar.uoregon.edu/costs/tuition_fee_structure/graduate
University of Pittsburgh	Arts and Sciences: Resident: \$18,774, Nonresident: \$30,736					http://www.upj.pitt.edu/366/

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University of Texas at Austin	<p>REVISED RESPONSE (6/7/12, Diana Lockhart, Tuition Billing) "The tuition is charged to the grant at whatever the individuals rate is; be that in-state or out-of-state. What is being charged are the cost associated with the specific individual performing on the grant. Appx.40.5% of graduate students receive NRT waivers." ORIGINAL RESPONSE: "I believe the charge is directed proportionate to their appointments and based on the individuals assessed tuition rate (in or out of state)." Jason Richter, Associate Director for Sponsored Projects Tuition: Liberal Arts Resident:\$5,321, Nonresident: \$10,582 per semester</p>	<p>Tuition remission is required on all grants. Does not appear to differentiate between in-state and out. http://www.utexas.edu/research/osp/documents/tuition_remit.pdf</p>	<p>"At our university, tuition and mandatory fees are rolled into one flat rate amount. The issuing department instructs us, via electronic documents, as to the coverage of in-state or out-of-state tuition and other additional fees (such as International Health Insurance, or Late Registration). The department also has the ability to include an amount to cover. If the amount is less than the total billed, the student is responsible for payment. Diana Lockhart Tuition Billing</p>	<p>It is charged proportionate to the appointment</p>	<p>"At our university, tuition and mandatory fees are rolled into one flat rate amount. The issuing department instructs us, via electronic documents, as to the coverage of in-state or out-of-state tuition and other additional fees (such as International Health Insurance, or Late Registration). The department also has the ability to include an amount to cover. If the amount is less than the total billed, the student is responsible for payment. Diana Lockhart Tuition Billing</p>	<p>http://www.utexas.edu/business/accounting/pubs/tf_grad_fall11.pdf</p>

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University of Virginia	Resident tuition is charged to grants. Resident: \$15,108, Nonresident: \$25,104	All GTAs, GRAs, and GAAs holding at least a half-time appointment (.125 FTE; the effort level is equivalent to 10 hours per week) qualify for tuition remission, the payment of in-state tuition and required fees , during the semesters in which they are employed in this capacity. Remission is limited to actual in-state tuition and required fees paid in the semester(s) of employment. If sufficient funds are not available from the appropriate source, the department chair and the dean should identify an alternative source of non-federal and non-state funds from which to make payment. Subject to sponsor requirements, non-federal grant funds may be re-budgeted in order to allow payment of tuition remission. https://policy.itc.virginia.edu/policy/policydisplay?id=PROV-008	If sufficient funds are not available from the appropriate source, the department chair and the dean should identify an alternative source of non-federal and non-state funds from which to make payment.	No	Not indicated	http://www.virginia.edu/Facts/Glance_Tuition.html
University of Washington	Resident:\$12,670, Nonresident: \$25,540 "Please see the University of Washington (UW) Tuition & Fees schedule via our website at: http://opb.washington.edu/sites/default/files/opb/Tuition/2011-12-tf-annual.pdf We request only the Operating Fee component as direct line item in our grant/contract proposal budget.	Graduate Operating Fee is equal to tuition less building fee and student activity fees. A Graduate Operating Fee "waiver" is the process by which non-resident tuition differential is waived. Graduate operating fee waivers are issued to a limited number of graduate students by the Graduate School. "The building fee is part of our F&A rate and other fees are generally being paid by the grad students "	"Depends on the fees, some Dept may subsidize it if non-federal funds are available. Generally student will pay the remaining amount."	"For grant and contract budget, our Graduate School usually waived the out of state tuition so we charge the grant/contract budget only for in-state tuition level."	"Generally waived by our Graduate School for tuition paid by a grant or contract budget. Feel free to contact me at the number listed above if you have any questions. Thanks"	http://opb.washington.edu/sites/default/files/opb/Tuition/2011-12-tf-annual.pdf

Institution	Exactly what is charged to the grant?	How is the amount charged to the grant computed?	If an amount less than tuition is charged to the grant, who pays for the remaining amount?	Is the full costs of out-of-state tuition charged?	If the full cost of out-of-state tuition is not charged to the grant, who pays for it?	Tuition Website
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Those highlighted in tan were followed up with separately after they did not respond to the initial survey.

Those highlighted in blue are missing. (We received no response from them and were not able to garner information online.)

Information was collected via the institution's website, a direct contact to the institution's Office of Sponsored Projects or Research Administration or a member of the AAU Data Exchange listserv.

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Institution	Exactly what is charged to the grant?	Is the full amount of tuition charged?	If the full amount of tuition is not charged, who pays the difference?	Student Fees Website
California Institute of Technology	A Graduate Research Assistant Rate of 65%/\$24,416 (\$37,563 tuition & fees 2011-12); Institute policy is to provide full tuition and fees for each research assistant working on a sponsored project who meets a required average workweek. 65 % of the tuition and fees is charged to the grant or contract on which the GRA is working. This is paid by the sponsor as a special employee benefit.	No	Did not indicate.	http://bur-sar.caltech.edu/expenses_grad.htm
Case Western Reserve University	charged to a grant varies depending on where the student is in his/her program. For students earlier in their programs who are taking nine credit hours per semester, Engineering charges a maximum of 75%/ \$42,563 (tuition for Engineering \$56,750 for 2011-12). For students later in their programs who are often registered for only one credit per semester, Engineering would charge 100%. Those students are still considered full-time, but they've completed all courses and enough dissertation credit that they only need to be registered for one hour.	No	The remaining percentage is paid out of university operating funds. CWRU does not charge overhead on tuition.	http://studentaffairs.case.edu/international/information/new/tuitionrates.html
Columbia University	Effective July 1, 1998, student salary is no longer subject to Fringe Benefits. In lieu of Fringe, tuition will now be charged, based on \$18,230 per year effective September 1, 2010 (+3% inflation increase each year thereafter). This is an estimate of the tuition cost, and is subject to revision when the actual amount is determined. This tuition rate is exempt from Indirect Cost assessment. Tuition remission is budgeted under Other Direct Costs. No tuition remission is to be charged during summer months. Tuition for Graduate School of Arts and Sciences \$18,778 per term	No	Did not indicate.	http://www.columbia.edu/cu/sfs/docs/University_Tuition_And_Fees_tuition-fees-11-12.html#N106A6
Cornell University	It is CALS policy to waive 50% (\$10,400) of the tuition for graduate assistantships that are supported on research grants to faculty. For those graduate assistantships funded by federal, state or nongovernment sponsored agreements, the 50% tuition waiver can be reported as cost sharing.	No	For academic year 2011-12, the tuition for the contract college research degree programs (M.A., M.S., M.S./Ph.D., Ph.D., MFA and DMA) is \$20,800. Our current policy is that CALS will waive half of the tuition (\$10,400) for assistantships paid on grants/contracts to college faculty. If mandatory cost sharing (matching) is required by a sponsor, the waived component can be listed as cost share (match) on proposals.	http://www.dfa.cornell.edu/treasurer/bursar/studentsparents/tuition/index.cfm#CP_JUMP_45031

Institution	Exactly what is charged to the grant?	Is the full amount of tuition charged?	If the full amount of tuition is not charged, who pays the difference?	Student Fees Website
Duke University	<p>Our tuition remission charge for 11-12 will be \$2,865 regardless of the year of study, so approximately 14% in years 1-3 and 100% in the summer term and for years 4+. Also reflected on our T&F schedule.</p> <p>Links to our Tuition Remission Policy and Fee schedule are below. Note that we are in the process of revising the Tuition Remission Policy but not significantly. We need to tweak and clarify a few things that created some issues after implementation. Please let me know if you have other questions or would like additional information.</p> <p>http://gradschool.duke.edu/documents/financial_support/tuition_remission.pdf</p> <p>http://gradschool.duke.edu/documents/financial_support/AY11-12%20tuition%20fees%20stipend%20schedule.pdf</p>	No	<p>The balance of tuition for students in years 1-3 and mandatory fees are covered by the Graduate School with scholarships. Health and Rec fees are partially recovered through a fringe rate that is applied to GSRA salaries.</p>	<p>http://gradschool.duke.edu/financial_support/coa/index.php</p>
Emory University	<p>At present, PIs who sponsor graduate students are responsible for the student's salary plus an Enrollment Fee of \$1,250 per semester or \$3,750 per year. Our policy is under review and we expect to propose a slightly different schedule in the next budget round. (\$36,050 tuition for 2011-12)</p>	No	Did not indicate.	<p>http://www.gs.emory.edu/resources/financial.php?entity_id=10</p>
Harvard University	<p>Effective July 1, 2007, graduate tuition remission may be charged to research awards at Harvard as a non-overhead-bearing direct cost. Tuition remission is the payment of tuition expense as part of compensation to students performing necessary work on federal research awards [Office of Management and Budget Circular A-21, Section J.45]. Unlike salaries and wages, tuition remission must be excluded from the application of indirect costs [OMB A-21, Section G.2]. Did not indicate the percentage of \$39,324 (total tuition amount for 2011-12, full-time). Regarding Graduate Students on Federal awards:</p> <ol style="list-style-type: none"> 1) They are not assessed fringe on their salary. 2) Tuition may be added to the award but only in proportion to their effort being paid on the award. 3) Tuition does not take overhead. <p>Many departments in FAS use the NIH HRSA guidelines when it comes to paying Pre and Post Doctoral Students.</p>	No	Did not indicate.	<p>http://www.gsas.harvard.edu/programs_of_study/special_students_costs_tuition_and_fees.php</p>

Institution	Exactly what is charged to the grant?	Is the full amount of tuition charged?	If the full amount of tuition is not charged, who pays the difference?	Student Fees Website
Massachusetts Institute of Technology	The Institute subsidizes 50%/\$10,230 (total tuition for 2011-12 - \$20,230) of academic-year tuition. The remaining 50% is charged directly to sponsored research projects. There is no Institute subsidy of an RA salary/stipend. Although 100% of the cost of tuition is an allowable cost for reimbursement purposes, MIT has elected to subsidize RA tuition to reduce the cost of a graduate student research assistant to a research grant.	No	MIT subsidizes the remaining 50% of AY tuition & 100% of summer tuition, to reduce the cost of a graduate student to a research grant, and to improve the quality of faculty life.	http://web.mit.edu/registrar/reg/costs/graduate/gad_fallspring12.html
New York University	We cover our full time graduate research assistants' tuition on grants through a pool accumulated as a percentage of salary. For Arts and Science, the charge is 37% of all salaries and for others, 51%. Tuition is \$1382 per credit (so 24 credits (full time for one academic year) would be \$33,168 and fees are \$910). Tuition remission gets charged to the sponsor at same rate regardless of how many classes are being taken or indeed, whether or not any classes are taken and the pool is designed to recoup 100% of the costs.	No	In any year when the pool runs short, the Deans pick up the remainder.	http://steinhardt.nyu.edu/graduate_admissions/tuition
Princeton University	For graduate students supported on sponsored research grants and contracts which provide full F&A costs, the proposal budget should include one-half of the tuition (\$19,310) as specified on the ORPA rate sheet. The University will contribute the other half of the tuition, as voluntary uncommitted cost-sharing. Regular tuition: \$38,620	No	The portion of the tuition paid by the University may be shown as cost-sharing when cost-sharing is required by the sponsor. The PI should be careful to consider an individual student's status, i.e., taking courses or writing the dissertation, in calculating the tuition amount. If the University commits to cost-sharing at full tuition and a student goes on dissertation status at some time during the project, the department is responsible for covering the cost-sharing obligation.	http://www.princeton.edu/graduate_school/about/docs/studentlife/1112_cost_of_education.pdf
Rice University	For doctoral students who are in their first three years, Rice charges full tuition (for FY12 is \$34,900). For doctoral students who are working as research assistants (on externally funded grants but also institutional funded), we charge a tuition remission rate of 38%/\$13,262 on the stipend paid from the grant.	Yes	The 38% recoups a portion of the cost of tuition from the grant. If we recouped the full amount the rate would be over 50%. So, the university covers the portion not generated through tuition remission.	http://www.student.rice.edu/students/Tuition_Fees.asp#Grad_Prog
Stanford University	Stanford calculates a Tuition Allowance as part of all Graduate Student Assistantship appointments. For PI (outside of School of Medicine), 65%/\$8,678 (total tuition for 2011-12 - \$13,350 amount vary see website) of the cost of Tuition Allowance for Research Assistants is charged directly to the source of funding that supports the Research Assistant's salary. PI in School of Medicine pay 81%/\$12,351 (total tuition for 2011-12 - \$15,248) of the cost of Tuition	No	35% of the cost of Tuition Allowance is charged to University General Funds, or in the Graduate School of Business, to the School. PIs in School of Medicine -19% of the cost of Tuition Allowance will be absorbed within the School of Medicine.	http://studentaffair.stanford.edu/registrar/students/tuition-

Institution	Exactly what is charged to the grant?	Is the full amount of tuition charged?	If the full amount of tuition is not charged, who pays the difference?	Student Fees Website
Tulane University	Tulane does not generally charge graduate tuition to federal grants and contracts. Fulltime tuition for Graduate School of Liberal Arts \$43,494	No		http://pan.dora.tcs.tulane.edu/acctrec/pdfs/TUITI_ON_FEES_201130-201210.pdf
University of Pennsylvania	The University provides one-half \$15,030 (\$30,060 for 2011-12) of a graduate research assistant's or fellow's tuition cost when an externally-funded research grant or contract provides the other half and the student is paid a stipend from the grant that is at least at the minimum University Fellowship level.	No	The University provides the other half as a tuition subsidy.	http://www.sfs.upenn.edu/tuition/PHD-2011-2012.htm
University of Rochester	The University of Rochester does not have a set institution-wide policy for tuition charged to grants and contracts. Most (basic science) departments in the medical school/center charge nothing, and some AS&E departments request up to 50%. (Rochester charges \$1,284 per credit hour for medical school, for an annual rate \$43,100 for 2011-12.)	No	Tuition "scholarships" at the University of Rochester are awarded by the department (and school) and thus is (are) responsible for the total amount.	http://www.rochester.edu/adminfinance/bursar/graduate.htm
Vanderbilt University	Vanderbilt charges 35% of tuition to the research proposal; This policy & practice was developed seven years ago as a standard across the university; it was determined to be reasonable, defensible and allowable. Tuition in the Graduate School will be charged at the rate of \$1,680 per semester hour for the 2011/2012 academic year 24 hours =\$40,320	No	The university pays the remaining amount; usually the responsible of the graduate student's academic school.	http://www.vanderbilt.edu/gradschool/fees_and_financial_support/

Institution	Exactly what is charged to the grant?	Is the full amount of tuition charged?	If the full amount of tuition is not charged, who pays the difference?	Student Fees Website
Washington University in St. Louis	<p>We don't charge tuition to federal grants, with the exception of training grants. Our Engineering School used to do so but discontinued. Arts & Sciences does not, although it comes up for discussion occasionally.</p> <p>If we did charge tuition to federal grants, and only recovered partial tuition through the grant sources, the unfunded portion would simply become remission, financial aid sourced from school operating funds, in our system. The budgets for supporting grad students are managed by the dean of each school (Arts & Sciences, Engineering, Medicine, Social Work) who can put a brake on grad student admissions when needed. Tuition for the 2011-2012 Academic year is \$40,950.</p>			http://graduate-school.wustl.edu/prospective-students/financial-information/tuition-fees
Yale University	<p>Yale charges 50% (\$17,250) tuition to research grants for graduate research assistants (called Assistants in Research at Yale). This is a university-wide policy.</p>	No	<p>The remaining 50% of tuition is covered by the applicable school (e.g., The Graduate School for students in FAS departments and the Medical School for students in its departments).</p>	http://www.yale.edu/graduate-school/financial/costs.html
Carnegie Mellon University	<p>I responded to Gema's request back in September. I informed her that I tried collecting the information from a few different offices on campus but was unsuccessful in my attempts. I apologize, but I am unable to provide you with the information you requested. Good luck in your research. Melissa Baker</p>			http://www.cmu.edu/hub/tuition/graduate/
University of Chicago	<p>We charge a fraction (45%) of the graduate student's salary. By charging based on salary, the tuition charged accurately follows effort. This will cover about a quarter of the student's tuition. The remaining amount is paid by the University. None of our students pay tuition out of pocket. (\$44,568 tuition Social Sciences Division)</p>	No	<p>The remaining amount is paid by the University. None of our students pay tuition out of pocket.</p>	http://bur.sar.uchicago.edu/tuition.html#tuition

Institution	Exactly what is charged to the grant?	Is the full amount of tuition charged?	If the full amount of tuition is not charged, who pays the difference?	Student Fees Website
Johns Hopkins University	<p>"Since Johns Hopkins is very decentralized, I'm answering these questions from the viewpoint of the School of Engineering.</p> <p>A graduate student's salary and 20% tuition is charged to the grant for Ph.D. students. We also charge graduate student healthcare to the grant. For master's students we normally do not charge either salary or tuition although that may vary by the student's advisor. If the student is 100% on one project, that project would be charged for the Ph.D. student's salary, 20% tuition, and healthcare for the year. If the student isn't working 100%, we will charge a proportionate amount to the projects he/she is working on. The current policy is that the dean's office picks up the other 80% tuition for Ph.D. student's. For master's students it is more complicated. The dean will pick up 50% tuition for master's students if the student was an undergraduate at JHU or if the dean grants a waiver due to circumstances. If the master's student's advisor is well funded, the advisor might charge the 50% to the grant. If not, the student might be responsible for the 50%. Master's students' grant support varies by department and by the specific situation."</p> <p>Tuition:\$42,280</p>	No	The current policy is that the dean's office picks up the other 80% tuition for Ph.D. students.	http://webapps.jhu.edu/jhuni/verse/information_about_hopkins/facts_and_statistics/tuition_and_financial_aid/doctoral_tuition/index.cfm
Brandeis University	Graduate School of Arts and Sciences tuition: \$40,514			http://www.brandeis.edu/gsas/financing/cost.html
Brown University	<p>"We charge 1/4 of the tuition and a health services fee for support of graduate research assistants. The remaining 3/4 are covered by the graduate school akin to a scholarship. In some cases health insurance is charged as well." Brown University tuition for regular full-time students in the 2011-2012 academic year is \$41,328</p>	No	The remaining 3/4 are covered by the graduate school akin to a scholarship.	http://www.brown.edu/graduate/school/financing-support/tuition-and-fees
University of Southern CA	\$42,162			http://www.usc.edu/dept/publications/cap2011/private/pdf/2011_2012/tuition_and_fees.pdf

Institution	Exactly what is charged to the grant?	Is the full amount of tuition charged?	If the full amount of tuition is not charged, who pays the difference?	Student Fees Website
Northwestern University	Tuition: \$13,864/quarter (8 or less terms)\$41,592 \$3,466/quarter (9 or more terms)\$10,398			http://www.northwestern.edu/sfs/tuition/t_grad_s_tuition.html

Those highlighted in tan were followed up with separately after they did not respond to the initial survey.

Those highlighted in blue are missing. (We received no response from them and were not able to garner information online.)

Information was collected via the institution's website, a direct contact to the institution's Office of Sponsored Projects or Research Administration or a member of the AAU Data Exchange listserv.

Item3A.18

Institution	Exactly what is charged to the grant?	How is the amount charged to the grant computed?	If an amount less than tuition is charged to the grant, who pays for the remaining amount?	Is the full costs of out-of-state tuition charged?	If the full cost of out-of-state tuition is not charged to the grant, who pays for it?	Tuition Website	Contact
UC Berkeley	100% of tuition, Resident:\$14,985 Nonresident:\$30,087			yes		http://registrar.berkeley.edu/?PageID=feesched.html	Patricia Gates 510-642-8117
UC Davis	75% of tuition, Resident: \$15,271 Nonresident: \$30,373	Campus currently subsidizes 25% of tuition and non-res. supp. tuition for GSRs on extramural grants.	Campus subsidy	No	Campus subsidy	http://budget.ucdavis.edu/studentfees	Carlos Garcia 1 530 754 7941
UC Irvine	100% of tuition, Resident: \$14,944 Nonresident: \$30,046			yes		http://www.reguci.edu/fees/	Nancy Lewis, Director 949-824-0018
UC Los Angeles	100% of tuition, Resident: \$14,618 Nonresident: \$29,720	*Full tuition and fees are charged to grants except the campus fee of ~\$123 per term	Department pays campus fees	yes*	Department pays campus fees	http://www.registrar.ucla.edu/Fees/	Ana Lebon 310-206-4309
UC Merced	100% of tuition, Resident: \$12,809 Nonresident: \$27,911	*Full tuition and fees are charged to grants except the campus fee of ~\$300 per year	Did not indicate.	yes*	Did not indicate.	http://registrar.ucmerced.edu/policies/fees	Jennifer Teixeira (209) 228-7832
UC Riverside	100% of tuition, Resident: \$14,554 Nonresident: \$29,656			yes		http://www.classess.ucr.edu/fees/index.htm#	Caron Thomas Tel: (951) 827-4813
UC San Diego	Blended (Tuition: Resident: \$14,381 Nonresident: \$29,483)	Blended rate: higher than resident, lower than non-resident. Most GSRs are in the "general pool." Actual GSRTF rates for 2011-12 are: CSE \$2,220 * 9 = \$19,980 ECE \$2,558 * 9 = \$23,022 MAE \$2,175 * 9 = \$19,575 SE \$2,458 * 9 = \$22,122 Physics \$1,866 * 9 = \$16,794 SIO \$2,095 * 9 = \$18,855 General Pool \$1,757 * 9 = \$15,813	For the General Pool, the over/under goes back to departments. Varies for the others	No	For the General Pool, the over/under goes back to departments. Varies for the others	http://students.ucsd.edu/finances/fees/registration/index.html	Kathryn Murphy 858-534-3724
UC San Francisco	100% of tuition, Resident: \$14,892 Nonresident: \$29,994			yes		https://registrar.ucsf.edu/registration/fees	John Rutkowski SRO Director, 415-502-4029
UC Santa Barbara	100% of tuition, Resident: \$15,300 Nonresident: \$30,402			yes		http://www.registrar.ucsb.edu/feehart.htm	Cara Egan Williams (805) 893-8809 and Cora Diaz, Asc Director, SPO 805-893-4035

UC Santa Cruz	100% of tuition, Resident: \$15,946 Nonresident: \$31,048	yes	http://reg.ucsc.edu u/Fees/index.html Larry Castro, Director, SPO 831- 459-5278
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Item 3A.17

http://www.whitehouse.gov/omb/circulars_a021_2004/

CIRCULAR A-21 Revised 05/10/04

1. Purpose: This Circular establishes principles for determining costs applicable to grants, contracts, and other agreements with educational institutions. The principles deal with the subject of cost determination, and make no attempt to identify the circumstances or dictate the extent of agency and institutional participation in the financing of a particular project.

The principles are designed to provide that the federal government bear its fair share of total costs, determined in accordance with generally accepted accounting principles, except where restricted or prohibited by law. Agencies are not expected to place additional restrictions on individual items of cost. Provision for profit or other increment above cost is outside the scope of this Circular.

45. Scholarships and student aid costs.

a. Costs of scholarships, fellowships, and other programs of student aid are allowable only when the purpose of the sponsored agreement is to provide training to selected participants and the charge is approved by the sponsoring agency. However, tuition remission and other forms of compensation paid as, or in lieu of, wages to students performing necessary work are allowable provided that --

(1) The individual is conducting activities necessary to the sponsored agreement;

(2) Tuition remission and other support are provided in accordance with established educational institutional policy and consistently provided in a like manner to students in return for similar activities conducted in nonsponsored as well as sponsored activities; and

(3) During the academic period, the student is enrolled in an advanced degree program at the institution or affiliated institution and the activities of the student in relation to the Federally sponsored research project are related to the degree program;

(4) the tuition or other payments are [reasonable compensation for the work performed and are conditioned explicitly upon the performance of necessary work](#); and

(5) it is the institution's practice to similarly compensate students in nonsponsored as well as sponsored activities.

b. Charges for tuition remission and other forms of compensation paid to students as, or in lieu of, salaries and wages shall be subject to the reporting requirements stipulated in Section J.10, and shall be treated as direct or F&A cost in accordance with the actual work being performed. Tuition remission may be charged on an average rate basis.

Item 3A.16

Public	Private	Canadian	UC campuses
<p>Georgia Institute of Technology Indiana University Iowa State University Michigan State University The Ohio State University The Pennsylvania State University Purdue University Rutgers, The State University of New Jersey Stony Brook University-State University of New York Texas A&M University University at Buffalo, The State University of New York The University of Arizona University of Colorado at Boulder University of Florida University of Illinois at Urbana Champaign The University of Iowa The University of Kansas University of Maryland at College Park University of Michigan University of Minnesota, Twin Cities University of Missouri-Columbia The University of North Carolina at Chapel Hill University of Oregon University of Pittsburgh The University of Texas at Austin University of Virginia University of Washington The University of Wisconsin-Madison</p>	<p>Brandeis University Brown University California Institute of Technology Carnegie Mellon University Case Western Reserve University Columbia University Cornell University Duke University Emory University Harvard University The Johns Hopkins University Massachusetts Institute of Technology New York University Northwestern University Princeton University Rice University Stanford University Tulane University The University of Chicago University of Pennsylvania University of Rochester University of Southern California Vanderbilt University Washington University in St. Louis Yale University</p>	<p>McGill University University of Toronto</p>	<p>University of California, Berkeley (1900) University of California, Davis (1996) University of California, Irvine (1996) University of California, Los Angeles (1974) University of California, San Diego (1982) University of California, Santa Barbara (1995)</p> <p>Non-AAU UC campuses University of California, Merced University of California, Riverside University of California, Santa Barbara University of California, Santa Cruz</p>
<p>Of the 28 public institutions, 27 included in the survey 1 missing</p>	<p>Of the 25 private institutions, 21 included in the survey 4 missing</p>	<p>Of the 2 Canadian, 0 included in the survey</p>	<p>Of the 10 UC campuses, 10 included in the survey</p>

Item 3A.15 2011-12 Tuition Remission Survey (Sorted alphabetically)	Annual Resident Tuition	Annual Nonresident Tuition	Charged to Grant	Charge	Notes
Public					
Georgia Institute of Technology	11,171	26,606	11,146	Resident	Tuition less \$25
Indiana University	10,523	30,668	10,523/30,668	100%	Inferred from the information provided
Iowa State University	8,508	20,224	8,508	Resident	
Michigan State University	13,691	26,855	not specified	Resident*	*SI rate calculated on resident tuition—institution did not state exact amount
The Ohio State University	11,400	28,125	11,400	Resident	
The Pennsylvania State University	17,172	29,656	14,630	Flat rate	Rev 6/2012)
Purdue University	9,478	27,646	9,478	Resident	
Rutgers, The State University of New Jersey	16,237	24,925	16,237/24,925	100%	Policy is currently under review
Stony Brook University-State University of New York	11,498	17,788	5,084	Resident	(6 credits)
Texas A&M University	6,348	11,982	6,348	Resident	(Rev 6/2012)
University at Buffalo, The State University of New York	10,536	16,826	not specified	Blended	
The University of Arizona	10,840	25,802	10,840	Resident	
University of Colorado at Boulder	10,991	26,867	10,991	Resident	Tuition plus insurance
University of Florida	11,950	29,344	11,950	Resident	No standard rule, commonly resident
University of Illinois at Urbana Champaign	10,908	24,174	6,545 to 14,504	Blended Tuition Rate 60%	
The University of Iowa	8,810	24,168	8,810	Resident	
The University of Kansas	7,532	17,618	7,532	Resident	
University of Maryland at College Park	12,600	27,144	12,600	Resident	
University of Michigan	18,666	37,726	18,666	Resident	
University of Minnesota, Twin Cities	14,012	21,466	not specified	Resident	Fringe benefit is charged rather than tuition
University of Missouri-Columbia	12,600	29,140	12,600	Resident	
The University of North Carolina at Chapel Hill	8,646	24,332	8,646	Resident	Based on % effort
University of Oregon	14,220	20,619	14,220	Resident	(Rev 6/2012)Office of research instructs to budget at resident rate, tuition for all in-state GTF appointments
The University of Texas at Austin	10,642	21,164	not specified	100%	(Rev 6/2012) Based on % effort. 40-5% of grad students g
University of Virginia	15,108	25,104	15,108	Resident	
University of Washington	12,670	25,540	12,670	Resident	
The University of Wisconsin-Madison	11,375	25,133	8,000	Flat rate	
Private					
Brown University	41,328	41,328	10,332	25%	Plus health services fee
California Institute of Technology	37,563	37,563	24,416	65%	
Case Western Reserve University	56,750	56,750	42,563	75%	Varies by dept and level. This represents engineering
Columbia University	37,556	37,556	18,230	Flat rate	
Cornell University	41,600	41,600	20,800	50%	
Duke University	40,720	40,720	5,701	4%	
	36,090	36,090	3,750		enrollment fee of 3,700 plus salary
Emory University	39,324	39,324	not specified	Based on % effort	
Harvard University					
The Johns Hopkins University	42,280	42,280	8,456	20%	Salary, 20% tuition, and healthcare
Massachusetts Institute of Technology	40,460	40,460	20,460	50%	
New York University	34,078	34,078	17,179	37 or 51%	
Princeton University	38,620	38,620	19,310	50%	
Rice University	34,900	34,900	34,900/13,262	100 or 38%	Depending on classification
Stanford University	40,050	40,050	26,032	65%	
Tulane University	43,494	43,494	0	0%	
The University of Chicago	44,568	44,568	11,142	25%	45% of the graduate student's salary, equivalent to 25% of tuition
University of Pennsylvania	30,060	30,060	15,030	50%	
University of Rochester	43,100	43,100	21,550	50%	Generally but there is no policy
Vanderbilt University	40,320	40,320	14,112	35%	
Washington University in St. Louis	40,950	40,950	0	0%	
Yale University	34,500	34,500	17,250	50%	
UC campuses					
University of California, Berkeley (1900)	14,985	30,087	14,985/30,037	100%	
University of California, Davis (1996)	15,271	30,373	11,453/22,779	75%	
University of California, Irvine (1996)	14,944	30,046	14,944/30,046	100%	
University of California, Los Angeles (1974)	14,618	29,720	14,618/29,720	100%	
University of California, San Diego (1982)	14,381	29,463	15,613	Blended	General pool rate is displayed
University of California, Santa Barbara (1995)	15,300	30,402	15,300/30,402	100%	
Non-AAU UC campuses					
University of California, Merced	12,809	27,911	12,809/27,911	100%	
University of California, Riverside	14,554	29,656	14,554/29,656	100%	
University of California, San Francisco	14,892	29,994	14,892/29,994	100%	
University of California, Santa Cruz	15,946	31,048	15,946/31,048	100%	

The stated fee remission award will cover a minimum of 90% of the credit hour fees for a resident and a minimum of 95% for a non-resident. <http://www.indiana.edu/~cats/Ab/D/F/graduate-student-academic-appointeeSAA-fee-remissions5400.php>
http://researchadmin.iu.edu/Policies/Payments_and_Fee_Remissions_to_Graduate_Students_on_Sponsored_Programs_2011_10.03.pdf

survey response indicates below resident rate flat fee

http://ogs.tamu.edu/wp-content/themes/ogs-genesis/faculty-resources/GA_employment-issues.pdf

<http://ogs.tamu.edu/incoming-students/tuition-and-payments/>
<http://ogs.tamu.edu/2011/07/payment-of-tuition-for-graduate-assistants/>
<http://www.research.ufl.edu/research/facts.html>

For budgeting purposes use the current in-state tuition rate for new graduate students (11/12 \$427.37 per credit hour).

2011-2012 TUITION: (7% annual increase)

Resident Graduate Students \$4,320 per term / \$12,960 (3 terms)
 (for all in-state GTF appointments and for in-state graduate trainees)
Non-resident Graduate Students \$6,453 per term / \$19,359 (3 terms) (for out-of-state graduate trainees on training grants or fellowships)
http://ors1.uoregon.edu/web/proposals/budget/quick_reference.fm

Since GTFs at .20 FTE or above are exempt from payment of tuition (the instruction fee) for up to 16 credit hours taken in any term to which the appointment applies, budgets must include tuition for GTFs at the resident in-state rate. Tuition will not be charged during the summer term if the student is not required to enroll for credit to meet program or degree requirement
http://ors1.uoregon.edu/index.cfm?toptext=proposals&pages=proposals_sections

<http://gradschool.uoregon.edu/staff/gtf-appointments/gtf-appointment-costs>

Hiring units should budget based on resident tuition rates

<http://register.uoregon.edu/doc/catalogs/ef/ef-catalog-el-11-12.pdf>

Decision	When to apply	When to apply	When to apply
Request for funding for teaching	When to apply: 1. At least 100 hours per week and must be approved monthly. 2. No more than 20% of the total number of appointments. 3. No more than 16 credit hours per term. 4. No more than 16 credit hours per term. 5. No more than 16 credit hours per term. 6. No more than 16 credit hours per term. 7. No more than 16 credit hours per term. 8. No more than 16 credit hours per term. 9. No more than 16 credit hours per term. 10. No more than 16 credit hours per term. 11. No more than 16 credit hours per term. 12. No more than 16 credit hours per term. 13. No more than 16 credit hours per term. 14. No more than 16 credit hours per term. 15. No more than 16 credit hours per term. 16. No more than 16 credit hours per term. 17. No more than 16 credit hours per term. 18. No more than 16 credit hours per term. 19. No more than 16 credit hours per term. 20. No more than 16 credit hours per term. 21. No more than 16 credit hours per term. 22. 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Item 3A.14 Graduate Remission Survey: UPDATED JUNE 8, 2012

2011-12 (Sorted by amount charged to grant)	Annual Resident tuition	Annual Nonresident tuition	Charged to Grant	Charge	Notes
Public					
University of Michigan	18,666	37,726	18,666	Resident	
Rutgers, The State University of New Jersey	16,237	24,925	16,237/24,925	100%	Policy is currently under review
University of Virginia	15,108	25,104	15,108	Resident	
The Pennsylvania State University	17,172	29,656	14,630	Flat rate	(Rev 6/2012)
University of Oregon	14,220	20,619	14,220	Resident	(Rev 6/2012)
University of Washington	12,670	25,540	12,670	Resident	
University of Maryland at College Park	12,600	27,144	12,600	Resident	
University of Missouri-Columbia	12,600	29,140	12,600	Resident	
University of Florida	11,950	29,344	11,950	Resident	No standard rule, commonly resident
The Ohio State University	11,400	28,125	11,400	Resident	
Georgia Institute of Technology	11,171	26,606	11,146	Resident	Tuition less \$25
University of Colorado at Boulder	10,991	26,867	10,991	Resident	Tuition plus insurance
The University of Arizona	10,840	25,802	10,840	Resident	
Indiana University	10,523	30,668	10,523/30,668	100%	

2011-12 (Sorted by amount charged to grant)	Annual Resident tuition	Annual Nonresident tuition	Charged to Grant	Charge	Notes
Purdue University	9,478	27,646	9,478	Resident	
The University of Iowa	8,810	24,168	8,810	Resident	
The University of North Carolina at Chapel Hill	8,646	24,332	8,646	Resident	Based on % effort
Iowa State University	8,508	20,224	8,508	Resident	
The University of Wisconsin-Madison	11,375	25,133	8,000	Flat rate	
The University of Kansas	7,532	17,618	7,532	Resident	
University of Illinois at Urbana Champaign	10,908	24,174	6,545 to 14,504	Blended Tuition	
Texas A&M University	6,348	11,982	6,348	Resident	(Rev 6/2012)
Stony Brook University-State University of New York	11,498	17,788	5,084	Resident	(6 credits)
Michigan State University	13,691	26,855	not specified	Resident*	SI rate calculated on resident tuition--instituiton did not state exact amount
University at Buffalo, The State University of New York	10,536	16,826	not specified	Blended	
University of Minnesota, Twin Cities	14,012	21,466	not specified	Resident	Fringe benefit is charged rather than tuition
The University of Texas at Austin	10,642	21,164	not specified	100%	(Rev 6/2012) Calculation based on % effort. Appx. 40.5% grad students receive NRT
Private					
Case Western Reserve University	56,750	56,750	42,563	75%	Varies by dept and level. This represents engineering

2011-12 (Sorted by amount charged to grant)	Annual Resident tuition	Annual Nonresident tuition	Charged to Grant	Charge	Notes
Rice University	34,900	34,900	34,900/13,262	100 or 38%	Depending on classification
Stanford University	40,050	40,050	26,032	65%	
California Institute of Technology	37,563	37,563	24,416	65%	
University of Rochester	43,100	43,100	21,550	50%	Generally but there is no policy
Cornell University	41,600	41,600	20,800	50%	
Massachusetts Institute of Technology	40,460	40,460	20,460	50%	
Princeton University	38,620	38,620	19,310	50%	
Columbia University	37,556	37,556	18,230	Flat rate	
New York University	34,078	34,078	17,379	37 or 51%	
Yale University	34,500	34,500	17,250	50%	
University of Pennsylvania	30,060	30,060	15,030	50%	
Vanderbilt University	40,320	40,320	14,112	35%	
The University of Chicago	44,568	44,568	11,142	25%	45% of the graduate student's salary, equivalent to 25% of tuition
Brown University	41,328	41,328	10,332	25%	Plus health services fee
The Johns Hopkins University	42,280	42,280	8,456	20%	Salary, 20% tuition, and healthcare

2011-12 (Sorted by amount charged to grant)	Annual Resident tuition	Annual Nonresident tuition	Charged to Grant	Charge	Notes
Duke University	40,720	40,720	5,701	14%	
Emory University	36,050	36,050	3,750	enrollment fee of	
Tulane University	43,494	43,494	0	0%	
Washington University in St. Louis	40,950	40,950	0	0%	
Harvard University	39,324	39,324	not specified	Based on % effort	
UC campuses					
University of California, San Diego (1982)	14,381	29,483	15,813	Blended	General pool rate is displayed
University of California, Santa Barbara (1995)	15,300	30,402	15,300/30,402	100%	
University of California, Berkeley (1900)	14,985	30,087	14,985/30,087	100%	
University of California, Irvine (1996)	14,944	30,046	14,944/30,046	100%	
University of California, Los Angeles (1974)	14,618	29,720	14,618/29,720	100%	
University of California, Davis (1996)	15,271	30,373	11,453/22,779	75%	
Non-AAU UC campuses					
University of California, Santa Cruz	15,946	31,048	15,946/31,048	100%	
University of California, San Francisco	14,892	29,994	14,892/29,994	100%	

2011-12 (Sorted by amount charged to grant)	Annual Resident tuition	Annual Nonresident tuition	Charged to Grant	Charge	Notes
University of California, Riverside	14,554	29,656	14,554/29,656	100%	
University of California, Merced	12,809	27,911	12,809/27,911	100%	

APPENDIX 2

Current Efforts to Improve UC Graduate Diversity

As noted in the **2007 Report of the Work Team on Graduate and Professional School Diversity** (http://diversity.universityofcalifornia.edu/documents/07grad-prof_rpt.pdf):

The proportion of URM students decreases steadily with successive levels of the academic community (e.g., from high school graduates to undergraduate students to graduate/professional students, to postdocs, to faculty).

At each level of academia (i.e., undergraduate, graduate/professional, postdoctoral, faculty), UC must establish or reinforce academic preparation programs that will attract URM students, build upon the skills/competitiveness of diverse students and encourage/facilitate URM students to continue on to the next academic level. UC should expand or replicate successful academic preparation programs (with a focus on attracting URM students) at the pregraduate and preprofessional school level.

With the passage of Proposition 209, the state constitution was amended to prohibit state government institutions from considering race, sex or ethnicity in public education (and other areas). Often it is thought that Proposition 209 prohibits institutions from actively seeking to outreach and recruit underrepresented minority students. Institutions can indeed seek to increase cultural diversity; the key is the mechanisms by which the goal is pursued. UC employs a wide range of programs, activities and initiatives designed to cultivate and encourage greater diversity on behalf of graduate education. These efforts are in compliance with Proposition 209. In order for UC to attract, enroll and graduate increased numbers of URM students it must make consistent and meaningful efforts.

Below are a variety of efforts being made to improve diversity at UC. The list focuses on outreach, preparation and pipeline efforts and is by no means exhaustive. Programs and efforts vary considerably by campus but many activities are common to all or most UC campuses. The information provided does not emphasize retention efforts or general community building on behalf of diversity. Retention and community building efforts are critical to cultivating an environment supportive of diverse scholars. Improving retention of URM scholars at every level, and the quality of their experience, is invaluable to impacting diversity at UC. This overview only briefly touches on retention; those strategies and efforts can be addressed separately.

PREPARATION / IMPROVING THE PIPELINE:

Research opportunity programs may occur during the summer or year-round. They may be department-based or sponsored by a graduate division or other entity. These programs are designed to provide undergraduate and master level students with university research experience. Exposing students to research experience, especially at a UC campus allows the student to obtain critical training and research experience, develop a relationship with a faculty mentor (as well as post docs and/or graduate students) and gain exposure to department or lab culture. The experience generally serves to make a student more competitive when applying to graduate school as the student is better prepared, has greater understanding of graduate level work and has a faculty member or researcher who can attest to their ability, interest, attitude and critical skills necessary to succeed in a Ph.D. program. UC offers a wide range of such programs. There are Graduate Division sponsored programs such as UCR's Mentoring Summer Research Internship Program (MSRIP), UCB's Summer Research Opportunity Program (SROP), UCSD's Summer Training Academy for Research in the Sciences (STARS), UCI's Summer Undergraduate Research Fellowship (SURF), UCLA's Summer

Program for Undergraduate Research (SPUR), UCSF's Summer Research Training Program (SRTP), UCSB's Academic Research Consortium Summer (ARCS) Program and department or college focused efforts such as UCB's Electrical Engineering and Computer Science's Summer Undergraduate Program in Engineering Research at Berkeley- Information Technology for Sustainability (SUPERB-ITS), UCM's California Alliance for Minority Participation (CAMP) and McNair programs.

- The number of students participating in these research programs vary. The more campuses can solicit or allocate support for these important preparation programs, the greater the potential to train and recruit talented participants. Committing financial resources to support these important outreach and training opportunities is critical for departments and programs to improve the numbers of underrepresented students in the pipeline. UCSF's Summer Research Training Program (SRTP) serves an average of 55-65 students a year, of which over 70% are typically underrepresented. These students receive research experience, GRE preparation, research seminars and workshops on demystifying the road to graduate school. Students are provided necessary travel, a stipend and housing for the summer. This is typical of most summer research opportunities.

UCR offers another example of a longstanding summer research program, the Mentoring Summer Research Internship Program (MSRIP). It is an eight-week summer research program for approximately 35 participants. The program targets rising juniors, seniors (and some masters students) from educationally and/or economically disadvantaged backgrounds. Participants work under the supervision of a faculty mentor on the mentor's research project. Many MSRIP alumni have successfully completed their doctorates at UCR or at other Ph.D.-granting institutions. Typically UCR, in collaboration with other campus undergraduate programs, sponsors approximately 45-50 students every summer in its MSRIP program.

Its primary objectives are to:

1. Provide preparation for graduate studies through a variety of workshops
2. Provide a mechanism that fosters faculty/student interrelationships
3. Introduce students to graduate opportunities at UCR
4. Assist the students in realizing their potential for graduate studies, in general, and at UCR, in particular
5. Expose the faculty mentors to the possibility of recruiting their interns to their departments

UC LEADS

UC LEADS (Leadership Excellence through Advanced DegreeS) Scholars Program: The goal of the University of California's Leadership Excellence through Advanced Degrees (UC LEADS) program is to educate California's future leaders by preparing promising UC students for advanced education in science, technology, mathematics and engineering (STEM). The program is designed to identify upper-division undergraduate students with the potential to succeed in these disciplines, but who have experienced situations or conditions that have adversely impacted their advancement in their field of study. UC LEADS is a systemwide program with a UC LEADS program on each of the ten UC campuses (UCSF works with undergraduates from the Berkeley campus). UC Davis provides central coordination and oversight for this comprehensive UC systemwide preparation program. UC LEADS represents a distinct investment of UC in preparing its own scholars for potential UC graduate experiences.

UC-HBCU Initiative

A competitive grants program designed to support UC faculty interested in actively collaborating and working with faculty and students enrolled at Historically Black Colleges and Universities. They create summer research opportunities at UC that expose HBCU scholars to the University of California and encourage them to consider attending UC for graduate school. The UC-HBCU Initiative is designed to support any HBCU student selected, based on faculty review criteria, irrespective of race, ethnicity, national origin, sex or gender identity.

<http://www.ucop.edu/research/gu/uchbcu/> -- Program Overview

http://www.ucop.edu/research/gu/uchbcu/documents/hbcu_rfp.pdf --Call for Proposals

<http://www.ucop.edu/research/gu/uchbcu/awards.html> --Awardees

Active collaborations w/minority serving institutions include efforts underway as part of the UC-HBCU Initiative and other established campus and department activities. For example, as part of the UC-HBCU Initiative UC Santa Barbara has established a relationship with Florida A&M University. There has been an exchange of faculty visits and UCSB will host its first cohort of students in Summer 2012. There are eleven funded UC-HBCU Initiative projects across seven UC campuses (Berkeley, Davis, Irvine, Los Angeles Riverside San Francisco Santa Barbara). UC faculty mentors will welcome 35 HBCU scholars this summer.

Through the UC-HBCU Initiative, UCR has collaborated with the UNCF/Mellon Programs to create The Lindon Barrett Scholars Mentoring Program, where outstanding HBCU students actively engage with faculty and graduate student mentors conducting humanities research and preparing for graduate school at UCR. Independent of the UC-HBCU Initiative, UCR is also actively pursuing reciprocal graduate recruiting relationships with Howard University and Philander Smith College.

Collaboration efforts between CSU and UC faculty with a goal of exposing and preparing more CSU students to consider graduate school at UC include the following.

The California Professoriate for Access to Physics Careers was formed under the UC Alliances for Graduate Education and the Professoriate (AGEP) program and fosters the interaction of CSU and UC faculty to improve the diversity of Physics graduate doctoral programs.

(<http://www.physics.ucdavis.edu/cpapc/>)

UC Riverside actively cultivates connections with CSUs in a number of ways, including hosting campus visits by prospective graduate students. Since 2009, UCR has run its UCR-SEED program, which provides incentives to departments to develop faculty and student interactions with their counterparts at CSUs. This includes underwriting visits by CSU faculty and students to UCR for research seminars and graduate recruitment days. It also provides the opportunity for UCR faculty to visit CSU campuses and interact with students and faculty.

Faculty, departments and graduate divisions partnering with minority targeted research and preparation programs include the CSU Bridge to the Doctorate, which has proven a successful vehicle to increasing participation of underrepresented students in PhD STEM programs and the CSU Sally Casanova Predoctoral Scholars Program as well as MARC and McNair Scholars Programs). SRTP and Inside UCSF directly target Minority Access to Research Careers (MARC), MCNAIR, (Research Internships in Science and Engineering (RISE), CAMP, and Louis Stokes Alliances for Minority Participation (LSAMP) Programs via online announcements and via Program Director outreach. 10-15% of Summer Research Training Programs participants yearly are MARC scholars.

UCR also has an active NSF Bridge to the Doctorate that recruits students of color into its graduate life-science and bio-medical programs. This program is associated with the LSAMP (Louis Stokes Alliances for Minority Participation) program and is run through UCR's CAMP (California Alliance for Minority Participation) Currently, there are 10 students who have received Bridge to the Doctorate fellowships.

OUTREACH / RECRUITMENT:

Departments utilize focused electronic mailing lists, conference contact networks, or name exchange programs to contact potential applicants and encourage them to consider applying to UC (in some cases the Graduate Division subscribes to a service like the ETS Name Search Service and requests information for individuals who have registered to take the GRE, a department can specify certain criteria when requesting information (GPA, major, gender, ethnicity, etc). UCSF Graduate Division in 2011 began contacting SRTP and Inside UCSF participants of the previous three years to determine if they were applying to UCSF Graduate Programs, and to encourage them to do so. Names of past SRTP applicants were forwarded to program administrators and diversity committee contacts. A letter from the Graduate Dean accompanied names urging a strong review of applicants.

UC campuses including UCLA and UC San Diego also participate in the National Name Exchange. The Berkeley, Davis, Irvine, San Diego, Santa Barbara and Riverside campuses actively utilize the McNair graduate participant list and the UC Office of the President list of summer program participants for recruitment. The list from UCOP provides a rich source of information on students who attended summer research programs at any of the UC campuses. In addition to these resources UCR also utilizes participant lists from the Southern and Northern California Forums for Diversity in Graduate Education.

Actively cultivating and encouraging UC undergraduates to consider UC for graduate school is important. Activities include structured long- term efforts such as UC LEADS (Leadership Excellence through Advanced DegreeS) but also faculty mentoring opportunities and less structured activities that allow UC undergraduates to be mentored by UC graduate students.

Diversity focused publications and webpages offering information and resources to inform and prepare applicants on the process of applying to graduate school (such UC's "**What's next?**" and campus graduate diversity pages, such as the information provided by UCB's Diversity Program)

UC Outreach Booklet, **What's next?**

http://www.universityofcalifornia.edu/graduate/admissions/files2/pdf/UC_WhatsNext_Final.pdf

UC Graduate Admissions Website:

<http://www.universityofcalifornia.edu/graduate/admissions/index.html>

UCB Help with Applying to Graduate School:

http://www.grad.berkeley.edu/admissions/application_help.shtml

Engaging the entire graduate community on behalf of diversity. Faculty, graduate students, administrators and staff play key roles in outreach and recruitment efforts in support of diversity. It is critical that the entire graduate community prioritize diversity and ensure it is an integral part of ongoing efforts and achievements in the academy. Strategic participation of key members of the graduate community in outreach efforts is critical to effectively inform and encourage potential URM applicants to apply to UC programs.

Efforts such as supporting graduate students to assist and outreach to potential applicants are important. Having faculty encourage applicants at field- specific and discipline-focused conferences and actively following up with prospects can be very effective.

UCR was the Platinum Sponsor for the Society for Advancement of Chicanos and Native Americans in Science (SACNAS) Conference in 2010, and Chancellor Timothy White addressed the conference of 4,200 attendees. UCR hosted 200 SACNAS students on its campus during the conference and introduced them to research faculty, provided laboratory tours, and gave seminars on how to successfully apply to graduate school. Pursuing this platinum sponsorship allowed UCR some unique and valuable outreach opportunities.

UCR and other UC campuses are regularly represented at key diversity events such as SACNAS, Annual Biomedical Research Conference for Minority Students (ABRCMS), the California Forum for Diversity in Graduate Education and UC Edge.

UCR has also been active in SHPE (Society of Hispanic Professional Engineers) and GEM (National Consortium for Graduate Engineering Degrees for Minorities), recently participating in the national SHPE conference in Anaheim (2011) and inviting 140 students to UCR for an introduction to its engineering faculty. UCR's Bourns School of Engineering also has established a GEM partnership with Howard University.

UCSF Graduate Division was a Platinum Sponsor for the SACNAS Conference in 2011. UCSF recruit yearly at SACNAS, ABRCMS, CSU Diversity Forum, and UC Edge Conference.

UCSB attends SACNAS, ABRCMS, CSU Diversity Forum, UC EDGE, and 2-3 national McNair Scholar conferences annually.

At UC San Diego OGS partners with faculty and graduate students to give talks at California's minority serving institution, the California State University system, visiting several CSU campuses each year with emphasis on local institutions, specifically CSU San Marcos and San Diego State University.

UC Davis has similar long-standing collaborations with select CSU campuses in Northern California and the Los Angeles area in which UC Davis faculty visit the CSU partner and CSU students are hosted at UC Davis. UC Santa Barbara collaborates with local CSU's including, CSU Channel Islands, CSU Northridge and CSU Los Angeles to make presentations and host visits by student groups.

Graduate faculty travel to most UCs and CSUs to present on UC graduate programs. Many faculty and graduate students are active in general and field specific outreach within the state and nation. UC has a notable presence in efforts designed to expose, advise and encourage current URM undergraduate and master's level students to pursue doctoral study.

Participation of UC faculty, graduate students and staff are invaluable in impacting UC's URM outreach efforts. All UC campuses actively participate in the planning and execution of the semi-annual California Forums for Diversity in Graduate Education. The forums are a collaborative effort by UC and CSU institutions along with California private and independent colleges to encourage and inform underrepresented California college students about the process of applying to graduate study. Typically more than 1,100 students attend each forum, one in northern California and one in southern California, to learn about graduate opportunities and speak with recruiters from top institutions throughout the nation.

UCSF Graduate Division hosts Inside UCSF, a two-day program with national recruitment and participation of students from HBCUs, UCs, CSUs and Community Colleges. Students receive graduate application fee waivers and application assistance, university information, campus tours, lab tours, student panels, and faculty talks. Inside UCSF is a targeted event for freshman and sophomores with the aim that they participate in SRTP in junior or senior Year.

In spring 2012 UCSD, UCI, and UCLA hosted 39 students from Morehouse College to learn about graduate student opportunities at UC. As a direct result, a number of Morehouse students will be participating in summer research programs at UCSD.

UCSD Office of Graduate Studies annually hosts current Native American and Alaska Native undergraduate students to provide information about the graduate application process and raise awareness of the Tribal Membership Initiative fellowship opportunity.

For the last three years, UC Santa Barbara has hosted Preview Days for prospective graduate students in various disciplines including Humanities and Fine Arts, Engineering, and the Earth/Environmental Sciences. As a result, a number of these students have participated in UCSB's summer program and have applied to UC Santa Barbara.

UCR has maintained an active relationship with SACNAS and continues to participate in recruitment activities—including open houses and “grad days” to introduce potential graduate students to our campus. UCR also has used its FIPSE UCR-SEED grant to successfully partner with several of the CSUs to bring URM students to campus. Yields from recruitment continue to increase each year from these efforts.

YIELD EFFORTS:

Visit days and focused recruitment efforts can help demonstrate to URMs that the program and campus value diversity, support their success and would like to see them matriculate at UC. The role of current graduate students and faculty in such efforts are critical. Department and campuswide efforts are made in support of encouraging students that contribute to campus diversity to accept the offer of admission. Such efforts should not be overlooked.

Personal outreach by faculty and graduate students to potential students throughout the application process and after they have been admitted can be very helpful in recruiting students. Faculty and current graduate students should make an effort to address questions and encourage them to accept the offer of admission. Regular personal communication with potential applicants can help boost the number of underrepresented students choosing to apply and once admitted such attention can go a long way in encouraging students to accept an offer. Genuine personal interest and attention, along with being a good research fit can strengthen a program's yield rate.

Fellowship and funding opportunities. Funding such as the former ACDP (Academic Career Development Program) awards, other top multi-year awards, top off awards and other efforts are critical in competing for top students. Offering talented URMs very competitive fellowship/support offers and demonstrating a department's commitment/interest in their success and well being is important in successfully competing for students who are often very much sought after from other institutions. The University of California Diversity Student Financial Support Program (formerly known as ACDP) consists of the following:
The Eugene Cota-Robles Fellowship Program

The Graduate Research Mentorship Program
The Dissertation Year Fellowship Program

These programs are intended to promote graduate academic student diversity by providing financial and mentorship support for graduate academic doctoral students at different stages in their graduate academic career. Campuses typically supplement (significantly) their original systemwide budgets for these programs. These fellowships and other financial efforts in support of diversity are important in demonstrating the University's commitment.

American Indians and Alaska Natives are extremely underrepresented in graduate education and as a population. UC San Diego has established the Tribal Membership Initiative, which offers two years of centrally-funded fellowship support to students who demonstrate that they are either (1) a member of a federally-recognized tribe or (2) Native Hawaiian (<http://ogs.ucsd.edu/student-affairs/graduate-diversity/diversity-initiatives/tribal-membership-initiative/index.html>). This initiative is Proposition 209-compliant because it involves recognition of a political affiliation, rather than awarding preference based on race, ethnicity or national origin.

While systemwide funding is limited, previous committees, as well as the graduate division deans examining these programs feel there is great value in UC offering diversity focused funding. The symbolism of support for diversity is important.

Offering competitive multi-year funding packages is critical to competing for top students.

SELECTED RETENTION EFFORTS:

In addition to adequate financial resources, a campus environment that values and supports diversity is critical to the retention of underrepresented graduate students. While this summary does not focus on retention efforts it is important to note their importance in meaningful long term success on behalf of improving graduate diversity. UC San Diego is highly engaged with the National Bouchet Graduate Honor Society which recognizes and celebrates student contributions to diversity. See <http://ogs.ucsd.edu/student-affairs/graduate-diversity/student-support-and-programs/bouchet-graduate-honor-society/index.html>. UC San Diego Office of Graduate Studies also hosts Competitive Edge, an eight-week summer bridge program. The program provides an early start for new incoming students who are underrepresented or first generation. Competitive Edge is collaboratively funded between OGS and graduate departments. Such efforts play a key role in contributing to an environment of success and supporting diversity.

Additional efforts on behalf of retention and cultivating an environment conducive to diversity include UC Irvine's recently launched DECADE, a program designed to enhance recruitment and retention of underrepresented students in all academic disciplines (<http://www.grad.uci.edu/about-us/diversity/decade/index.html>). Activities to date have included an assessment of campus climate, evaluation of the effectiveness of Competitive Edge - a pre-entry summer program for new doctoral students, a speaker series, and formation of campus and school-based councils to address issues of equity and diversity at the graduate program level. Faculty advisors and mentors have also been identified and encouraged to develop innovative solutions to enhance graduate diversity.

UCLA also hosts a Competitive Edge Bridge to the Doctorate for admitted students. The 6-week program includes full-time, faculty-guided research and mentoring as well as academic and professional workshops. See <http://www.gdnet.ucla.edu/agep/edge.htm>.

The UC Davis Office of Graduate Studies actively supports The Black Graduate and professional Student Association and the Latino Graduate Student Association as part of its overall retention efforts for underrepresented students. Graduate Studies also provides financial support for graduate student assistants who work in the Cross Cultural Center, the Lesbian, Gay, Bisexual and Transgender Resource Center and the Women's Resource and Research Center to ensure that the diverse population of graduate students is supported.

UC Santa Barbara offers the Summer Doctoral Research Institute (SDRI) for incoming students. The goal of SDRI is to provide an opportunity for incoming scholars to begin a course of research prior to their fall quarter enrollment; they enjoy the benefits of hands-on mentoring, advance introduction to respective program and departmental expectations, and early exposure to professional academic environment that is UC Santa Barbara. Throughout SDRI, the Graduate Division hosts a series of workshops featuring topics such as "How to Build Relationships with Faculty Mentors" and "Information on Funding Opportunities."

Similar to UC Santa Barbara's SDRI, UCR offers its GradEDge summer program to approximately 25 incoming graduate students. The program is intended to give these students a head-start on faculty mentored research while simultaneously providing them with grant-writing and professional development workshops.

UCR has a number of retention focused efforts through its GRADPREP/GSRC. Its Mentorship/First Year Graduate Success program has been especially effective in retention efforts, with an attrition rate of only 1% during its first two years of operation (usual attrition rates in year one are, nationally, about 12%; for at risk populations that increases to about 15%). This year (2012-13), UCR will have opportunities for 100 new graduate students who meet the campus diversity profile to participate in its mentorship program.

UCR offers the Medical Scholars Program (MSP), which aims to increase the diversity of UC Riverside Students who succeed in their BS or BA training and achieve their goal of entering medical school or post graduate programs and research. This program offers academic support in the form of Peer Mentors & Transfer Ambassadors, Faculty and staff mentors and advisors, Academic Coaches for science and math classes, research opportunities, including an 8 week, full-time paid summer research internships with UCR faculty, part-time academic year research program, and an annual research symposium. It also provides professional career development and community service opportunities. The MSP program has been a Hughes Grant Recipient.

MAXIMIZING THE END OF THE PIPELINE:

UCSF Post doc boot camp – Efforts such as this help equip underrepresented scholars to effectively pursue postdoc opportunities following the completion of their Ph.D. Postdoctoral opportunities are a critical pathway for competitive industry and academic appointments.

UC President's Postdoctoral Fellowship Program. The program selects fellows who will contribute to diversity and equal opportunity at the University of California through their teaching, research and service. Of the former PFP fellows hired into faculty appointments since 2003: Of the 91 total, 24 have been reviewed for tenure and 23 have been tenured. There is another group of 10 faculty hired from this program from 1999-2003 who all received tenure. Thus of the 34 fellows that were eligible for tenure, 33 have obtained tenure. Faculty is critical to impacting diversity at every level of the academy. Thus having more faculty members that come from a wide range of

communities, backgrounds and cultures contributes to diversity and models equity and inclusion in the academy.

OTHER IMPORTANT EFFORTS:

Actively supporting faculty mentoring and diversity focused efforts. The UC-HBCU Initiative is one example as UC is funding the interest and projects defined by faculty. Other efforts include UC San Diego's Office of Graduate Studies regularly convening meetings of its Diversity Coordinators, a group of faculty and staff representing all programs who focus on best practices for the recruitment and retention of under-represented students in all disciplines (<http://ogs.ucsd.edu/student-affairs/graduate-diversity/diversity-initiatives/diversity-coordinators/index.html>).

UC Irvine has recently expanded its ADVANCE program for faculty diversity to include graduate students and postdoctoral fellows (<http://advance.uci.edu/about.html>).

UCLA created a Student Affairs Officers Advisory Committee to explore best practices in outreach, recruitment, and diversity.

Participating in conferences, institutes and other knowledge sharing and building opportunities enhance the resources and collaborators available in working to address the challenges in building and supporting a diverse academic community. Faculty, graduate students, administrators and staff are involved in such efforts. For example, the UCLA Graduate Division participated in the 2012 College Board's Native American Student Advocacy Institute, presenting a session on Diversifying Graduate Programs: Best Practices for Graduate Recruitment and Retention of Native American Students.

Examining diversity efforts and URM enrollment by program on a regular basis with an eye toward supporting improvement and acknowledging success. This may be done by Graduate Division Deans, Discipline or College Deans and Department Chairs. Along with other key factors such as time to degree, completion rate, student support levels/funding packages and debt rates, departments (chairs) should be held accountable for progress and/or evident commitment to a plan for improvement.

Resource allocation is essential to influence departmental behavior. Diversity must be integrated into the forefront of departmental efforts and priorities. Doing so will help to demonstrate the University's commitment to diversity and promote more alignment of behavior with the commitment.

Incentivizing or acknowledging faculty mentoring and diversity cultivation efforts.

UCSD's Graduate Student Association offers annual awards to faculty who exemplify outstanding mentoring practices and to both students and faculty who enhance the campus community, particularly in the area of diversity.

WEBSITE RESOURCES:

Many UC campus websites provide helpful information regarding diversity efforts and resources. The following UCB Diversity Program links are useful resources in understanding the breadth of support available at some campuses:

UCB Graduate Diversity Program campuswide efforts: <http://diversity.berkeley.edu/graduate/gdp/goa>
UCB Recommended Departmental Outreach Efforts: <http://diversity.berkeley.edu/graduate/gdp/rdoe>

UCB Help with Applying to Graduate School:

http://www.grad.berkeley.edu/admissions/application_help.shtml

Other UC campus websites also provide a great overview of the range of efforts underway to cultivate diversity at UC. Some examples:

UC San Diego Office of Graduate Studies - <http://ogs.ucsd.edu/student-affairs/graduate-diversity/index.html>

UC Irvine Graduate Division website - <http://www.grad.uci.edu/about-us/diversity/>

UC Davis Graduate Studies website - <http://www.gradstudies.ucdavis.edu/prospective/diversity.html>

The UCLA Graduate Division also provides various diversity offerings and resources to prospective and current graduate students - <http://grad.ucla.edu/asis/diversity/index.html>

APPENDIX 3

UC Campus Efforts to Prepare Ph.D. Students for Multiple Career Pathways

The preparation of doctoral students for multiple career pathways is an area of great importance in the academic graduate community. UC has varying levels of structured efforts. Below is a brief summary of current efforts at each of the ten UC campuses. To learn more about career pathways for PhD students a useful resource is the recent report from the Council of Graduate Schools on “Pathways Through Graduate School and Into Careers” (<http://pathwaysreport.org/>).

UC Berkeley

Career Center services to help students explore and pursue the range of career options available to advanced degree candidates include: Career Exploration, Job Search Resources, and information about Graduate Students and Internships. The Career Center holds a three-week workshop series “Looking Beyond Academia,” addressing information and strategies designed to help students make an informed and affirmative choice of their next career.

<https://career.berkeley.edu/PhDs/PhDBeyond.stm>

UC Davis

The Office of Graduate Studies has an active partnership with the Internship and Career Center. Central to this partnership is a shared staff position. Collaboratively, the two offices provide a robust professional development program for graduate students and postdoctoral scholars throughout the academic year. Many of the seminars and workshops offered under this program provide opportunities for students to explore a broad range of career options with and outside academia. Example topics include: [Translating the Advanced Degree: Transferable Skills Workshop](http://iccweb.ucdavis.edu/graduates/pds/#16) (<http://iccweb.ucdavis.edu/graduates/pds/#16>), [Mock Interviewing: Interview Practice for Landing a Job Beyond Academia](http://iccweb.ucdavis.edu/graduates/pds/#23) (<http://iccweb.ucdavis.edu/graduates/pds/#23>), and [Project Management in Industry Panel Discussion](http://iccweb.ucdavis.edu/graduates/pds/#22) (<http://iccweb.ucdavis.edu/graduates/pds/#22>).

The Pathways Career Symposium is co-sponsored by the Internship and Career Center and the Office of Graduate Studies each year. This day-long event takes place on a Saturday in winter quarter each year. Sessions run concurrently throughout the day on a variety of career development topics both within academia and in the private and public sectors. Distinguished speakers are professionals from academia, industry and government. The Office of Graduate Studies has recently proposed and expanded a professional development program that will reach an even greater share of the graduate student population. <http://gradstudies.ucdavis.edu/students/professional.html>

UC Irvine

The Career Center dedicates an advisor to graduate student career advising. It holds a number of workshops throughout the year for graduate students focusing on both academic and non-academic careers. It also holds a summer bootcamp for imminent job seekers. The Graduate Division collaborates with the graduate career counselor to host drop-in hours and workshops at its Graduate Resource Center, and will provide additional support in the upcoming year in the form of a graduate student peer mentor program. <http://www.grad.uci.edu/services/careers/index.html>

UC Los Angeles

The Ph.D. Career Training Series workgroup organizes events designed to fit the career needs of doctoral candidates and postdoctoral scholars at UCLA. The workgroup is comprised of postdoctoral scholars and staff from the California NanoSystems Institute (CNSI); Office of Graduate Students and

Postdoctoral Scholars in the David Geffen School of Medicine; the Society of Postdoctoral Scholars; and the Graduate Division. The topics are designed to be of interest to most doctoral candidates and postdoctoral scholars, regardless of research discipline. In addition to a career mentoring luncheon series for postdoctoral scholars, workshops include topics on fellowship applications and grant-writing, research paper and manuscript writing, networking and interviewing (for example, Transition from Academic Training to Government/Private Sector Careers) and work-life balance.

UC Merced

UC Merced utilizes its Career Services Center to expose graduate students to alternate career paths. This is done through assisted job searches and through an invited speaker program. In addition, the Graduate Dean teaches a professional development course for all graduate students. This course focuses on responsible conduct in research and career development. Course content exposes the students to nonacademic career options. Finally, the Office of Research Development Services runs a series of proposal writing workshops designed to increase the capacity of graduate students to seek funds for postdoctoral employment in academic as well as in the government and commercial sectors.

UC Riverside

UCR Graduate Division has established a GRADPREP (Graduate Professional and Educational Program) that is staffed by one full time director and six half-time peer counselors. Among the programs that we provide is a University Teaching Certificate course (two quarters), which is advanced training in pedagogy. This is specifically designed for students who see themselves going into a teaching rather than a research career, but who are not getting adequate teaching experience or training in their programs.

The Graduate Division also runs a series of seminars/colloquia through our Graduate Student Resource Center (which is one of the GRADPREP components). These seminars are aimed at those students who are considering seeking employment outside of academia, whether in research careers, or in other areas of the private or governmental sector. Typically these colloquia bring together alumni or former faculty who have made the successful transition to non-academic careers, and who can offer specific insights and resources for students.

GRADPREP also operates a writing center specifically for graduate students. One of the many activities the writing center provides are workshops on crafting application letters, on interviewing and negotiation skills, and on designing personal websites for those seeking jobs in non-traditional venues.

GRADPREP also partners with Career Services to help focus their efforts on the needs of graduate students. Workshops and seminars in conjunction with Career Services have helped students with researching and identifying opportunities beyond the usual academic options, and preparing to compete successfully for those jobs.

The Graduate Division and the Graduate Dean are also actively involved in a nascent national campaign to begin to change the culture of how potential employers perceive Ph.D.s as job candidates in areas outside their research expertise. It is the conviction of UCR that Ph.D.s possess any number of transferable skills that would benefit employers; that they are exceptionally good at absorbing new training; that their communication skills tend to be very high, that they are exceptional at synthesizing large amounts of disparate information, and that they tend to be among the very best at meeting deadlines and seeing tasks through. As such, they are outstanding candidates for any number of positions; yet most employers may overlook them as “over qualified.” Part of the campaign’s goal is to help change this perception and to demonstrate what a value a Ph.D. is as an employee, regardless of the specialization.

UC San Diego

The Career Services Center dedicates an advisor to graduate student career advising. The Career Center holds a number of workshops throughout the year specifically for graduate students focusing on both the academic and non-academic career search. In addition to an Academic Job Search series, workshop topics include: It's never too early to think about the Job Search; Academic Interview Basics for Ph.D.s; and Mastering the Academic "Job Talk". Non-academic career search workshops include Questioning Career Transition; a series titled Looking Beyond Academia; and Interview Practice Beyond Academia for Graduate Students.

The Graduate Student Association and Career Services Center, with the Office of Graduate Studies host the annual Ph.D. Career Conference. The conference agenda includes plenary sessions by prominent speakers followed by discipline-specific panels of Ph.D. graduates representing both academic and non-academic careers. Looking ahead, UC San Diego is actively engaged in planning for a new effort to prepare graduate students for the full range of career options available to them as part of a campus-wide education initiative. While this effort remains in the planning stages, the goal is to provide students with a range of transferrable skills, as well as more comprehensive instruction in University-level teaching, that could aid their transition to a variety of positions.

UC San Francisco

The Office of Career and Professional Development (OCPD) provides programs and workshops, online resources and individual assistance for PhD students and postdocs considering multiple career pathways. These efforts are designed to not only build awareness about the many career pathways available to Ph.D.-level students, but also to help students make confident decisions about their pathway choices. OCPD staff have co-authored a web-based career decision making tool for Ph.D.-level scientists and engineers who are considering multiple career pathways, which will be published and freely available nationwide on July 27, in collaboration with the Burroughs Wellcome Fund and Science magazine's website.

The Graduate Student Internships for Career Exploration (GSICE) Program aims to support mentored career exploration by providing career planning and internship opportunities for UCSF basic and biomedical Ph.D. students, so that they can make free and informed career decisions by the time of graduation. A collaboration among the Graduate Division, School of Medicine Dean's Office, and Office of Career and Professional Development, GSICE is a unique experiential-education program designed to help PhD-level students in the life sciences explore multiple career pathways away from academic research. GSICE career pathway options include industry research, law, business, policy and education/ communication. GSICE components include an eight-segment training program, hands-on experience through a full-time internship, and individual mentorship with career professionals.

UC Santa Barbara

UCSB Graduate Division has established the Graduate Student Resource Center (GSRC), which acts as a hub and a clearinghouse for workshops, activities, and information about career and professional development for graduate students. As examples of the types of activities that are sponsored through this Center, two surveys about the assessment of importance and availability of training in 17 different areas of career and professional development (one for graduate students, one for faculty graduate advisors) were recently completed. The information from these surveys, as well as an extensive mapping of career development opportunities on campus, has been used for planning a curriculum of career and professional development skills to prepare students to effectively make the transition from graduate school to successful careers, whether it's in academia, non-profits, industry, or other career paths. Planned events include panels of alumni in non-traditional careers, seminars

about job interviews and negotiations, and workshops related to using technology in various fields. Example workshops include “Early Career Research Strategies for New Ph.D.s in the Humanities, Social Sciences, and Arts”, “Building a Digital Reputation and Finding a Job”, and “Rethinking Career Paths for Ph.D.s: Postdoc Surveys and Careers in Biotech”. An integral part of the GSRC is the “GradPost”, a graduate student blog, which hosts articles such as “Getting a Job 2.0: Branding, Digital Reputation, and Social Media”, “[The Keys to Successful Networking](http://gradpost.ucsb.edu/career/2012/1/23/the-keys-to-successful-networking.html)” (<http://gradpost.ucsb.edu/career/2012/1/23/the-keys-to-successful-networking.html>), and “[Tips for the Industry Job Search](http://gradpost.ucsb.edu/career/2012/6/7/tips-for-the-industry-job-search.html)” (<http://gradpost.ucsb.edu/career/2012/6/7/tips-for-the-industry-job-search.html>).

UC Santa Cruz

Grad Student Commons / Graduate Division: Created a GSR position (Professional Development Coordinator), filled by a graduate student who works with and liaisons between the Grad Student Commons, the Career Center, the Graduate Division, and various other departments and divisions on campus to provide a wide array of professional development programming and resources. Many events are relevant to graduate students following non-traditional career paths in industry, management, or non-tenure track academic positions. In the last academic year, some workshops offered to graduate students included: transferable skills (translating the CV to a resume), cover letters for non-academic positions in the sciences and humanities, making the most of your mentor relationships, conflict management and communication, professional website development, grant writing and funding sources, self-management and leadership, and STEM field careers.

The Graduate Leadership Program: A new graduate student leadership certificate program introduces a range of leadership theory, practical skills, and special topics relevant for application in both academic and professional contexts. With a varied format including readings, interactive group activities, case studies, panel discussions, and professionally conducted workshop sessions, program participants learn about major trends and debates in contemporary leadership thought, gain familiarity with project management and budgets, develop practical skills for negotiation and conflict resolution, and discuss modes of translating disciplinary expertise into social innovation and impact. The sessions emphasize collaborative teamwork and the positive, productive employment of the different disciplinary perspectives and backgrounds students bring to the program.

This opportunity is provided to a select group of graduate students across the disciplines with an introduction to up-to-date leadership thought and practical workshops to develop their academic and professional leadership skills. Some of the topics covered: Contemporary Leadership Philosophies; Academic Leadership and Administration; Negotiation and Conflict Resolution; Project Management; Mentorship; Innovation and Creativity; and Entrepreneurship. Students who complete the program are awarded a UCSC Graduate Council approved certificate, enhancing the value of their graduate degrees.

UCSC Career Center: In the past year the Career Center has seen a renewed focus on graduate student needs, particularly those interested in non-academic careers. The Career Center offers one-on-one advising on transforming academic CV's to resumes, cover letter construction, and career information. Their website offers a range of resources for job seekers, including specific information and resources on non-academic careers.