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Graduate Students in 2020: New Perspectives A CGS/NSF Workshop

Will changing global economic realities affect graduate education in the next fifteen years? Will significant changes in demographics matter? What about anticipated changes in national policies or changing ideas about social responsibility? Will changing modes of research, the role of interdisciplinarity or newly significant questions of national competitiveness in the global workplace be significant for future graduate students? How will the graduate community more effectively tackle the issue of broadening participation or the need to attract and retain the best and brightest of both domestic and foreign graduate students? This partial list of anticipated changes is already dauntingly long! Members of the graduate community, however, have never been afraid of taking on grand challenges and meeting them with energy and imagination. On May 31, 2006, a collection of graduate deans, federal program officers from the National Science Foundation, Department of Defense, and the National Institute of Health, policy makers from NSF and CGS, as well as other experts, gathered in a NSF/CGS sponsored workshop to imagine and begin to understand how these changes will impact graduate students and graduate education in the next fifteen years. This workshop is a continuation of a series of workshops on current issues in graduate education planned and carried out by CGS, the CGS/NSF Dean in Residence, and the Division of Graduate Education of NSF.

To help us put some of these challenges in perspective, three invited speakers provided expert commentary. Ray Uhalde, Director of the Workforce Development Strategies Group of the National Center on Education and the Economy, led off with an engaging talk titled "Graduate Education for the 21st Century: What's It Worth?," exploring issues ranging from the economic worth of graduate degrees, to job projections for graduate students, to the impact of globalization. His data-filled talk demonstrated the necessity in the near future for individuals to have a graduate education to maintain a middle or upper economic class life and illuminated the deeply unequal access to graduate education for low income students. Job projections out to 2012 indicate a strong demand for college educated students, including graduate students. The number of U.S. college-educated

workers, for instance, grew by 20% from 1980 to 2000, but will grow by only 3% from 2000 to 2020. The recent participation of Brazil, Russia, India, and China in the global economy has reduced the U.S. share of college-level workers from 30% to 15%; the labor costs for these workers will be less than U.S. labor costs for several decades to come. The impact of globalization may put a significant portion of the projected jobs at some risk, especially jobs requiring graduate education. Finally, a range of skill sets from work styles to creativity were identified and connected to specific occupations using the Occupational Network Data (<http://online.onetcenter.org/>) and then further connected to earnings. The connection to earnings is a way to validate the importance of the different competencies and may lead to a better understanding of the needs of various professional jobs. The talk was rich in data and ideas on the influence of economic settings that were new and startling for many of the participants, and provided a setting referred to in the discussions later in the day.

Daniel Denecke, Director of Best Practices, CGS, followed with a presentation titled "Half Empty or Half Full: What a 50% Ph.D. Completion Rate Really Means for the Future," a report drawing on the preliminary findings of the CGS Ph.D. Completion Project. The project has collected completion data, attrition data, demographic data, as well as exit survey data from nearly 400 programs at 29 universities -- a remarkable total of more than *continued on next page*

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Graduate Students in 2020: New Perspectives

50,000 graduate students! The preliminary findings show a cumulative seven-year completion rate for all fields of ~46% and cumulative ten-year completion rate of ~57%. Such a broad brush stroke characterization provides a context for national discussion. However, detail at the level of a particular institution, at the level of a specific program, or even at the level of the demographics of individuals is required for the data to be useful in envisioning and carrying out effective strategies for change. One particularly striking finding was that after seven years, the hierarchy of fields established in previous studies with respect to completion rates is borne out: engineering > life sciences > physical sciences and mathematics > social sciences > humanities. But after ten years, this hierarchy changes: students in the life sciences complete at a rate (approximately 64%) as high as students in engineering; social science students complete at a rate slightly higher (56%) than students in math and physical scientists (55%). Other project data on completion rates, and on the timing of completion of students by demographic group, suggest that this is in part a function of the fact that underrepresented minorities, overall, are taking longer to complete their degrees but in some cases complete at higher overall rates than majority students. That said, there remain very specific challenges for specific demographic groups by field and by discipline that the project data is enabling participating universities to address through targeted policies and practices. The quality of these data, available for the first time, will be influential in policy decisions that will directly aid in increasing completion rates. The discussion following this presentation was so lively that it threatened to engulf lunch and, in fact, was continued during lunch.

Michael Nettles, Senior Vice President of Educational Testing Service, delivered the third invited talk titled “A Renaissance in Graduate Education is Upon Us: Fact, Fad or Fiction?” His talk reflected on the extensive data set and analysis in the recently published book *Three Magic Letters: Getting to Ph.D.* by Catherine Millet and Michael Nettles. He provided an overview of the breadth of research activities on graduate education and the rich ongoing scholarship originating from many individuals and organizations, including CGS. The study reported on the doctoral student finances, experiences and achievements of more than 13,000 students from 21 universities in five broad fields of study: science and math; social sciences; humanities; education; and engineering. Four aspects of doctoral student experiences were documented as critical to success: namely, funding arrangements, faculty mentoring, research productivity, and, of course, degree completion.

Funding varies in a distinctive way between fields and, more disturbingly, by minority status. African-American and Hispanic students are significantly less likely than white

students to ever hold a research assistantship. The probability of holding a research assistantship correlated with other factors including the student's age at the start of the program (generally a negative factor) and having previously held a teaching assistantship (a positive factor).

The probability of having a faculty mentor for African-American students is lower than for whites overall. This probability is somewhat lower for most fields, but is significantly lower in the science and math area. Interestingly, having a faculty mentor influences research productivity but does not influence satisfaction with the doctoral program nor the likelihood of stopping out of the program.

African-American and Hispanic student rates of publication are significantly less than white students overall. African-Americans publish less than whites in the fields of education, science and math, and the social sciences. Hispanics in the humanities and the social sciences publish less than whites. Finally, completion rates for African-Americans and Hispanics are lower than for whites overall.

What was learned by studying this rich data set of graduate student experiences? Some good news: relatively small differences between white and Hispanic students are found in writing refereed journal articles in the social sciences or in degree completion in engineering. In the humanities, African-Americans, Hispanics and whites are all equally likely to be awarded research assistantships. The deep inequalities discussed above, however, give pause when considering these bits of good news. The talk ended with a list of seven additional challenging questions drawing attention, for instance, to the importance of effective models of mentoring.

A federal program officers' panel addressed the question “How do program officers envision graduate support systems responding to the needs of graduate students and the needs of the future?” The panel, consisting of Carol Van Hartesveldt, IGERT Program Officer at NSF, Earnestine Psalmonds, Graduate Research Fellowship Program Officer at NSF, Mark Herbst of the DoD Office of the Director of Defense, Research and Engineering, and Walter Goldschmidts, Acting NIH Research Training Officer, provided comments and stimulated a vigorous discussion with the attendees. Multiple themes appeared, including preparing graduate students for an uncertain future, one where both research content and research modes will be changing and where types of employment may be much different than today. A brief exploration of the contrasting value of fellowships and traineeships was pursued. Agencies should keep these points in mind in carrying out current programs or designing new programs. An emergent theme was how agencies might help create an environment for creativity and innovation, a theme that reappeared in the following deans' panel. The role of interagency cooperation and collaboration were explored while the role of industry cooperation and collaboration in the future was raised as a question that deserved further exploration.

The final panel of the day

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The Professional Science (Math) Master's Degrees: History and Prospects

I wish to take the opportunity afforded by the publication of a Communicator article by Sheila Tobias to publicly acknowledge her many contributions to the Professional Science Master's (PSM) Initiative. We are all indebted to Sheila for both the inspiration and much of the successful implementation of the vision of a new science master's degree. Since helping conceive of the PSM in 1995, Sheila has supported the work of the Alfred P. Sloan Foundation with her considerable energy and enthusiasm, as they funded the development of the first PSM degrees at doctoral research institutions. In helping to broaden the reach of these programs, she met with senior staff in the Council of Graduate Schools, and contributed to the plan which successfully expanded the PSM to leading "master's focused" institutions. Now, as a key player in the transition of responsibilities to CGS as the organization coordinating the continued expansion and institutionalization of the PSM concept, Sheila is serving as a consultant with us for the first year of our Sloan-funded project, through December 2006. I know I speak for the entire graduate community in thanking Sheila for her dedication to establishing the PSM as a key component of graduate education in the 21st century, and wishing her well in her future endeavors.

*Debra Stewart
President, Council of Graduate Schools*

In 1995, the Committee on Science, Engineering, and Public Policy (COSEPUP) of the National Academy of Sciences suggested that graduate schools of arts and sciences consider a "different" kind of graduate degree, less oriented toward research and requiring less time to obtain. The COSEPUP Report was a long-delayed acknowledgement that graduate education in the sciences (and mathematics) had become severely decoupled both from the career needs of students and from the supply needs of an increasingly technology-based national economy.¹

Even before the National Academies had broached the topic, there were stirrings in the mathematics and science communities. The Society for Industrial and Applied Mathematics (SIAM) was at the helm of the nascent movement in mathematics. SIAM recognized early that not only were there jobs to be had and interesting careers to be made by mathematicians in business and industry, but that some of the more interesting problems in mathematics could come from such settings.² In contrast, for most of the sciences reform was thought about in terms of improvements in doctoral education.

Professionalizing the Master's Degree

All the while, the "silent success" of the terminal (professional) master's degree in fields other than science and mathematics was pointing in another direction. Beginning in the late 1980s, an increasing number and proportion of M.S. degrees were being awarded in professional fields, with M.S. degrees in arts and sciences in decline.³

In a 1995 study, *Rethinking Science as a Career*, my collaborators, Daryl Chubin and Kevin Aylesworth, and I asked the question: "What kind of professional master's degrees might we invent for science?"⁴ And, once these degrees were in place,

could they be marketed to faculty, students, employers and the public more generally? If one looks to the master's degree in fields other than science and mathematics, one finds that instead of training producers of scholarship -- the traditional purpose of graduate education -- master's educators aim to produce people who are able to use the products of scholarship in their work and who are familiar with the practical aspects of emerging problem areas. The general outlines of a professional science or mathematics master's degree were available to the community by the mid-1990s. The next task was to begin the process of persuasion and develop the momentum necessary to launch the new degree.

Keck and Sloan Foundations' Initiatives

In 1997, both the William M. Keck and Alfred P. Sloan Foundations began to independently explore the possibility of launching new professional science master's degrees. Keck funded an all-new, master's-only graduate school to supply California's biotech industry with professionals skilled in the life sciences, mathematics, and engineering, but who were also knowledgeable about intellectual property rights, finance, and business management, particularly as applied to biotechnology (www.kgi.edu).

Sloan chose, instead, to provide start-up funding for program development in multiple locations; from 1997-2001 at Ph.D. -- granting institutions and from 2002-2005 to master's focused institutions as part of a Sloan/CGS initiative. Unlike KGI, Sloan was willing to entertain any professionally oriented science master's program -- in an emerging discipline or combination of fields -- for which a faculty group could document that there were employment possibilities for graduates at the master's level. As of this writing, Sloan and Sloan/CGS have funded more than 100 degree programs (now called PSMs) at over 50 universities, with approximately 1,300 enrolled and 1,100 graduates (www.sciencemasters.com).

Two Analyses

It wasn't until 2004-05 that serious analytic studies of the professional master's in the sciences and mathematics began to appear. Judith Raymo who had previously written about both master's education, and the doctor of arts degree, published *Professionalizing of Graduate Education: The Master's Degree in the Market Place*.⁵ Les Sims, a chemist and former graduate dean at the University of Iowa, worked on the CGS/Sloan initiative. His book, *Professional Master's Education: A CGS Guide to Establishing Programs*, provides a comprehensive outline of best practices, activities, and processes for professional master's programs.⁶

Raymo locates the new degree at the intersection of two innovations: that of interdisciplinary science (e.g. bioinformatics, nanotechnology, robotics, systems biology) and that of applied tech-business-oriented training. Les Sims, too, sees greater benefits even than workforce enhancement in the propagation of the professional science master's. "Such post-graduate options," he writes, "have the potential to encourage a larger percentage of students to pursue graduate education in the field of their major" [p. 18].

Identifying Stakeholders

Successful programs have all begun by engaging local and regional employers in the start-up process. Whether an institution opts for a PSM in bioinformatics, financial mathematics, forensic science,

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Graduate Students in 2020: New Perspectives

consisted of four “senior” deans, a sobriquet later modified to “deeply experienced” deans, including Diana Carlin of the University of Kansas, Suzanne Ortega of the University of Washington, Scott Bass of the University of Maryland at Baltimore County, and Richard Wheeler of the University of Illinois at Urbana-Champaign. Their charge was to respond to the questions: “How do graduate deans envision responding to the new settings of graduate education in 2020? What steps should the graduate community be taking now?” As one might imagine, the discussion was vigorous and multidirectional. After a brief excursion into finding answers to these questions in Shakespeare as a first strategy, the deans reflected that in some ways graduate education has changed little in 40 years and that change in such a decentralized enterprise is difficult indeed. Concern was expressed about possible structural gaps between the operations of a research university and the needs of domestic graduate student. Several structural changes, e.g., more transparent processes, peer support systems, professional support systems and increased flexibility, were offered as beneficial. A move from an “apprentice model” of STEM education to a “supportive and open mentor model” was suggested. Teamwork and interdisciplinarity were common phrases in the discussion and this was elaborated into an international context as well, with specific suggestions about cultural training in graduate programs and international graduate student research exchanges. Finally, the deans explored a key question -- how do we encourage intellectual risk-taking among our graduate students?

This final point engaged the workshop participants widely and was immediately connected to the need to teach innovation, to promote creativity, and thus by implication to be competitive globally. The topic is a foundational one that needs further exploration. In a similar way, the workshop illuminated the first steps in understanding more completely the upcoming economic, demographic, and international realities as well as selected current research results on graduate education, but also pointed to the need for continued exploration of these topics.

Copies of the workshop agenda as well as the presentations of the invited speakers and participants can be found at: www.cgsnet.org/Default.aspx?tabid=254.

by Howard Jackson, CGS/NSF Dean in Residence

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The Professional Science (Math) Master's Degrees

environmental science, or biotechnology depends on faculty and student interest, and the availability of actual career opportunities for graduates.

The “Plus” Components of PSM Programs

The PSM defines itself as a “science-plus” degree, adding courses or modules in business fundamentals, intellectual property law, regulatory affairs, communication and team-building, ethics, and project management. When PSM students do not fit comfortably into existing “business” courses, faculty frequently develop new, tailor-made variants. “Plus” components range from a ten-weekend certificate program (Michigan State University), to new courses in the sciences-plus-business that, once in place, attract engineering and Ph.D. students as well (“Business Fundamentals,” University of Arizona). The case study method is often employed where cases are selected for the tech-plus-business components. A frequent addition is the one-credit colloquium to which local business leaders are invited to talk about their careers.

Internships and Placement

PSM faculty and program staff begin working for their incoming enrollees immediately as regards finding and placing students in second-year internships, and finding and placing graduates in full-time employment.

Conclusion

With the PSM prominently mentioned in two current bills in Congress targeting economic competitiveness and innovation, the federal government (namely, the National Science Foundation) may be poised to fund PSM students and program development. This suggests that, as it approaches its tenth year of experimentation, the PSM is becoming more viable and, as a result, a more permanent fixture in graduate education.

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by Sheila Tobias, Consultant, Council of Graduate Schools

Data Sources

Graduate student finance is consistently one of the most important issues to graduate deans. The National Center for Education Statistics (NCES) has just released a new report on graduate student finance that can help shed light on national trends. Susan P. Choy and Emily Forrest Cataldi of MPR Associates, Inc. and James Griffith, Project Officer, NCES, authored “Student Financing of Graduate and First-Professional Education, 2003-2004” (Go to nces.ed.gov and search for 2006-185 for a full copy of the report). The authors show that 70% of master’s degree seeking students and 83% of doctoral degree seeking students received some form of financial aid, grants, assistantships, or loans in the 2003-04 school year. Overall, master’s students receive on average \$11,700 of aid and doctoral students receive on average \$20,200 worth of aid.

The report shows that students enrolled at least half time can borrow up to \$8,500 per year in subsidized Stafford loans. The federal government will pay the interest on the loan while the student is enrolled. A student who is not qualified for subsidized loans, or who has reached the maximum amount, can borrow \$18,500 in unsubsidized and subsidized loans per year up to \$138,000.

For master’s students, approximately the same percentage receive grants (38.4%) and loans (39.7%), while a smaller percentage (13%) receive assistantships. The average amount received from grants is \$4,500, loans \$13,500, and \$8,300 for assistantships. Master’s students at private not-for-profit institutions are more likely than those at public institutions to receive aid. Nearly three-quarters (73%) of those at private institutions receive any aid versus only two-thirds (67%) at public. These patterns differed greatly by field of study. The report compares students in business and education (the two largest fields at the master’s level) with those in other fields. Students in education (63%) are much less likely than business students (73%) and students in general (74%) to receive any aid. Moreover, half of students in business receive grants (on average \$4,900) while only a third (32%) of those in education receive grants (on average \$2,800).

Doctoral students are more likely than master’s students to receive aid. Over 80% of doctoral students receive aid, primarily grants (55%), assistantships (41%), and then loans (31%). Unlike master’s students where those at private institutions are more likely to get aid than at public, a slightly larger percentage of doctoral students at public institutions (84%) receive any aid than at private (80%). The area of greatest difference seems to be in the awarding of assistantships, where nearly half (49%) of doctoral students at public institutions receive this type of aid versus only 31 percent at private institutions. Students in education doctoral programs are less likely than students in other fields to receive aid. Eighty-seven percent of students in other fields receive some form of aid, while only 69% of students in education do so.

Another interesting contribution this report makes to our understanding of graduate students is a section on graduate student demographics. Comparing master’s to doctoral students, we find a typical master’s student to be a U.S. citizen woman enrolled part-time. Sixty percent of master’s students are women, 70 percent are enrolled part-time, and 54% are an “employee enrolled in school.” This is particularly true in the field of education where nearly all graduate students are U.S. citizens and enrolled part-time. On the contrary, doctoral students are about half women and half men, less likely to be U.S. citizens (only

77%), more likely to be enrolled full time (57%) and categorized as primarily students (54%). Doctoral students in fields other than education are even less likely to be U.S. citizens (66%), more likely to be enrolled full-time (62%), and primarily students (70%).

These findings can help those in the graduate education community to better understand the patterns of student enrollment and finance. However, we all realize that finance is a necessary but possibly insufficient condition for success at the graduate level. Aid alone is unlikely to help students overcome the barriers to accessing graduate education unless it is packaged with other forms of support. The McNair program is one of the models of merging student aid at the undergraduate level with targeted mentoring, information, and support to ease the transition to graduate school.

At the annual meeting in Palm Springs last December, two graduate students, Laura Luna and Nicole Bronson, who participated in the McNair Scholars Program as undergraduates, spoke about their experiences. The program’s ultimate goal is to help diversify the ranks of the American professorate. The 170-plus McNair programs, which are funded by competitive grants, inform students about working in the academy, assist with graduate school applications, and provide a sustained undergraduate research experience.

CGS and the Council on Opportunities in Education have had a long standing joint task force on the McNair program. As a member of the TRIO family of U.S. Department of Education programs, institutions with McNair Scholars grants must ensure that two-thirds of participants meet low-income and first college generation criteria. The remaining one-third need not meet those requirements if they are members of groups underrepresented in academia. When we approached Laura and Nicole about their session in December’s annual program, we asked them to provide suggestions for graduate deans who wish to serve the needs of non-traditional graduate students. Their thoughtful comments were worthy of a wider audience and are summarized below.

Laura, who is a second year graduate student in the General Experimental Psychology Program at California State University at San Bernardino, commented about the importance of a support network:

University deans are searching for innovative ways to recruit McNair Scholars, and as a former McNair scholar, I can say that a substantial degree of importance lies in a strong support system. Through my undergraduate career, fellow McNair scholars and faculty mentors have played a key role in my development as a student and as a researcher. This support system made the transition from undergraduate work to graduate level work attainable. An attractive graduate program and university is one that provides an environment that is conducive and accepting of cultural diversity, where students feel like accepted members of the university’s community.

Nicole is a fourth-year Ph.D. student in the Department of Health Services at UCLA. She suggests:

As a first generation college student and a current doctoral student, I found both the social and financial support provided by graduate departments to be the most beneficial to my success. They are both essential ingredients to the recruitment, retention, and graduation of students like myself. The social support provides students a sense of belonging. Many times we feel as though we don’t fit in with the traditional college students and on some occasions very

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CGS Names New Director of Research and Policy Analysis



CGS announced last month that it has named Kenneth Redd as its new Director of Research and Policy Analysis, effective August 1.

Ken has a strong reputation as an education researcher and is a national expert in one of CGS's most important policy areas, the

financing of graduate education.

In making the announcement, CGS President Debra Stewart remarked, "Ken Redd is a highly visible education researcher who has focused his intellectual efforts toward understanding factors that lead to student success. His vast knowledge of student financial aid and enrollment trends are well documented." She continued, "We are extraordinarily pleased that Ken joins CGS just at the moment when our member universities seek to know more about why students enter, persist in, and complete graduate programs, and how this experience shapes their future opportunities and contributions."

Ken comes to CGS from the National Association of Student Financial Aid Administrators, where he directed the organization's research and policy analysis for the past five years. Prior to that, he served as director of research at the USA Group

Foundation (now the Lumina Foundation for Education) and as a senior research associate at Sallie Mae. He has also worked as a researcher and analyst at the American Association of State Colleges and Universities, the National Association of Independent Colleges and Universities, and the Congressional Research Service.

The *Chronicle of Higher Education* named Mr. Redd as one of ten up-and-coming "New Thinkers in Higher Education" in 2005. He is the author of several recent publications focused on graduate and professional student aid policies. His recent publications include *Financing Graduate and Professional Education: 2003-2004*, *Financial Aid Awards and Services to Graduate/Professional Students in 2002-2003*, and the widely cited *Discounting Toward Disaster: Tuition Discounting, College Finances, and Enrollments of Low-Income Undergraduates*.

Ken holds an M.A. from the University of Minnesota and a B.A. from Tufts University. He is a board member of the Sallie Mae Fund and the Council on Public Policy in Higher Education, and has served on a number of technical review panels of the National Center for Education Statistics.

He will be replacing Heath Brown, who is joining the faculty at Roanoke College in Salem, Virginia this fall as an Assistant Professor of Political Science. Heath will be with CGS through July 31 to facilitate a smooth transition for Ken.

CGS wishes Heath the very best in his faculty career and looks forward to Ken joining the staff.

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Data Sources

few of us exist at the graduate level, which makes it difficult to build relationships with other students. Encouraging students to participate in student organizations, counseling sessions with department advisors, and ongoing mentoring relationships with faculty members with similar backgrounds, are proactive methods to ensuring a win-win situation for both the student and graduate school.

The level of financial support, in the form of fellowships or research assistantships, has been the deciding factor, in many cases, as to whether a student will attend graduate school. Having some form of financial assistance alleviates many burdens faced by students who must continue to work to support their family. In

some instances, it is very difficult to work and attend school on a full-time basis. As a result, many students forego advanced-level education. I believe it is important for graduate deans to consider all factors that impede one's ability to consider further education. Support on various levels is needed, even if that need is

not specifically communicated.

Considering the testimony of both students, it is quite clear that various forms of assistance, including social networking and mentoring, as well as financial support, are integral to the success of McNair scholars and other non-traditional students. If graduate schools work with academic departments to provide these kinds of services, it can be a win-win for all involved.

by Heath Brown, Director of Research and Policy Analysis

Sections of this article were authored by Priscilla Fortier, Assistant Dean and Associate Director, McNair Scholars Program, University of Illinois at Urbana

Table 1: Percentage of Graduate and First-Professional Students Who Receive Any Financial Aid, Grants, or Loans and for Aided Students, Average Amount, by Type of Degree and Institution Control: 2003-04 (Reproduced from Original Report)

Type of Degree	Any Aid		Grants		Loans		Assistantships	
	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount
Master's Degree	70.5	\$11,700	38.4	\$4,500	39.7	\$13,500	12.7	\$8,300
Public	66.8	\$10,300	36.9	\$4,000	33.2	\$11,100	19.7	\$8,200
Private	73.3	\$12,800	40.0	\$4,900	44.6	\$15,200	5.6	\$8,500
Doctoral Degree	82.6	\$20,200	54.7	\$10,200	30.5	\$17,800	41.2	\$13,300
Public	83.6	\$18,700	57.8	\$9,400	25.8	\$14,900	49.1	\$12,600
Private	80.0	\$23,400	49.1	\$12,000	36.4	\$21,700	5.6	\$14,900



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Deadline: September 8, 2006

www.petersons.com/graduate

REMINDER:

The deadline for nominations for the CGS/UMI Distinguished Dissertation Awards is July 31, 2006. This year's fields are 1) Social Sciences and 2) Mathematics, Physical Sciences, and Engineering.

The deadline for submissions for the CGS/Thomas Peterson's Award for Innovation in Promoting an Inclusive Graduate Community is September 8, 2006.

More information on these awards is available on the CGS website (www.cgsnet.org) or contact Cheryl Flagg at 202-223-3791.

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