

## **Executive Summary**

Columbia University has chosen to do a focused review on Ph.D. education as part of its evaluation for reaccreditation. To demonstrate its compliance with the accreditation standards of the Commission on Higher Education of the Middle States Association of Colleges and Schools, it assembled a body of relevant documents that was reviewed by a team of evaluators on November 3-5, 2005. The preparation of this self-study was directed by the Provost of the University, Alan Brinkley, with the assistance of a twelve-member Steering Committee. The review of the Ph.D. programs was conducted by four subcommittees – Curriculum and Training, Mission and Assessment, Organization and Resources, and Student Services – whose charges are on-line at <http://www.columbia.edu/cu/provost/midstates/docs/SelfStudyFinalAdobe.pdf>.

Columbia was a pioneer in doctoral education, opening one of the first Ph.D. programs in the United States in the 1870s. Since then, Columbia has played an important role in the education of the nation's pool of doctorally-trained talent. The Ph.D. programs have also helped to shape the character and culture of the University. Since their inception, they have accounted for a significant percentage of the University's total enrollments, and by drawing their students from a national and international pool, they have given it a cosmopolitan character.

Columbia offers the Ph.D. in 61 specializations. Of these, 31 are in the Arts and Sciences. The rest are spread among schools located at both the University's main, Morningside campus and its Medical Center. The program in Education has been excluded from this review

since it is directed by Teachers College, an affiliated institution that is accredited separately by the Middle States Association. The nature of Ph.D. education at Columbia is continually evolving, with the addition of new programs, frequent modifications in the scope and curriculum of on-going programs, and the elimination of others. To help guide their development, the programs in the Arts and Sciences are subject to periodic evaluation as part of the ARC (Academic Review Committee) process. The Dean of the Graduate School of Arts and Sciences has introduced a similar process of review for the other Ph.D. programs.

Regardless of the schools that organize them, all Ph.D. programs at Columbia are offered through the Graduate School of Arts and Sciences to which the University Statutes has given the exclusive authority for awarding the degree. The Dean of the Graduate School has direct administrative and budgetary authority over the 31 programs in the Arts and Sciences. He has a more limited influence over the other programs which enjoy a high level of autonomy. Responsibility for the curriculum, admissions and evaluation of students is even further decentralized, with the primary direction coming from the individual programs themselves. The Dean of the Graduate School is assisted in supervising the University's Ph.D. programs by an Executive Committee consisting of 21 faculty elected by their colleagues and the current and prior chairs of the Graduate Student Advisory Council, an elected body representing the students in all of the programs in the School.

Each program establishes the specific requirements its students must complete to earn the Ph.D. within the parameters defined by the rules of the Graduate School. Students are expected

to maintain continuous registration until they deposit their dissertations. The Graduate School requires them to be in residency at the University for their first six semesters, unless they are awarded advanced standing, and expects them to complete their degrees within seven years of their initial enrollment.

In most programs, students earn the Master's degree en route to the M.Phil. and the Ph.D., typically after they have successfully taken a specified number of course requirements in their first year of study. The M.Phil. represents a more substantial educational milestone. It is awarded after students have completed their required semesters of residence, course work and qualifying exams. Before they begin their doctoral research, students defend a dissertation proposal. At the end of their research, they defend their completed dissertations before a five-member faculty committee. Within this framework, the specific requirements the students must fulfill vary considerably from one program to another, depending on the knowledge and skills they must master to pursue independent careers in their disciplines.

Since their students will be educators as well as scholars, most programs consider training as teachers an integral part of their curricula. The form and duration of the students' involvement in teaching varies among the different programs. It is most fully developed in the Humanities and Social Sciences. The individual programs provide training in the craft of teaching to prepare their students for the classroom. The Graduate School augments that training through the GSAS Teaching Center which was opened in 1999 both to enhance the teaching skills of graduate students and to foster an institutional environment that places a premium on excellent teaching.

Much of a Ph.D. student's education occurs outside the classroom through the mentoring of individual faculty. By its very nature, mentoring is individual, informal and personalized. The faculty members who work most closely with the Ph.D. students are their doctoral sponsors, but other faculty also provide guidance as members of advisory and defense committees. Students in the sciences tend to have more frequent contact with their mentors than those in the non-sciences as a result of differences in how their educational programs are organized and the setting within which they do their work.

Some graduate student learning takes place outside of the formal curricular structure. Every program offers a rich array of co-curricular experiences that contribute to their students' education and their development as scholars.

Learning assessment is an integral part of doctoral education at Columbia. The University leaves the methods of evaluation to the programs and schools rather than having an institution-wide plan. Assessment takes place at both the level of the individual course and the program in a diverse range of forms. While chiefly designed to assess students' progress toward their degrees, the faculty and programs also use the resulting information to improve the educational training they provide. The University uses additional forms of assessment to ensure an appropriate level of standardization across the programs. In some of the sciences, these are driven by the requirements of externally-funded training grants. More generally, the Dean of the Graduate School seeks to ensure that all Ph.D. students are making satisfactory progress toward their degrees.

The Ph.D. programs draw their faculty from all parts of the University. Most hold appointments in the schools and departments responsible for the programs, but others contribute as well, including faculty at institutions affiliated with the University. The core faculty consist of those appointed by the Executive Committee of the Graduate School to serve as dissertation sponsors, but a larger group cooperates in directing each of the programs. It is common for individual faculty to be members of more than one program.

The full-time doctoral faculty have the following demographic characteristics: almost 80 percent hold full-time University appointments and of these more than half have tenure; 28 percent are women and 15 percent are minorities; their average age is 50 years; over a third come from abroad; and over 96 percent hold the doctorate themselves. Many are the recipients of honorific awards, prizes, national society memberships and other forms of scholarly recognition, and they compete successfully for externally-funded research awards. Many of the programs and schools are ranked highly in surveys conducted by non-profit organizations and for-profit businesses. Over the past decade, the University has materially enhanced the quality of the faculty through the recruitment of new tenured faculty from other universities and the development of junior faculty, many of whom have emerged as among the ablest younger scholars in their fields.

Starting in the late 1990s, many programs experienced significant increases in applications and much stronger yields. The changes have been most pronounced in the Humanities and Social Sciences but similar patterns have appeared in other selective programs.

The improvements tend to be concentrated in programs that have introduced better systems of student funding. However, surveys of admitted applicants show that other factors have also contributed, especially the excellence of the faculty and the strong reputations of the programs.

Admissions decisions are made by the schools with administrative and budgetary authority over them. The number of offers is determined primarily by the school's budget for financial aid and its potential for external funding, adjusted to reflect whether it has met its recruiting targets in recent years. The programs use a variety of means to market themselves but primarily depend on their reputation and quality as recruiting tools. Most, however, make a special effort to attract minority students who have been traditionally underrepresented in doctoral programs, with the Graduate School engaging in the most comprehensive effort. The evaluation of applications is done by the faculty of the individual programs, with oversight from the dean who has the authority to depart from the recommendations of the programs on whom to admit.

In Fall 2004, there were 3,287 students enrolled in the 60 Ph.D. programs under review. Over 63 percent were in the Arts and Sciences, with the largest concentration in the programs in the Humanities and Social Sciences. Over the past decade, the total number of Ph.D. students has declined, as the Graduate School has purposely reduced enrollments in the Humanities and Social Sciences. On the other hand, some programs in other parts of the University have expanded over the same period of time, especially in the Natural Sciences and Engineering. Over 38 percent of the Ph.D. students are international. Women make up 46 percent of all Ph.D.

students and as much as 70 percent or more in individual programs. Almost 42 percent of the students for whom we have ethnic data are minorities, with East and South Asians accounting for over three-quarters of them.

While the Graduate School expects students to finish their degrees within seven years, some programs have historically allowed a significant number to take longer. Time-to-degree is highest in the Humanities, followed by the Social Sciences and Social Work. At the other end of the spectrum, Journalism, Business and the science programs all have average time-to-degree that are less than seven years. The variations in time-to-degree reflect differences among the programs in the availability of multi-year funding, teaching requirements, mentoring practices and program culture. Historically, some programs, especially in the Humanities and Social Sciences, have also experienced high losses of students before they complete their degrees. There is a strong correlation between attrition and funding. Thus, attrition rates have fallen as programs that previously did not offer multi-year support have moved in that direction.

The amount of financial support students receive is determined by the schools with budgetary authority over the programs. Within the Arts and Sciences, doctoral students in the Natural Sciences have been fully funded since the 1960s. In contrast, the Graduate School historically provided limited funding to those in the Humanities and Social Sciences. By the mid-1990s, these practices placed the Graduate School at a serious disadvantage in competing for the best applicants in those disciplines. With significant additional financial resources from the Arts and Sciences and help from the Provost, the Graduate School began in 1997 to implement a

system of multi-year fellowships for incoming students in the Humanities and Social Sciences. By the class of 2004, 97 percent of those students received five years of tuition, living stipends and health coverage plus one year of summer support. Over the same period, the amount of the stipends throughout the Arts and Sciences has increased by 76 percent.

Outside of the Arts and Sciences, the programs in Architecture, the Biomedical Sciences, Business and Journalism provide multi-year fellowships, although there are differences in the amount of support and the number of years for which it is guaranteed. Engineering, Public Health and Social Work do not guarantee all incoming students funding that covers the full cost of tuition and provides a living stipend. They have, however, brought their funding packages into closer alignment with the full-funding model and recognize the need to make further improvements in the future.

Due to the high cost of living in Manhattan, Columbia maintains a substantial stock of apartments, currently valued at more than \$960 million, for the use of its faculty, staff and graduate students. Each year it invests almost \$40 million in improving the quality of the units it owns. Graduate students occupy over two-thirds of the University apartments. While the number who can be housed has grown in recent years, demand still exceeds supply. Particularly in short supply are accommodations suitable for couples and families. Nonetheless, over 90 percent of Ph.D. students interested in University housing are accommodated.



Graduate student housing outside of the Medical Center is managed by the Office of Residential Operations. Each year, it gives the schools allocations of units for incoming students and follows their directions on which individuals should be housed. A separate Office of Housing Services assigns a smaller pool of housing to students in the Medical Center, using a different allocation system. Both offices charge rents that are substantially lower than those for comparable apartments on the open market.

Students on the Morningside campus receive primary medical care and psychological counseling through the Health Services at Columbia (HSC). Those in the Medical Center have access to a separate health service. Both offices also offer medical insurance through a national underwriter to help students with health-care needs that cannot be met on campus. Ph.D. students are among the heaviest users of these services at the University. Over the past six years, HSC has made substantial changes in the primary care it provides and in its insurance plan to expand service and improve quality. Further enhancements are now in development, including the replacement of its current facilities with a much larger and better equipped space. Nonetheless, students continue to criticize some aspects of the care they receive. Most significantly, these arise from the existence of different plans on the University's two campuses and differing amounts of financial help student receive as part of their fellowship packages in meeting the cost of their health care.

International students account for almost 39 percent of Columbia's Ph.D. enrollments. The International Students and Scholars Office (ISSO) is responsible for helping them and other

international students. Annual surveys show a very high level of satisfaction among international students with the assistance they receive from the ISSO. The high scores reflect both its commitment to service and its development of a sophisticated computer system for handling immigration matters that has materially expedited the preparation of immigration documents.

As they search for positions after graduation, Ph.D. students can count on support from their faculty, programs and the University's Center for Career Education. Over time, the assistance they receive has expanded and become more sophisticated. As in the past, the faculty advisor remains the main source of support, but students also receive help from other faculty who participate in their education, act as placement officers for their programs or oversee doctoral studies in their department or school. Many programs integrate aspects of preparing for the job market into their curricula. They have also developed initiatives specifically designed to help students once they are actively engaged in looking for positions. The Center for Career Education complements these initiatives with programming designed to help students define their career objectives, identify opportunities that match their goals and compete successfully for positions that interest them. The Graduate School has collected information on the first and current positions of Ph.D. graduates since 1993-94. These data indicate that the programs have been successful in preparing their students for careers primarily in academic institutions but also in a wide range of alternatives in both the private and public sector.

