

PROPOSAL

PH.D. COMPLETION AT ILLINOIS

Ph.D. Completion Project, Council of Graduate Schools

The University of Illinois at Urbana-Champaign, which enrolls more than 9,000 graduate students in over 100 graduate degree programs, many of which are ranked among the best in the nation, has awarded an average of 670 doctorates a year for the last ten years, placing it high among the universities awarding the most earned doctorates. Of course, these numbers don't tell the whole story. We know that many students who enter Illinois doctoral programs will leave without a doctorate, some of them after several years in their programs. Some of this attrition is likely unavoidable, and some is highly desirable. But clearly some could—and should—be prevented. It is important to know how much, and how.

As one of the original public land-grant institutions, and as one of the major producers of doctoral degrees in the country, the University of Illinois at Urbana-Champaign is eager to be a part of the Council of Graduate Schools' Ph.D. Completion Project. The Graduate College will take the lead role in this initiative, as is consistent with our mission of serving both graduate students and graduate programs. Working closely with us will be 15 graduate departments from four disciplinary colleges—Engineering; Liberal Arts and Sciences; Education; and Agricultural, Consumer, and Environmental Sciences. Ten participating programs are from SEM fields (physical sciences and mathematics, engineering and life sciences) and five from the social sciences and humanities.

We believe that our shared participation in this project will enable us to realize the following outcomes:

- To build a core group of fifteen diverse graduate programs that will develop and pilot initiatives aimed at increasing completion of doctoral students across all our programs.
- To build on and expand the leadership role Illinois already plays in graduate education, both regionally, as part of the Committee on Institutional Cooperation and the Midwest Association of Graduate Schools, and nationally, through initiatives such as the Carnegie Initiative on the Doctorate, the Responsive Ph.D., and VIGRE.
- To improve collaboration between departments and the various campus offices that serve graduate students and graduate units, including the Graduate College Career Services Office, Educational Equity Programs, the Counseling Center, the Office of International Student Affairs, and the Office of Admissions and Records.
- To make better use of campus data on graduate student retention and to make it publicly available.
- To expand upon existing initiatives that focus upon recruiting a diverse graduate student population by providing opportunities designed to retain and connect underrepresented graduate students.

The Participants

The Graduate Programs

Doctoral education is, by its very nature, a decentralized enterprise. While a shared commitment to undergraduate education has brought the disciplinary colleges at Illinois together in a variety of ways, graduate programs have had comparatively few opportunities to work together and to learn from one another. The Graduate College is the main point of connection; uniquely positioned to look across the various graduate programs at Illinois, it tries to foster collaboration wherever possible.

Our work with the four departments currently participating in the Carnegie Initiative on the Doctorate—Educational Psychology, History, Mathematics, Neuroscience—has shown us that there is real merit in bringing together graduate programs for collaboration and discussion, even (perhaps especially) when those programs differ in terms of discipline, size, and reputation.

The programs participating in this project are:

Animal Sciences	History
Chemistry	Mathematics
Civil and Environmental Engineering	Mechanical and Industrial Engineering
Computer Science	Microbiology
Educational Psychology	Neuroscience
Electrical and Computer Engineering	Physics
English	Political Science
French	

These programs represent the broad range of graduate study at Illinois. Some are large; both Chemistry and Electrical and Computer Engineering grant more than 50 doctoral degrees each year. Some are small; English, French, Microbiology, Neuroscience, and Political Science average fewer than 10 degrees. Some are ranked among the strongest in their disciplines; the National Research Council placed the following Illinois doctoral programs within the top 10 nationwide: Chemistry (8), Civil Engineering (5), Computer Science (8), Electrical Engineering (3), Mechanical Engineering (9), and Physics (8).

All of these programs share a commitment to improving Ph.D. completion within their programs. Many have already begun to implement some of the practices that have been identified by CGS¹ as improving retention at the doctoral level. Some conduct annual reviews, some provide completion data to incoming students, and some provide opportunities that involve engage students in research.

All 15 participating graduate programs have agreed to do the following:

- To work collaboratively with the Graduate College and with other participating departments to develop a variety of interventions designed to improve Ph.D. completion within their programs and across the campus;
- To assist the Graduate College with providing accurate program data to CGS and to make degree completion statistics available to future applicants;
- To work with the Graduate College to collect comprehensive qualitative data through exit interviews;
- To pilot selected interventions and to identify and share best practices with other graduate programs.

The Graduate College

The Graduate College has been actively engaged with issues related to student completion for some time. Nearly a decade ago, our Chancellor charged a campus-wide Task Force on Graduate Education to define key issues central to graduate education from the perspective of graduate students, faculty, and programs, and to recommend policies to enhance the excellence of graduate programs. The broad-ranging recommendations of the Task Force touched on the quality and operation of graduate programs, on issues related to graduate student employment, and on student-faculty interactions.

¹ See Council of Graduate Schools, “Ph.D. Completion and Attrition: Policy, Numbers, Leadership, and Next Steps” (Washington DC: Council of Graduate Schools, 2004).

Perhaps the most important outcome of the Task Force was its recommendation that the Graduate College serve an expanded role on the campus. Although it had been in existence for more than a century, the Graduate College at Illinois had for many years been part of the Office of the Vice Chancellor for Research (VCR), and the VCR served as the *de jure* dean of the Graduate College. Recognizing that research and graduate education were two related but quite distinct enterprises, campus leadership decided in 2000 to appoint the first free-standing dean of the Graduate College, a move that would enable the Graduate College to provide campus-level leadership on issues related to graduate education.

Since then, the Graduate College has worked hard to establish a strong record of participation in national and local efforts to reform graduate education. Richard Wheeler, now in his fifth year as dean of the Graduate College, has been asked to assume various leadership roles in the Council of Graduate Schools, the Midwest Association of Graduate Schools, and the CIC Graduate Deans.

Past Record of Effecting Change

National Initiatives

The University of Illinois has a long tradition of excellence in graduate education. National initiatives in which the University of Illinois has been a participant include the following:

Carnegie Initiative on the Doctorate

Four graduate programs— Educational Psychology, History, Mathematics, and Neuroscience —are active participants in the CID, a five-year initiative aimed at enriching and invigorating the education of doctoral students.

Vertical Integration of Research and Education (VIGRE)

With a five-year grant it received in 2000 from the National Science Foundation's Vertical Integration of Research and Education (VIGRE), the Department of Mathematics is working to revitalize mathematics education for graduate students, as well as undergraduates and postdoctoral scholars. One important initiative is the Research Experience for Graduate Students (REGS). During the Spring 2003 semester, the department's Graduate Affairs Committee, under the leadership of Professor John D'Angelo, developed this summer research program for first- and second-year graduate students in mathematics. The National Science Foundation agreed to finance the Summer 2003 and Summer 2004 components of the project through a supplement to the department's VIGRE program. The primary goal of REGS is to engage beginning graduate students in the mathematical research agenda of the department, and to thereby increase their maturity level; such students are then better prepared to participate in deeper research projects.

The Responsive Ph.D.

The University of Illinois is a relatively recent addition to this initiative of the Woodrow Wilson National Fellowship Foundation. In 2003, Robert Weisbuch visited the campus as the keynote speaker for a symposium on graduate education sponsored by the Graduate College, and this visit led to the University's joining a number of other institutions to collaborate on a national agenda for improving the doctorate. As part of this initiative, Illinois graduate student Rebecca Harris was selected to be the Project Pericles Woodrow Wilson Fellow at Allegheny College this year; we look forward to other placements like this in the future.

Campus Initiatives

In addition to these national initiatives, the Graduate College has spearheaded a number of initiatives related to graduate education in the past two years.

Career Services for Graduate Students

The Graduate College Career Services Office (www.grad.uiuc.edu/CareerServices/), or GCCSO, was established in 2003 to provide advising, special programs, and resources to assist graduate students with decision-making and planning for career paths both within and beyond academia. The GCCSO has created an information rich web site and offers numerous workshops to provide professional development opportunities for graduate students. More than 1000 students attended GCCSO workshops and events during its first year of programming.

The GCCSO has assumed a central role in facilitating and coordinating professional development events for graduate students. It has established a master calendar of events for graduate student professional development, www.grad.uiuc.edu/mastercalendar/, in order to better disseminate information to students about the numerous resources available. Students and faculty alike have approached the GCCSO with workshop or event ideas, and numerous collaborative events have resulted. For example, in fall 2004, university faculty will present workshops on topics like "Publishing in Academic Journals," and "Scholarly Writing as Creative Work." In 2004 the GCCSO coordinated the first Graduate Student Information Fair to formally welcome all new graduate students to the University of Illinois and help orient them to campus services and resources. It is also piloting a new Graduate College Student Liaisons program, where student representatives from all departments will assist the Graduate College with outreach and provide general feedback on behalf of their departments. A small advisory group will meet regularly with the Dean to discuss graduate student concerns.

Diversity Initiatives

The mission of the Graduate College Educational Equity Programs Office (www.grad.uiuc.edu/eep/) is to address questions of access to and participation in graduate education by individuals from groups that are currently underrepresented at the University of Illinois at Urbana-Champaign. GCEEP offers several programs for Illinois students, including the Summer Pre-Doctoral Institute, which provides incoming graduate students from populations underrepresented in Illinois graduate programs with an eight-week orientation to graduate study on the campus. In addition, this office works closely with the programs offered by the Committee on Institutional Cooperation (CIC) to recruit underrepresented students to graduate programs through active recruiting efforts, the CIC FreeApp program, and the CIC Summer Research Opportunities Program.

Working closely with GCEEP and units from across the campus, the Graduate College began sponsoring a series of Graduate College Campus Visits in Spring 2004 to bring to campus those underrepresented students who had applied to Illinois graduate programs. This program was designed to complement departmental recruitment efforts, which tend to focus much more specifically on the culture within the department and discipline. The Campus Visits attempted to provide a broader perspective on the university, including information about student organizations and services (e.g., housing, recreation, counseling and health services), culturally relevant social activities, cultural programs, and off-campus resources and contacts. The visits also involved several planned activities to bring together prospective graduate students with students already pursuing graduate study at Illinois. Two two-day-long visits were scheduled, one March 12-13, the other April 5-6. Of the 80 applicants who participated, 68 students accepted the University's offer of admission for Fall 2004.

Promoting Dialogue About Graduate Education

Since 2003, the Graduate College has presented an annual Symposium on Graduate Education in order to provide an opportunity for graduate students, faculty, staff, and alumni to discuss the challenges and opportunities distinctive to graduate students' academic experience today. Keynote speakers have included Robert Weisbuch, President of the Woodrow Wilson Foundation, and Maresi Nerad, Director, Center for Innovation and Research in Graduate Education (CIRGE) and Associate Dean, University of Washington Graduate School. Mary Ann Mason, Graduate Dean at the University of California-Berkeley,

will serve as the keynote speaker in 2005. Additional information is available at www.grad.uiuc.edu/CareerServices/Symposium/SymposiumHome.html.

Fellowship Support

The Graduate College provides approximately \$5 million in fellowship support directly to students. In the past few years, we have worked very hard to increase both the number and the size of fellowships available to students, particularly those available to students who are underrepresented in their programs. The recent overhaul of state-funded fellowship programs for underrepresented students, combined with increasing pressure from groups like the Center for Equal Opportunity, have raised concerns about our ability to enhance fellowship support for some of our most highly-sought students. Nevertheless, the Graduate College, in collaboration with several graduate programs and with the Office of the Provost, has worked to shore up these programs with an infusion of additional resources.

Outreach to Graduate Programs

The Graduate College has always considered outreach to departments and students an important part of its mission. The Graduate College's rules, policies, and guidelines related to graduate study are collected in *A Handbook for Graduate Students and Advisers*. An extensively revised online handbook, to be available in November 2004, will make the rules, policies, and guidelines clearer and more accessible to students, faculty, and staff. Departments expect directors of graduate study (DGSs) to fill many roles, including oversight of the retention of graduate students, yet the precise responsibilities of a DGS are rarely clearly outlined. The Graduate College has attempted to rectify this by establishing an annual orientation for new DGSs; in October 2003 the Graduate College presented the first annual Workshop for New Directors of Graduate Study to cover the essentials of effective graduate education management. In May 2004 the Graduate College presented a workshop on the annual review of graduate students. This workshop presented annual review as a tool to enable students to successfully progress through graduate study by allowing timely diagnosis of deficiencies, clarification of expectations for academic performance, and identification of opportunities for improvement. These very well received workshops have become the centerpiece of our active relationship to directors of graduate programs, and will benefit enormously from the findings and recommendations that emerge from our doctoral completion study.

Data Collection, Management and Analysis

The University of Illinois at Urbana-Champaign has a strong history of data management, as can be seen by its extensive capabilities in warehousing student information, analyzing data, publishing information in both written and electronic form, and participating in national surveys and initiatives that depend heavily on our ability to extract and process vital details about undergraduate, graduate, and faculty trends. Data management and institutional research takes place at the university, campus, and college levels with strong collaboration among researchers in all offices. Institutional researchers actively participate in national organizations and initiatives and have taken leadership roles among their peers. For example, last year, Sally Mikel, the Information Systems Management Specialist from the Graduate College, was selected to participate in the Association of Institutional Research Data Policy Institute in Washington D.C., an intensive, two-week data camp sponsored by the National Science Foundation (NSF) and National Center for Educational Statistics (NCES) to study the national databases of the NSF and NCES. The combination of effective tools, strong organizational structure, and quality staff show the University of Illinois' commitment to the use of quality data analysis in the support of building strong programs.

This project will draw upon the considerable data management resources of the Graduate College; the Graduate College in turn is able to draw upon resources at both University and campus levels.

University

The University recently implemented sweeping changes to university administrative systems through the deployment of the SCT Banner ERP system. A new organization, Decision Support

(www.ds.uillinois.edu), was formed to support integrated and secured management reporting, analysis and decision making by providing the University with the infrastructure and services to access data and documentation through the deployment of a new electronic data warehouse (EDW). Decision Support provides extensive online metadata, training, and tools to make the information in the EDW usable and accessible to all staff. The EDW provides an extremely powerful, central data source for all campus-level information to all staff and faculty.

The University Office of Planning and Budgeting, UOPB, (www.pb.uillinois.edu) conducts a variety of analytical studies to support the planning and budget development processes and to meet reporting requirements of state and federal agencies, such as IPEDS. The office prepares and coordinates the exchange of information about the university with peer institutions and with other participants in the Association of American Universities Data Exchange. UOPB also publishes electronic and paper versions of data and research information such as the Student Databook, an annual compilation of student statistics for the three University of Illinois campuses available at www.pb.uillinois.edu/internet/dr/databook.asp.

Campus

At the Urbana campus, the Division of Management Information, DMI, (www.dmi.uiuc.edu) is a service unit reporting to the Provost and Vice Chancellor for Academic Affairs. Its goal is to assist administrators, faculty, and staff in obtaining timely, accurate, and appropriate information from the university's administrative databases. DMI is responsible for preparing the information used in the annual Cost Study for the Illinois Board of Higher Education, for Federal A-21 reporting, and for accreditation reviews. DMI also provide data for annual surveys by *Money Magazine*, *US News & World Report*, *Barron's College Guides*, and many other specialized surveys. DMI publishes information online for use by campus units including the Campus Profile (www.dmi.uiuc.edu/cp/), ten years of centrally-provided indicators for each department, with school, college, and campus totals.

Graduate College

While university and campus-level IR staff address some graduate student and program issues, their focus tends to be directed more toward undergraduates. In recent years, the Graduate College has shifted the focus of one FTE primarily to the support of internal and external institutional research. The Graduate College regularly publishes application, admission, new enrollment, enrollment, and degree counts by program, gender, and race/ethnicity for internal usage. Recent initiatives within the Graduate College have included efforts to analyze student time-to-degree trends by program, college, gender, and race/ethnicity, examine international admission and enrollment trends for internal and external usage, and work with a group of graduate students to statistically analyze five years of exist survey data on graduate student satisfaction and identify indicators for predicting student satisfaction. Recent analysis of international admission and enrollment trends were used to support presentations by Dean Wheeler at both CIC and CGS meetings, provide data for two recent CGS requests for information about international application trends, and to provide information to William Bowen for a study on international admission trends by discipline. While the Graduate College has been successful in analyzing and providing data for specific studies, we are working toward a more structured way of organizing and disseminating information about the graduate programs at the University of Illinois. We believe that this project, which we refer to as the Graduate Program Profiles project, aligns directly with the initiatives proposed for the CGS Ph.D. Completion Project.

Graduate College Data Initiatives Associated with the CGS Proposal

There are four key data initiatives associated with the CGS proposal that would be undertaken by the Graduate College as part of the Ph.D. Completion Project. They are:

- Coordinating an exit survey for all graduate students
- Developing a web-based toolkit of departmental resources

- Establishing a “Ph.D. Completion at Illinois” Web site
- Developing the structure for the Graduate Program Profiles Project

Each of these initiatives is discussed in more detail below.

Exit Survey

About five years ago, the Graduate College began conducting a voluntary exit survey of all students depositing theses and dissertations at our Thesis Office. The survey primarily examined student satisfaction of campus, departmental, and graduate college resources. Recently, the Graduate College worked with a group of students in a statistical consulting class to perform a detailed statistical analysis of the results of the survey. Data was examined for program, college, race/ethnic, gender, and disciplinary trends. Statistical analysis was used to assess whether certain indicators could be used to predict overall student satisfaction and success at attaining post-graduate employment. One clear limitation of the study was that only depositing students were included in the survey sample, so non-completing students never were surveyed.

The CGS Ph.D. Completion Project would provide an opportunity to move forward with this survey in several ways. First, we could expand the survey sample to include non-completers, as the CGS survey calls for conducting a survey of all students leaving the programs regardless of outcome. Second, the CGS Project would provide a means of evaluating our survey questions and format to align with a more standardized set of common questions across all institutions. We could also look at the means of survey dissemination and take advantage of newer technologies, such as web-based survey tools. Our current exit survey is conducted as a paper survey that requires someone at the Graduate College to hand-enter all input. Third, we would continue to analyze and summarize the exit survey data both for internal usage and for external reporting required by CGS for annual project reports.

Web-Based Toolkit

The Web-Based Toolkit is discussed below in the section titled *The Interventions*.

Ph.D. Completion at Illinois Web Site

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Graduate Program Profiles Project

The Graduate Program Profiles Project began with the vision of having an online single-page snapshot of summary data for each graduate program at the University of Illinois. This one-page summary would provide an administrative overview of each program and speak to the quality of the program. To be truly effective, the profile would need to be dynamically updated to contain the most recent information and be a conduit to more comprehensive information. To this end, Sally Mikel, the Information System Management Specialist at the Graduate College, began building a specification and preliminary design for the Program Profile database and user interface. We envision that the inclusion of the following types of program information:

- 10+ years of application, admissions, new enrollment, enrollment, and degree counts and trends, with these data items further divided by race/ethnic, gender, citizenship, and residency
- Degree completion
- Time to degree
- Sources and levels of support including assistantships and fellowships
- Contact information

Beneath the Program Profile would lie a comprehensive database of student information spanning both old and new sources of student and faculty data associated with all graduate programs. Student, academic history, applications and admissions data, sources and levels of graduate student funding, degrees

conferred, preliminary and final examination data, departmental faculty and staff information, and possibly even program ratings compared to other peer programs would need to part of the underlying database structure. Data would need to be updated dynamically and in some cases automatically as sources were updated. We envision this database to be implemented using a newly-purchased Windows 2003 Server with Microsoft SQL Server.

The true value of the Program Profile is that not only does it provide a single-page snapshot of each program, but it also provides the ability to drill down from graphs, charts, tables, and links on the profile to more detailed information on subsequent pages. This capability can be implemented using ColdFusion technology in conjunction with the underlying SQL Server database. For example, selecting a bar on a summary chart of 10-year enrollment trends could open a new chart showing the enrollment by race/ethnicity, gender, and/or citizenship. Selecting the graph of enrollment of international students could open a graph by nation. At detailed levels, information could be restricted to program faculty and the Graduate College staff.

While we do not believe that the CGS Ph.D. Completion Project can facilitate the complete implementation of the Program Profiles Project, we believe that parts of this project clearly align with CGS initiative, and to this end, we propose furthering the implementation of those parts. The hardware and software tools, ColdFusion, IIS, and the SQL Server are already in place in the Graduate College, so the database and front-end application development associated with the aligned parts would be the primary focus of activities during the Ph.D. Completion Project initiative.

The Interventions

The University of Illinois has identified ten interventions that we believe demonstrate the greatest potential for campus-wide implementation. Some initiatives are new, while others will involve the expansion of pre-existing programs. Our plan is to pilot these interventions during the first half of the grant period. Following assessment of these pilot interventions, we plan to expand the most promising interventions to the rest of the campus in year three.

Mentoring

Annual Review of Graduate Student Performance

Work toward the goal of having graduate students reviewed on a regular basis, preferably annually. The review process would include a written report and discussion between the student and his/her adviser(s).

Currently, only a handful of graduate programs at Illinois conduct annual reviews of graduate student progress, yet nearly all agree that this would be one of the most important interventions in terms of improving students' completion. We would like to see such reviews become more widespread, and the CGS Ph.D. Completion Project is an excellent opportunity to leverage for expansion of this practice. The Graduate College has offered workshops on annual review for directors of graduate study in the past; our goal is to continue and expand these workshops while working with the participating departments to develop guidelines and disseminate best practices.

Mentoring Workshop for Graduate Faculty

Sponsor an annual faculty workshop on the advising and mentoring of graduate students and postdoctoral researchers.

The University of Illinois has an active Center for Teaching Excellence that provides faculty with workshops and retreats to facilitate the development of best practices in teaching. However, there are few resources that address and support faculty in the distinctive climate of graduate education where a single adviser may play an influential, central role in guiding and defining the research, ethics, and career paths of junior scholars.

The Graduate College plans to fill this gap by piloting an interactive workshop that will provide faculty with the knowledge and resources to serve as better advisors and mentors. Discussion topics will include management styles, conflict resolution, giving negative feedback effectively, career planning and goal setting, and the challenges of diversity. It will also help familiarize faculty with existing campus resources, so they may make better referrals.

Research

Facilitate Early Research Experiences for Graduate Students

Develop opportunities to engage graduate students in scholarly research early in their graduate careers. The VIGRE (Vertical Integration of Research and Education) program may serve as one model. The Graduate College also oversees a small conference travel grant program; we would like to target this program to solicit applications from students in their second year of graduate study.

The departments in the humanities and social sciences with whom we have worked have been particularly vocal about their desire to engage graduate students in research earlier in their careers. Unlike students in the laboratory sciences, humanities and social sciences students are less likely to have the opportunity to work alongside faculty in furthering scholarly research, due to what CGS has termed “field-specific differences in the nature and organization of the research community” across the disciplines.²

Promote Research Among Underrepresented Groups

The Community of Scholars Conference was launched in the spring of 2004 to showcase the research of underrepresented graduate students at the University of Illinois. Jonathan Alger, University of Michigan, and Julianne Malveux, *Black Issues in Higher Education*, were keynote speakers, and students also had the opportunity to attend various special topics and roundtable sessions. The Graduate College proposes to expand the Community of Scholars beyond this annual conference to a series of events throughout the year that would bring together underrepresented graduate students for workshops and discussions.

Program Environment

Provide Funding for Departmental Initiatives

Establish a seed grant program for participating departments to request funds for departmentally-based initiatives to improve social/academic integration of graduate students and graduate fellows. Initiatives might include the organization of departmental social events for graduate students and faculty, the expansion of lounge and/or office spaces for graduate students and fellows, or departmental activities like professional development programs, brown bags, and discussion groups.

Open Direct Dialogue Between Students and the Graduate College

Create opportunities for graduate students from a variety of departments to hold informal discussions with graduate deans and directors on the problems that affect graduate student completion.

Because no graduate student government exists at Illinois, the Graduate College has had to create its own mechanisms for interacting with graduate students. At one time, the Graduate College sponsored a Graduate Student Advisory Council to facilitate interaction between graduate students and the Graduate College, but this was discontinued several years ago. A new group, the Graduate College Student Liaisons, has recently been established, and we believe that this group might provide the basis for more sustained interactions on graduate completion and attrition, and the factors that influence both.

² Council of Graduate Schools, “Ph.D. Completion,” 16.

Curriculum, Processes and Procedures

Workshops for students

Expand upon existing Graduate College workshops in order to provide a comprehensive workshop series for graduate student professional development. Workshops could provide an introduction and orientation to graduate school, demystify graduate education, and help demarcate key stages in graduate student development. Probable topics include an introduction to graduate school culture, choosing an adviser, dissertation writing, and dissertation preparation and deposit. In addition, informal discussion groups might enable students to connect with other students and define meaningful social support.

Provide Departmental Contacts with Expanded Resources

Provide expanded resources for graduate program assistants and contacts, including a handbook and orientation specifically designed for them. In many graduate programs, these assistants serve as the first point of contact for students, yet few receive the kind of in-house training they need to do their jobs well. The Graduate College proposes to regularize and standardize reference materials that can be used in training and disseminated to contacts across the campus.

Web-based Toolkit of Resources for Faculty

Publish a web-based toolkit that would make available to all graduate faculty resources on topics such as conflict resolution, preparing students as researchers, best practices in attracting, recruiting, and retaining a diverse graduate student population, information on the responsible conduct of research for advisers and students.