

# Graduate Student Retention

A Progress Report to the Planning and Leadership Team  
June 16, 2004

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## **I. The Issues**

A study conducted recently by the Office of Institutional Research showed that our retention rate of doctoral students was less than 40% over a 10-year period. Most students who do not complete their degrees leave within the first few years. Retention of our master's degree students is better, but can be improved. Our experiences are consistent with national studies that demonstrate greater completion rates among students who are full time and are fully funded by their departments. These students tend to be better connected to formal and informal networks within the departments, have better mentoring, and are able to devote their full attention to completing their degrees. Until recently we did not do a good job of tracking student progress and thus did not know the extent of the problem.

Our long-term goals include increasing the number of full-time Ph.D. students and creating more targeted master's degree and certificate programs in applied areas that meet the workforce needs of the region. Presented below are steps taken to address the problems and to achieve our goals, along with outcomes to date and resources needed.

## **II. Steps Taken**

### **Changing Practices:**

- *Identifying and understanding the problem.* As mentioned earlier, the Graduate School worked with the Office of Institutional Research to track all of our doctoral students over a 10-year period. Each department was given a list of all students who had enrolled in their program, the students' registration patterns each semester, and the last date of registration or degree completion. The data was discussed in a meeting with GPDs and department chairs.
- *Annual progressions audit.* Last year we instituted the annual practice of reviewing the progress of each student. Departments are notified of all students who have missed a milestone (time deadline to graduate or reach candidacy) and all students who are within a year of reaching a time deadline. They must take action on each student who has missed a milestone and are asked to make sure other students reach the impending milestone by the appropriate deadline. Monitoring GPAs to determine academic standing has been done for many years.
- *Recognition of students reaching doctoral candidacy.* Over the past 3 years since this formal recognition was established, the number of doctoral candidates has increased from 60 in 2001 to 97 in 2003.
- *Planned initiation of exit surveys or interviews* to understand why students leave UMBC without completing their degrees. We also plan to survey graduating

students to understand where we are doing well in providing a quality experience and where additional attention is needed.

- *Raising awareness of the issues at UMBC and nationally.* We have had expert speakers discuss the issues of retention and degree completion from a research perspective. We have also shared articles and research reports with GPDs. The dean and associate dean of the Graduate School have visited some departments to talk about issues within their departments and disciplines.
- *Improved orientation.* A campus-wide task force was established to make recommendations on the structure and content of graduate student orientation programs. August orientation now spans two weeks, including activities sponsored by the Graduate School, the departments, GSA, PROMISE (see bullet below) and the Office of International Education Services (IES). This year we will add training seminars for all teaching assistants in conjunction with the Faculty Development Center. Graduate student success seminars are held monthly throughout the year. Two years ago we began offering orientation for students entering spring semester. We have an extensive orientation website providing all of the information students need to get started and be successful to parallel and augment our face-to-face programs. Studies show that many of the students who do not complete their degrees report a lack of understanding of what was expected.
- *Focus on effective mentoring.* At the root of our success with the undergraduate and graduate Meyerhoff programs is effective mentoring. Therefore we are having regular conversations with GPDs, chairs and faculty on the importance of mentoring, how being a good mentor is in their own best interest, and strategies for effective mentoring. In spring 2004 we hosted a campus-wide conference on effective mentoring of graduate students.
- *PROMISE: Maryland's Alliance for Graduate Education and the Professoriate* is a program funded by the National Science Foundation to increase the number and diversity of Ph.D. graduates who go on to academic careers in the sciences and engineering. It is an alliance between the three public research universities in Maryland (UMBC, UMCP and UMB), with UMBC as the lead institution. The activities are geared to: 1) cultivate new graduate students; 2) build a supportive community where students can excel; and, 3) promote professional development. Graduate Horizons is an example of our recruiting programs. The graduate student Success Seminars are managed and co-sponsored by PROMISE. Peer mentoring, an annual retreat, extended orientation, and "professors in training" seminars are also key components of PROMISE. While the program has a focus on underrepresented minorities, the activities are open to all students. The impact on the climate and culture for graduate students has already been felt. See <http://www.umbc.edu/promise> for more details.
- *Departments working with DPET to create new applied master's degree and certificate programs.* Our programs must be relevant to the career needs of our students for them to invest their time and resources. The new programs are designed to be self-supporting.

### **Funding for Students and Programs:**

- Six years ago we negotiated an *increase in state supported graduate assistantships*. The level of support continues to be an issue (see below).
- *De-centralized management of graduate assistantships* so that departments can make the number and size of awards that are appropriate to their programs with a focus on increasing Ph.D. enrollment (given the constraints of a fixed allocation of funds). We are evaluating the effectiveness of this approach.
- *Training grants to support cohorts of students*. Programs are increasing use of federally sponsored training grants to support graduate students in cohort groups with attention to broader educational needs of students. Examples include the NIH NIGMS grant that supports the Graduate Meyerhoff Program; U.S. Department of Education Graduate Assistance in Areas of National Need (GAANN) awards in Mathematics and Statistics, Biology, Mechanical Engineering (2003) and Physics and Information Systems (2004); NIH grant to support the Chemistry-Biology Interface (CBI) program; preliminary proposals submitted to NSF IGERT program through CASPR and CUERE; proposals to NIH for Gerontology and Psychology. A proposal to NASA for a graduate Meyerhoff program in the physical sciences and engineering is under preparation.
- *External funding for initiatives*. PROMISE was funded by a \$2.5M grant from the NSF, with a supplement for \$500,000 bringing the total funding to \$3M over 5 years. This provides support for personnel and programs. The Council of Graduate School (CGS) and Peterson's gave UMBC their award for promoting inclusiveness at the graduate level. These funds are being used to promote effective mentoring. The NSF provided additional funds for our focus on mentoring to hold the campus-wide conference and to bring in additional speakers. We are disseminating the lessons we learn through journal articles, conferences and a booklet that CGS will publish. Seed funding of \$30,000 from the USM in FY02 helped to lay the groundwork needed to obtain these additional awards.

### **III. Outcomes**

- Enrollment of minority doctoral students in fall 2003 increased by 11% over 2002 (from 76 to 85); enrollment of women in doctoral programs increased by 3% (from 338 to 349) and the total enrollment of domestic doctoral students increased by 5% (from 411 to 434). Enrollment of continuing doctoral students in 2003 was up 10% over 2002. Total doctoral students increased from 672 to 722. Master's and non-degree enrollments were also up during this time period. Total graduate enrollment increased by 4% from 2,169 to 2,226. Applications from domestic students in general and minority students in particular are up for fall 2004 (in both real numbers and percentages) with underrepresented minorities now comprising more than 10% of the overall applicant pool.
- Most departments are able to fund the majority of their full time doctoral students, although not always at the level needed to be competitive.

- Several departments have instituted annual reviews of student progress by the chair, GPD or faculty committee, and they are seeing improvements in retention.
- We have seen a jump in the annual number of Ph.D. degrees awarded from the low-mid 50s to the mid-upper 60s. Based on the trends in reaching candidacy, we expect this number to continue to rise.
- There has been a steady increase in the number of master's degrees awarded. We now also provide formal diplomas for certificate recipients, many of whom continue their education toward a master's degree.

#### **IV. Resource Challenges**

- Graduate studies and research go hand in hand. Therefore, the health and vitality of our graduate programs are directly tied to accomplishing the recommendations in the research infrastructure report.
- The level of the stipends in our graduate assistantships impedes our ability to compete for many of the best students. National fellowships and training grants are now providing stipends up to \$30,000 – more than double what some of our programs are able to provide. We have the situation in several departments where student support differs greatly depending on the source of their support (state supported teaching assistantships, grant supported research assistantships or national fellowships and training grants).
- We have created new programs and grown existing programs without providing additional graduate assistantships.
- We have succeeded in attracting students with external fellowships. But many of these require matching funds. As we grow and mature as a research university we must address the infrastructure needs for administering external fellowships (matching funds and personnel).
- Graduate Program Directors have a large workload and many do not get adequate support to do their jobs. While many programs have support staff dedicated to graduate student issues, some have no full time support staff at all.