

**Promising Practices,
Strategies and
Interventions to
Improve Retention
and Degree
Completion of
STEM Ph.D. Students
from
Underrepresented
Groups**

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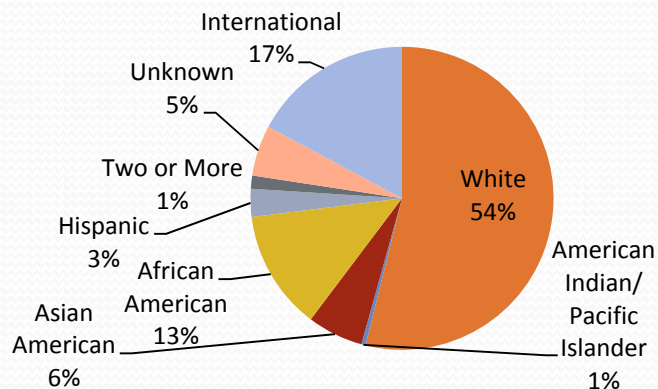
Vice Provost and Dean of the Graduate School
University of Maryland, Baltimore County



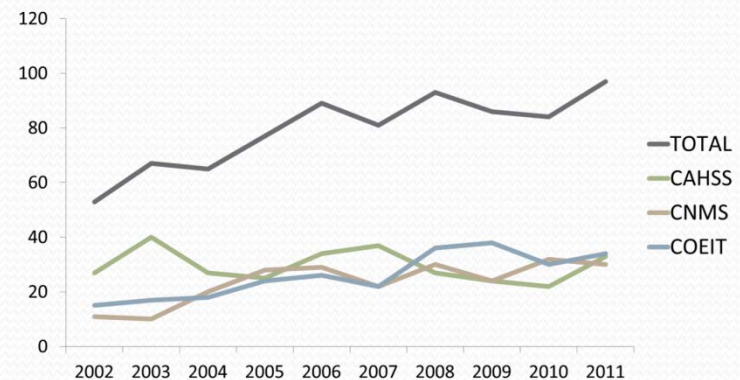
About UMBC

- Medium size public research university (13,637 students)
 - Graduate: 2,684 (30% Ph.D. students)
 - Undergraduate: 10,953
- Will be 50 years old in 2016
- Offer 37 master's degree programs, 24 doctoral degree programs and 21 graduate certificate programs

Graduate Enrollment



Ph.D. Degrees Awarded by College



Basic Premise

- Diversity programs can only be successful if the climate for *all* graduate students is one that promotes:
 - Inclusiveness
 - Academic success
 - Self-confidence
 - Life balance
 - Professional development

With the university as a whole serving as a mentor to shepherd each student



What Makes the Undergraduate Meyerhoff Program Successful?

- Fully integrated into the academic affairs infrastructure:
 - Reports to the Provost's office.
 - Advisory board of STEM department chairs.
 - The most productive research faculty serve as mentors and advocates.
 - Faculty are proud of the program and are eager to have brilliant undergraduate students work in their labs beside graduate students and post docs.





Translating the Meyerhoff Success to Graduate Students

- Funding:
 - Meyerhoff Graduate Program in Biomedical Sciences funded by NIH IMSD training grant
 - PROMISE: Maryland's AGEP
 - GAANN and IGERT training grants
 - CGS Ph.D. Completion Project (Phases 1 & 2) and DIMAC Project
 - LSAMP Bridge to the Doctorate
- Institutional transformation:
 - Discussions at graduate program director (GPD) meetings
 - Discussions at President's Council
 - Discussions with individual department chairs and GPDs

Academic Support Dissertation House

Summer Success Institute



Thesis and
Dissertation Coach

Professors in Training

Graduate Student
Success Seminars



Community Building



Friends and Family Celebration of Graduates Picnic

Retreat at Rocky Gap



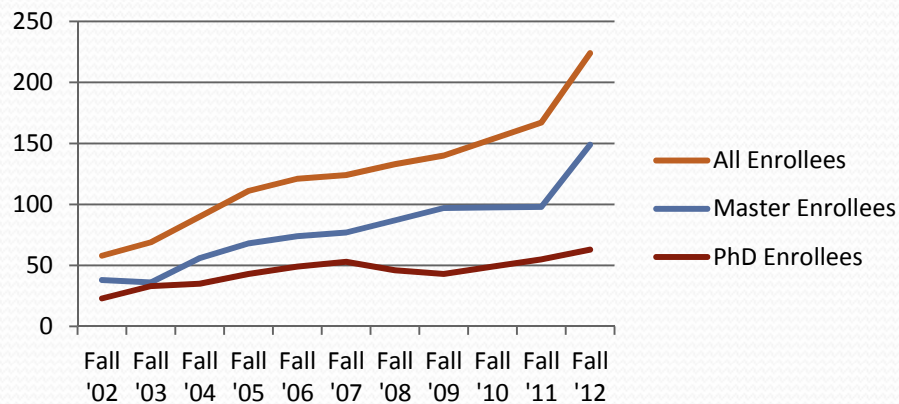
Fall Harvest Dinner

Four Elements of Psychological Sense of Community

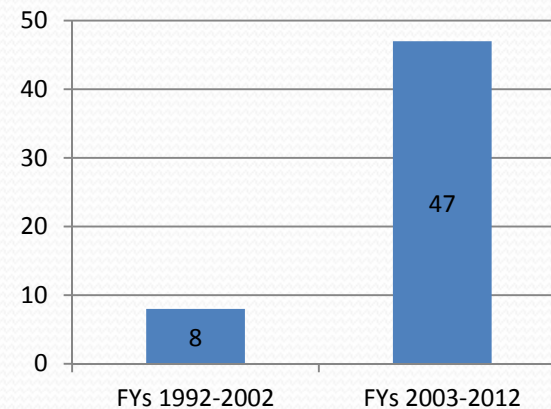
- **Membership:** belonging to a community
- **Influence:** positive influence on student from others and ability to be positive influence and role model to others
- **Integration and fulfillment of needs:** members feel rewarded in some way for their participation in the community
- **Shared emotional connection:** opportunity to bond through shared experiences at retreats, conferences, monthly meetings, celebration of milestones

McMillan, D.W., & Chavis, D.M. (1986). Sense of community: A definition and theory. *Journal of Community Psychology*, 14(1), 6-23.

Results



Change in URM Graduate Enrollment in Natural & Mathematical Sciences and Engineering & IT at UMBC



Change in URM PhD Degrees Awarded in Natural & Mathematical Sciences and Engineering & IT at UMBC





For More Information

- Website: www.umbc.edu/promise
- Twitter: @PROMISE_AGEP
- Facebook: facebook.com/promiseagep