



UMBC

A University On The Move

Meyerhoff Scholars History



- Founded in 1988
- Initially, the program addressed the shortage of African American males pursuing terminal degrees in SMET fields.
- First Class of 19 African American males arrived in 1989
- Women included in 1990
- Open to all high-achieving high school students in 1996
- 600 Graduates since 1993

PROGRAM MISSION



1. Provide the necessary academic advising, social and moral support, encouragement, and enrichment experiences that enable a diverse group of undergraduate students to succeed in STEM fields.
2. Prepare students for terminal degrees in these areas.
3. Prepare them to address and combat the underrepresentation in the STEM fields.

PROGRAM OVERVIEW



1. Student selected on:
 - academic performance
 - standardized test scores
 - recommendation letters
 - community service
 - interests in STEM fields
 - plans to pursue graduate degrees in a STEM area
2. Nomination information is sent to high schools or may be requested from the Meyerhoff office (2,000 a year)
3. The Meyerhoff application deadline is Dec. 1
4. Awards range from \$5,000-\$22,000 per year for 4/5 years
5. Finalists (250) are invited to Selection Weekends
6. Offer 90-100 scholarships for 60-70 slots

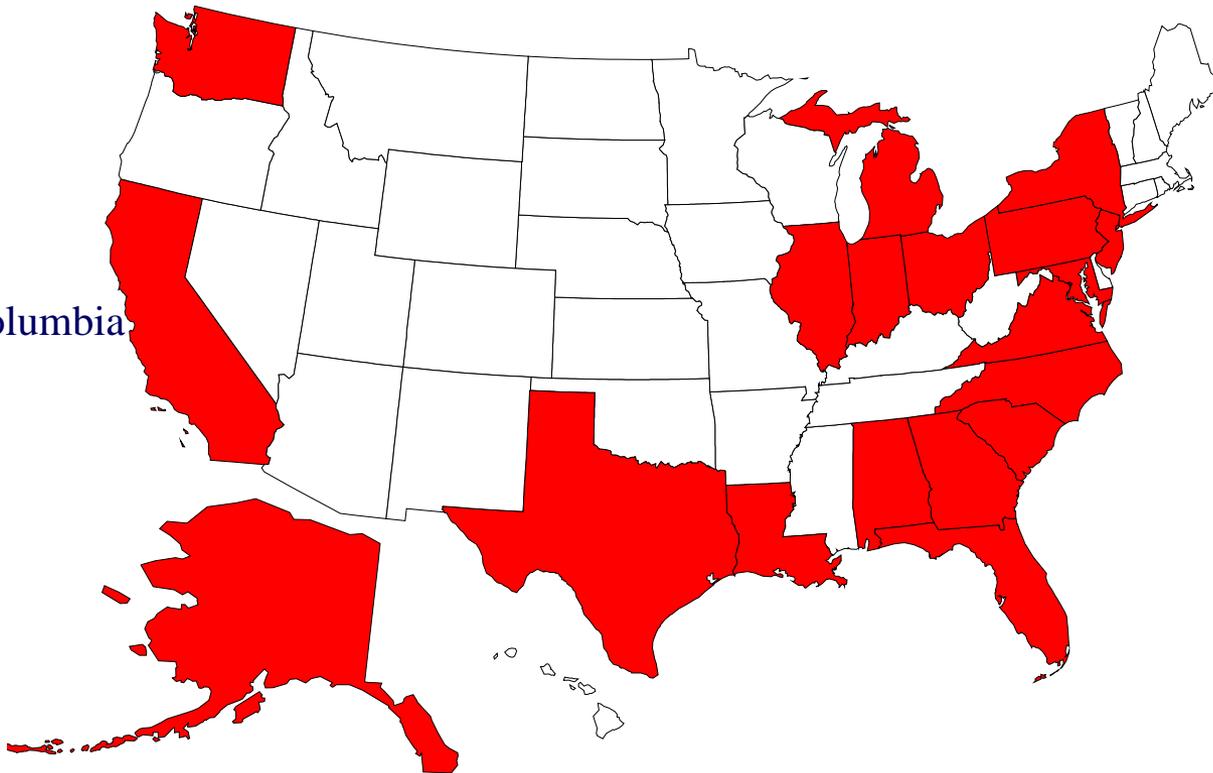
PROGRAM PHILOSOPHY



1. Entire university should be involved in the Selection Process (ownership)
2. Comprehensive Bridge program
3. Program advisor the first 2 years
4. Retake STEM courses with "C" grades
5. Learn to study individually/groups
6. Activities with mentors and parents
7. Regular meetings to discuss class success and concerns

Geographical Distribution

Alaska
Alabama
California
Connecticut
Colorado
District of Columbia
Florida
Georgia
Illinois
Indiana
Louisiana



Maryland
Michigan
Minnesota
North Carolina
New Jersey
New York
Ohio
Pennsylvania
South Carolina
Tennessee
Texas
Virginia
Washington

BARRIERS TO SUCCESS



1. Fear of disapproval/rejection by Peers
2. Perceived hostile/unsupportive environment
3. Inadequate preparation to attitudinal/ behavioral demands of the Academy
4. Specific gaps in knowledge/skill development
5. Limited exposure to models of academic excellence and scholarly practice
6. Overall low expectations
7. Isolation
8. Financial aid

Recruitment

- Top math and science students
- On-campus selection weekends
 - Includes faculty, staff, and current Meyerhoff students.



Summer Bridge

- Introduction to University academics
- Site Visits to technical and scientific sites to learn their chosen professions - researcher, engineer
- Courses Include:
 - Calculus and Africana Studies
- Workshops Include:
 - Physics, Chemistry, and Math
 - Study Skills
 - Public Speaking
 - Analytic problem-solving
 - Group study
 - Social and cultural events.



Academic Components

Faculty/Staff
Involvement

Knowledge/
Skill
Development



Monitoring/
Advising

Early
Research
Experience

Social Components

Sense of
Community

Social
Integration



Peer/Research
Mentors

Family
Involvement

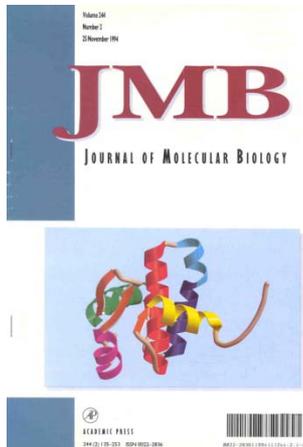
Program Values

Emphasizes striving for outstanding academic achievement, community service, seeking help (tutoring, advisement counseling) from a variety of sources, supporting one's peers, and preparing for graduate or professional school.



Publications of Meyerhoff Scholars

Since 1992, 70 Meyerhoff Scholars have been published including 3 on the covers of the Journal of Molecular Biology.



Chiana Paschall (M4) 1994

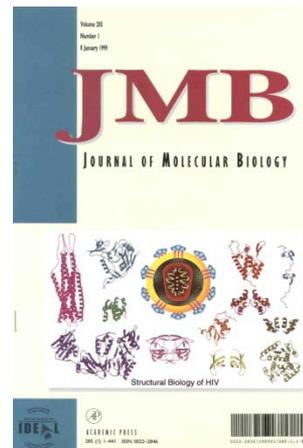
Volume 244, Number 2

November 25, 1994

Brian Turner (M7) 1999

Volume 285, Number 1

January 8, 1999



Ryan Turner (M7) 2000

Volume 301, Number 2

August 11, 2000

BEFORE MEYERHOFF



1. UMBC graduated fewer than 18 African-American S&E majors per year.
2. Typically, fewer than five of these students graduated with a grade point average above 3.0 (on a 1 to 4 scale).
3. Consistent with achievement levels observed at other institutions.

Meyerhoff Study Conducted*



Comparison between:

- Meyerhoff - Students from first three coeducational cohorts (1990-1992)
- Declined - Students who declined Meyerhoff offers and went to other universities (1990-1992)
- Pre-Meyerhoff - Students who entered UMBC prior to Meyerhoff program and met Meyerhoff criteria
- UMBC - students who entered UMBC 1990-1992 who met Meyerhoff Criteria (all African Americans are Meyerhoff students)

* Maton, K., Hrabowski, F. (1999). African American College Students Excelling in the Sciences: College and Postcollege Outcomes in the Meyerhoff Scholars Program. Journal of Research in Science Teaching, 37, 69-654.

INDICATORS OF SUCCESS



Retention

Academic
Performance

Graduate
Program
Completion

Impact on
UMBC

Graduate
Placement

RETENTION



1. To date, the program has supported 768 students, 260 of whom are currently undergraduates with a 96% retention in the sciences and technical fields.
2. 86% (435 of 508 students) of Meyerhoff graduates earned science or engineering bachelor's degrees.
3. 87% (379 of 508) of program graduates went on to graduate or professional school.

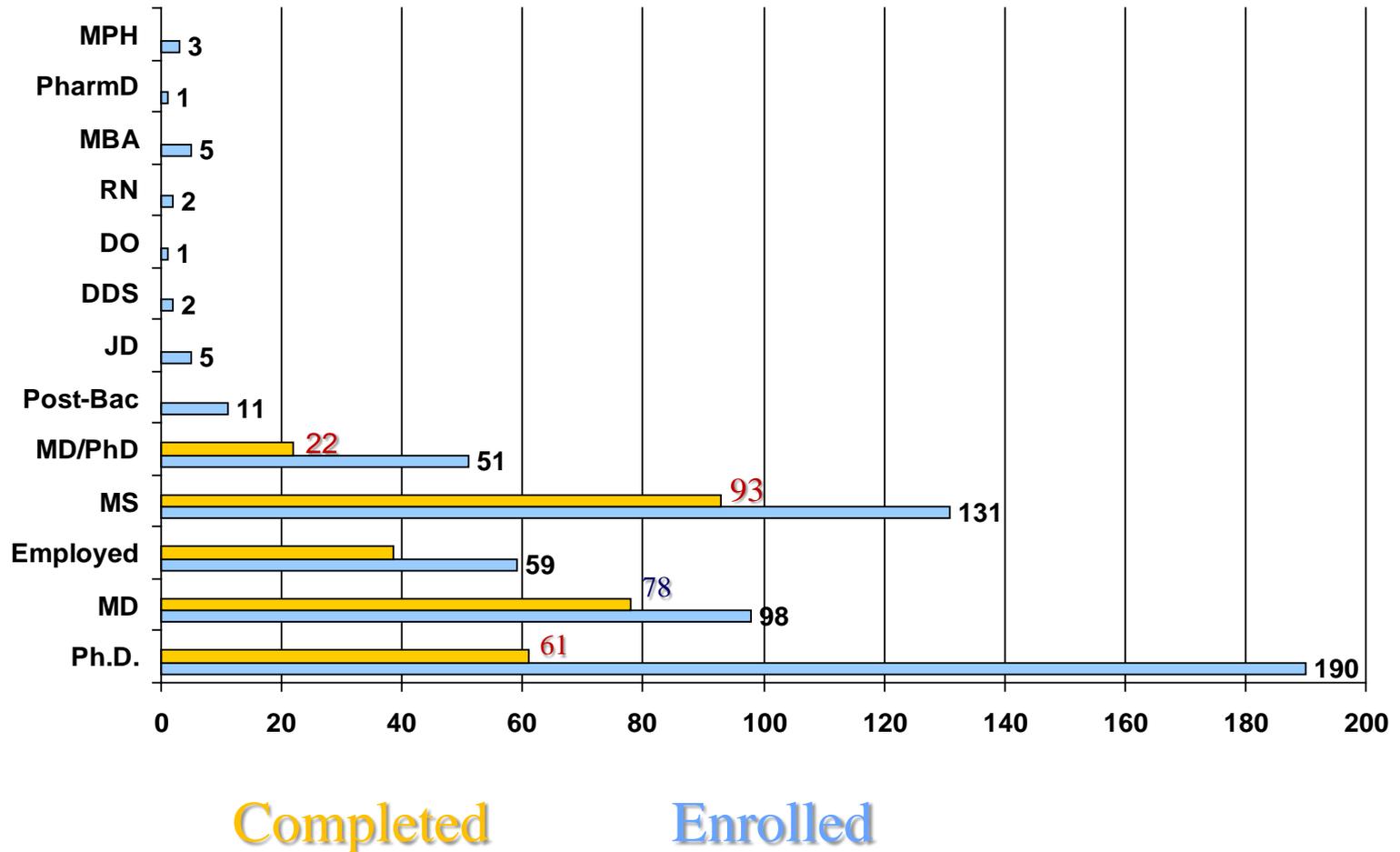
ACADEMIC PERFORMANCE



1. Similar grades and graduation rates. But Meyerhoff students were twice as likely to earn a STEM BS/BA degree.
2. 5.3 times more likely to enroll in post-college graduate study.
3. Meyerhoff students twice as likely to earn STEM BS degrees as Asian, Caucasian, and non-Meyerhoff African-American students with similar preparation and interests.
4. GPAs in science, math and engineering are higher than students with similar profiles.

Matriculation Totals

M1-M15



Matriculation to Top Programs

M.D./Ph.D. Programs

- Case Western Reserve
- Cornell
- Duke
- Harvard
- Johns Hopkins
- New York University School of Medicine
- University of Maryland, Baltimore
- University of Pennsylvania
- University of Alabama, Birmingham
- Medical University of South Carolina
- Washington University

Matriculation to Top Programs



Ph.D. Programs

- **Chemistry** - Cornell, Duke, Rice University of California at Berkeley
- **Computer Science** - Carnegie Mellon, UMBC
- **Electrical Engineering** - Northwestern, Stanford, University of Michigan
- **Information Systems** – Columbia University
- **Mathematics** – Rice University
- **Mechanical Engineering** - Georgia Tech, MIT
- **Physics** – MIT
- **Biophysics** – Oxford University
- **Chemical Engineering** – NC State University, Johns Hopkins University
- **Biochemistry** – University of Virginia, SUNY Stony Brook

IMPACT ON UMBC



1. The average GPA of all African American STEM graduates has increased from 2.70 in 1989 to 3.21 in 2005 (due primarily to the high achievement of the Meyerhoff Scholars (average graduating GPA = 3.42 ± 0.12)).
2. The average GPA of Caucasian STEM graduates has remained relatively unchanged (3.17 ± 0.05).
3. Simultaneous increase in STEM participation among UMBC minority students who are not in the Meyerhoff Program.

IMPACT ON UMBC



4. The number of African-American undergraduates majoring in STEM areas has increased more than sevenfold since 1985 whereas overall African-American enrollment increased 1.4-fold.
5. Overall and S&E enrollments among Latino students have also grown (three and five fold, respectively) since 1985.
6. The number of Caucasian S&E majors also increased during this time period (from 710 to 1287 students, 1.8-fold) at a rate greater than that of total undergraduate enrollment (from 7914 to 9406 students, 1.2-fold).

WHAT HAVE WE LEARNED?



1. Students affiliated with learning communities are more likely to be successful.
2. A Bridge program also should help “demystify” the Academy and the Professoriate.
3. Program should be an integral part of the fabric of the university.
4. All components of the program should lend itself to the broader mission and purpose of the university – academic success and personal growth.
5. Parental involvement should not stop at K-12. Teach parents how to be supportive at this academic level.

CONTACT INFORMATION



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