GOAL:

To facilitate diversification of the science, technology, engineering and mathematics (STEM) workforce.
CURRENT PROGRAMS

- NSF Northeast Alliance for Graduate Education and the Professoriate (NEAGEP)
- NIH Initiative for Maximizing Student Development (IMSD)
- NIH Postbaccalaureate Research Education Program (PREP)
Current Resident Population of the U.S.

- White: 64%
- Black: 14%
- Hispanic: 15%
- Asian and Other: 7%
Projected U.S. Population: 2050

- White: 46%
- Black: 15%
- Hispanic: 30%
- Asian: 9%

Legend:
- White
- Black
- Hispanic
- Asian
How are we doing at UMass Amherst?
The rate of increase in URM enrollment is not paralleled by enrollment of non-URM or international PhD students.
Increased enrollment is explained by increased numbers of applicants, admissions and enrollees.
URMs participation at UMass Amherst has increased, but remains at 5% of the total and 10% of the U.S. STEM PhD student population.
How Are Individual Programs Doing?
Engineering: URM as % Total STEM PhD Students

- Applications
- New Admits
- New Doctoral Enrollees

Mean Total New Enrollees = 69
Engineering Admission Rates for URM and All PhD Students (Mean Past 5 Years)

- Total Admission Rate
- URM Admission Rate

Percentage

Engineering Enrollment Rates for URM and All PhD Students (Mean Past 5 Years)

- Total Enrollment Rate
- URM Enrollment Rate

Percentage

ECE  |  Polymer Sci  |  Chem E  |  Civil  |  MIE
0    |  10           |  20     |  30     |  40
10   |  20           |  30     |  40     |  50
20   |  30           |  40     |  50     |  60
30   |  40           |  50     |  60     |  70
40   |  50           |  60     |  70     |  80

MIE  |  Civil  |  Chem E  |  Polymer Sci  |  ECE
0    |  10     |  20     |  30         |  40
10   |  20     |  30     |  40         |  50
20   |  30     |  40     |  50         |  60
30   |  40     |  50     |  60         |  70
40   |  50     |  60     |  70         |  80
Engineering: URM as % Total STEM PhD Students (Mean Past 5 Years)
Life Sciences: URMs as % Total STEM PhD Students

- Applications
- New Admits
- New Doctoral Enrollees

Mean Total New Enrollees=57/year
Life Science Admission Rates (Mean Past 5 Years)

Percentage

Total Admission Rate
URM Admission Rate

Psych NSB MCB OEB

Life Science Enrollment Rates (Mean Past 5 Years)

Percentage

Total Enrollment Rate
URM Enrollment Rate

NSB MCB OEB Psych
Life Sciences: URMs as % STEM PhD Enrollees (Mean Past 5 Years)
Chemistry: URM as % Total STEM PhD Students

Mean Total New Enrollees=26/year
Computer Sciences: URMs as % Total STEM PhDs

Mean Total New Enrollees=28/year

Applicants
New Admits
New Doctoral Enrollees
Physical Sciences: URM as % Total STEM PhD Students

Applicants
New Admits
New Doctoral Enrollees

Mean Total New Enrollees=18
Mathematics and Statistics: URMs as % Total STEM PhD Students

- **Applicants**
- **New Admits**
- **New Doctoral Enrollees**

**Mean Total New Enrollees=11**
Admission Rates: STEM PhD Programs
(Mean Past 5 Years)
Minority Representation in STEM PhD Programs

URM as % U.S. PhD Enrollees: Social Sciences

URM as % U.S.: Life Sciences

URM as % U.S.: Engineering

URM as % U.S. Students: Chemistry
Minority Representation in STEM PhD Programs

URM as % Total Students: **Physical Sciences**

URM as % U.S.: **Computer Science**

UR as % U.S. Students: **Math and Statistics**

URM as % U.S.: **Geosciences**
Noteworthy Trends: URM as % STEM PhD Students

- Kinesiology
- MCB
- NSB
- Civil Engineering
What Next?

• What is working for your program and should be kept or expanded?

• What is not working and should be abandoned?

• What are some new strategies we could implement?
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Funded by NSF since 1999 (total over $10 million; PIs Charlena Seymour, James V. Staros, PD Sandra Petersen; Co-PIs Donald Fisher and Julian Tyson)

Alliance of 15 institutions led by UMass Amherst

- BU, MIT, Penn State, Rutgers, UConn, URI, UVM, UNH, UMaine

- Bennett College, Jackson State University, Lincoln University, Medgar Evers College and the University of Puerto Rico Mayaguez
Recruiting Activities:

1) Annual Graduate Preview Weekend

2) Partner Science Days

3) Partner Visiting Faculty

4) Going Back Visits by Graduate Students

5) Diversity Team Travels

Funded by NIH ($2.7 million; PI/PD Sandra Petersen; co-PIs Surita Bhatia, Barry Braun, Don Fisher and Sally Powers)

Dr. Heyda Martinez, Program Director
Vanessa Hill, Program Coordinator
Funded by NIH ($1.62 million; PI/PD Sandra Petersen and Lynmarie Thompson)

- Chosen from participants in an 8-week summer research program
- Receive $27,000 stipend, tuition, health insurance for one year
- Take graduate-level courses
- Conduct independent research
- Participate in professional development activities
- Attend social events
- Apply to graduate school at UMass and elsewhere
100% program completion
95% are in graduate school and 85% are in Ph.D. programs at:
UMass Amherst
UMass Medical
University of London
University of Washington
Notre Dame
University of Illinois
University of Chicago
Ohio State University
Vanderbilt
Boston University
Dartmouth College
University of Michigan
University of West Virginia
University of Connecticut