

PUMA-STEM Recruitment and Retention Workshop

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The Louis Stokes Alliances for Minority Participation
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What is PUMA-STEM?

- PUMA-STEM stands for Promotion of Underrepresented Minorities in Academic STEM*
- PUMA-STEM is a collaboration among regional high schools and colleges to increase graduation rates and career success of underrepresented minorities (URMs) in STEM; NSF defines URMs in STEM as including African-American, Hispanic, American Indian, Alaskan Native, and Pacific Islander
- Funded in September of 2016 by a Pre-Alliance Planning Grant from the NSF (National Science Foundation) and the LSAMP (Louis Stokes Alliances for Minority Participation)
- The funded grant is sponsoring workshops and research to improve success of URMs in STEM regionally, with broader impact envisioned through expansion of meaningful academic networks and collaborations with STEM business and industry

Workshop Goals

1. Share and discuss current practices to recruit and retain underrepresented minority students to STEM
2. Identify significant barriers to recruitment and retention of underrepresented minority students in STEM programs
3. Discuss strategies to overcome barriers and increase recruitment and retention of underrepresented minority students in STEM

Workshop Agenda/Timeline:

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|-----------|--|
| 4:30-4:45 | Introduction |
| 4:45-5:30 | Address discussion questions (groups of approx. 4) |
| 5:30-5:50 | Report back to entire group |
| 5:50-6:20 | Discuss findings and possible solutions and improvements |
| 6:20-6:30 | Wrap-up and next steps |

Increasing underrepresented minority persistence in STEM fields – Factors to consider

- Critical Junctures
- Barriers to recruitment and retention
- Factors associated with success
- Recommendations

Critical Junctures

1. Academic preparation for college – completing a rigorous curriculum more important than test scores
2. Graduation from high school - URM students have lower graduation rates
3. Enrollment in college – enrollment rates are up for URM students, but have not increased as much as non-URM students
4. Persistence to earn B.S. or B.A. – URM students have lower 6 year graduation rates

Potential barriers to recruitment and retention

- Lack of academic preparation
- Low confidence
- Imposter syndrome
- Unrealistic expectations
- Lack of community (peers, role models, and mentors)
- Environmental alienation (campus climate, potential “culture shock”)
- Financial need

Factors associated with success

- Mentoring
- Studying frequently with others
- Participating in research
- Involvement in academic clubs or organizations
- Learning communities

Joint working group on improving URM persistence in STEM

- Group convened by National Institute of General Medical Sciences and Howard Hughes Medical Institute
- Reviewed data and proposed focus on “institutional barriers to remove, and interventions that lift students’ interests, commitment, and ability”.
- Influenced by Kurt Lewin’s planned approach to change
- Gave five recommendations for undergraduate institutions

Five Recommendations

1. Track and increase awareness of institutional progress toward diversifying STEM
2. Create strategic partnerships
3. Unleash the power of the curriculum and active learning
4. Address student resource disparities
5. Fire students' creative juices

Discussion Questions:

1. What current practices does your institution use to recruit underrepresented minority students (URMs) to STEM, if any?
2. What are the most significant barriers to recruiting URMs into STEM fields?
3. How do we increase URM student interest in STEM fields and help students see themselves in a future STEM career? What can we do to recruit more URM to STEM programs?
4. Does your institution use any practices to retain URM once they show an interest in STEM?
5. What are the most significant barriers to retaining underrepresented minorities (URMs) in STEM?
6. What can we do help URM students persist in STEM fields?

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