

Best Practices for Recruitment of Students:

1. Availability and Coordination of Financial Resources:

The availability of financial resources for the recruitment process is of paramount importance. Supplemental funding should be maintained for doctoral students to help overcome potential economic burden from matriculating in a doctoral program [3–5].



2. Targeted Recruitment:

Prospective students can be identified through many avenues including by building and maintaining interinstitutional partnerships with minority-serving institutions (MSIs) [1]; engagement with feeder and bridge programs (e.g., AGEP, CREST, HBCU-UP, LSAMP, MARC U STAR, McNair, MS PHD's, PREM, RISE, Western Washington, and others); and participation in national diversity conferences (e.g., GMIS, NSBE, SACNAS, and SHPE).



3. External Marketing Initiatives:

Low-cost, effective recruitment mechanisms (e.g., email exchanges and referrals) [2] can be utilized to disseminate the research expertise of the STEM faculty, establish personal connections, and draw diverse applicants to your doctoral program.



4. Facilitation of Research Experiences:

Hands-on research experiences can be made accessible to prospective students [4,5]; approximately half of the USF Sloan Scholars had prior participation in an REU program (at USF or elsewhere).



5. Create and Maintain a Critical Mass:

Achieving a critical mass of underrepresented minority (URM) doctoral students helps to build a culture of inclusivity within the institution (essentially helping to avoid a sense of isolation), and further presents a welcoming environment for prospective students.



Best Practices for the Retention and Mentoring of Students:

1. Create and Maintain a Climate of Inclusive Excellence:

The institution should ensure an alignment in the institutional culture¹ and climate². The training of faculty, students, and staff on issues of diversity and implicit bias, especially in departments where women and



¹ “the collection of shared values and beliefs that is the blueprint that guides actions” [1]

² “the practices and behaviors that determine the prevailing attitudes in the environment” [1]

students of color are significantly underrepresented or microaggressions are prevalent amongst these groups of students should be encouraged.

2. Student Guidance and Support:

Students have varying strengths and weaknesses, which should be well-understood by the research mentor. Accordingly, the research training that is offered to each student should be individualized by the research mentor. Their training can be further supplemented by workshops offered through the College that would benefit the PhD cohort (e.g., on research methods, technical writing, career development). Each student should partake in short- and long-term planning alongside their mentor(s). Additionally, during the course of their program, a student can experience times of extreme stress and unexpected life events (e.g., family hardships, an illness or death of a close friend or relative). Building a good relationship with your student can help establish trust and, sometimes, the mere act of offering a listening ear can help relieve some of the burden and anxiety your students may be experiencing.



3. Expanding Your Student's Network and Allies:

Students should have access to a diverse group of STEM role models within and external to their institution [3]. The USF UCEM has implemented a multi-dimensional mentoring model to provide Sloan Scholars with support from their research mentor, a peer mentor, mentors external to the discipline, and alumni trainee mentor. This way the Sloan Scholar does not rely on one primary mentor, but rather can obtain mentorship from individuals in varied stages of their career.



Figure 1: Multi-dimensional Mentoring Model initiated by the USF UCEM.

4. Continuous Improvement of Mentorship:

Faculty should aim for continuous improvement of their mentorship. Exemplary mentoring can be recognized (e.g., via college or university-level awards or faculty spotlights) within the institution to further promote continuous improvement.



References:

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- [2] Shadding, C. R., Whittington, D., Wallace, L. E., Wandu, W. S., and Wilson, R. K., 2016, "Cost-Effective Recruitment Strategies That Attract Underrepresented Minority Undergraduates Who Persist to STEM Doctorates," *SAGE Open*, **6**(3), p. 215824401665714.
- [3] Witherspoon, L., 2018, "Understanding the Motivation of Female Ph.D. Students to Enroll and Persist in STEM-Related Fields," University of Oregon.
- [4] The National Academies, 2011, *Expanding Underrepresented Minority Participation*, Washington, D.C.
- [5] Advisory Committee for Academic Diversity, 2007, *Manual of Best Practices for Recruiting and Retaining Underrepresented Groups in Ecology and the Environmental Sciences*.