

## 1. INTRODUCTION

In an era of phenomenal discoveries in chemical sciences and related fields, our nation is faced with the challenge of producing a generation of diverse scientific leaders who can tackle 21<sup>st</sup> century challenges. Underrepresented minority<sup>1</sup> (URM) students now make up a third of the college-age U.S. citizens, yet they earn about 18% of U.S. chemistry Bachelor's degrees and about 11% of chemistry PhDs. Graduation data show that the current paradigm of moving students from undergraduate to graduate education fails to include many URM students.

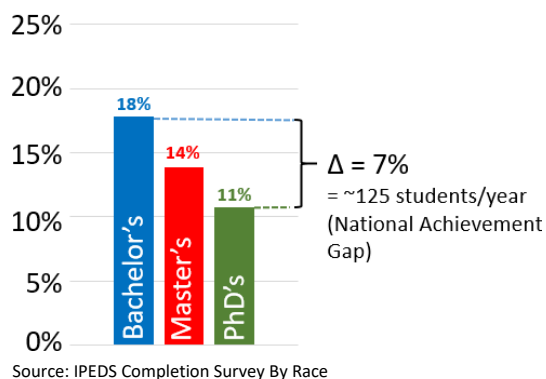
The American Chemical Society Bridge Program (ACS-BP) is an effort to increase the number of chemical science PhDs awarded to URM students. As part of a national effort, the [Inclusive Graduate Education Network \(IGEN\)](#), ACS-BP is doing this by creating sustainable transition (bridge) programs and a national network of doctoral granting institutions that provide substantial mentoring for students to successfully complete PhD programs.

The ACS-BP incorporates practices from programs that have strong evidence of success in supporting URM students. The ACS-BP will also establish links between minority-serving undergraduate institutions and doctoral-granting institutions through research activities, collaboration, and personal contacts. Since many of today's doctoral students will become tomorrow's academic, industrial, and government leaders; educating more URM PhDs will have a multiplicative effect in educating and inspiring students at all stages in the system and will help address persistent disparities.

The ACS-BP mission is to strengthen the chemical sciences in the United States by increasing the number of underrepresented minority students who receive doctoral degrees in chemical sciences. The project has the following goals:

1. Increase, within ten years, the fraction of chemical science PhDs awarded to *underrepresented minority* students to match the fraction of chemical science Bachelor's degrees granted to these groups
2. Develop, evaluate, and document sustainable model bridging experiences that improve the access to and culture of graduate education for *all* students, with emphasis on those underrepresented in doctoral programs in chemical sciences
3. Promote and disseminate successful program components to the chemical science community

**Degrees to Underrepresented Minorities in Chemistry (5-yr average 2013-2017)**



The ACS Bridge Program has support from the National Science Foundation through grant NSF-1834545, the Genentech Foundation, and through the American Chemical Society. More information about the program is available at [acs.org/bridge](http://acs.org/bridge).

<sup>1</sup> The project defines underrepresented minorities as African American, Hispanic American and Native American

## 2. PROGRAM DESCRIPTION

The ACS Bridge Program invites your department to consider joining a network of “Partners” – departments that will provide URM students with a smooth transition into graduate programs. The ACS Bridge Program (ACS-BP) expects a large number of students’ applications each year for the program. Because we might be unable to accommodate all students in programs at ACS funded Bridge Sites; we aim to identify other departments that are interested in recruiting students into their masters or doctoral programs. In addition, while many students who enter bridge programs might matriculate into the doctoral program at that institution, there might be a significant need to have available other institutions that are willing to attract bridge students to their doctoral programs. Since our first priority is to ensure a supportive pairing between student and graduate program, we plan to establish Partners to vet programs for students and to help departments committed to the principles underlying the Bridge Program recruit students to their programs. This document provides guidelines by which institutions can apply to become ACS Bridge Program Partners, and criteria we use to select these institutions. The procedure for becoming a Partner will require institutions to submit a brief proposal detailing programs and practices that support students entering their doctoral program.

## 3. ELIGIBILITY

The Partner must be at a college or university that offers a Master and/or Doctoral degree in chemical sciences and be located and accredited in the United States, including Puerto Rico. The institution must have active research programs readily available to students throughout the academic year.

## 4. BENEFITS

Departments that become Partners will be able to take advantage of benefits granted to Community Departments in addition to the following:

### *Unique benefits afforded to Partners*

- Access to ACS-BP Bachelor’s and Master’s student applicant database (an annual recruitment effort by the ACS to identify URM students interested in pursuing doctoral studies in the chemical sciences)
- Public recognition by ACS of the department’s commitment to diversity in the chemical sciences
- Endorsement of the graduate program to URM students in Bridge Programs and to others who contact ACS to inquire about possible recommendations for departments that have supportive post-baccalaureate educational environments
- Featured on ACS and ACS-BP websites
- Access to individuals involved the project and at existing bridge sites who are knowledgeable about support strategies for URM students in graduate studies
- Strengthening Broader Impacts statements in federal grant applications

## 5. APPROVAL PROCESS

Partner applications will be reviewed by members of select ACS committees and the management team of the Bridge Project. Following a successful review, the Bridge Project management and members of the select ACS committees will conduct either a videoconference review or on-site review of the department.

### 5.1 PROPOSAL SUBMISSION

Institutions that would like to be considered as a Partner are required to submit their 5-page proposal. Proposals that exceed the page limit will not be read beyond the stated page limit. Institutions are

encouraged to utilize the available [ACS Bridge Program Partner – Proposal Template](#). Proposals will be reviewed biannually for approval. **The deadline for proposals is June 1, yearly at 5 p.m. ET.**

Proposals must be sent as a single PDF document (as an email attachment, or for larger files to a “Dropbox” folder by prior arrangement) to Joerg Schlatterer at [bridge@acs.org](mailto:bridge@acs.org) (Subject: Partner Proposal – ACS Bridge Program). **Late proposals will not be accepted.**

## 5.2 REVIEW OF PROPOSALS

Members of select ACS committees and the ACS-BP Project Management will review applications. The following considerations are used in evaluating proposals.

- Engaged & Committed Faculty
  - Active faculty participation is defined as a group that includes a minimum of 10-15% of tenured faculty in the department. This group must include the chair and/or the Director of Graduate Studies (DGS) or equivalent
- Mentoring Activities
  - Mentoring and Mentor Training experience
    - Examples of departmental participation in mentor training experiences
    - Examples of previous URM mentoring success
  - In case there has been no previous experience mentoring URM:
    - Outline of a Mentor/Mentee Training Plan that may include
      - Research and professional development programs
      - Ideas on how to identify and recruit students to serve as peer mentors for students brought in from the ACS-BP
      - Examples of a Mentor-Mentee compact - a formal agreement that outlines the expectations and responsibilities of the mentor and mentee
- Admissions Practices & Benefits
  - Use of multi-faceted admission criteria that, along with traditional measures of academic preparation, examine a broad range of indicators of a student’s potential to conduct original research, and that specifically do not employ strict GRE cutoff metrics
  - Description of how graduate admission decisions are made and what inputs are considered
  - Financial support package and health benefits awarded to students
- Advising & Induction
  - Evaluation and advising procedures for students who are accepted, but lack some key undergraduate preparation (e.g. can students take upper-division undergraduate courses?)
  - Description of how students find an appropriate research advisor
  - Department procedure for inducting students into graduate student academic and social cultures
  - Description of department level relocation assistance, housing initiative, student handbook, etc
  - If applicable, strategies for preparing students for applying to PhD programs (GRE preparation, application coaching, etc.)
  - Description of institutional resources that support the mental well-being of students.
  - Description of the departmental use of Individual Development Plans (IDPs) for the professional advancement of any graduate students

- Student Progress & Monitoring Procedures
  - Describe how student progress is monitored in the first few semesters
    - Early intervention plans in case student is doing poorly, including tutoring assistance, considerations of add/drop dates, and having students enroll in different level courses
  - Exam structure for reaching candidacy
    - Comprehensive or qualifying exam (include description of exam, passing rates, policy on retaking)
    - PhD candidacy exam (include description of exam, and passing rates if applicable)
  - Long term progress monitoring plans for students
  - Presence of an Ombudsman or procedure on how grievances are handled
- Data & Demographics
  - Retention rate of all students and of any underrepresented minority students from admission to graduation
  - Description of why students left the graduate program in the past five years if known
  - Number of students (total and URM):
    - Applicants who applied in the previous year
    - Students who were accepted into the program
    - Students who are currently enrolled
- Additional Information
  - Describe the anticipated and additional value of becoming an ACS Bridge Partner to your department and institution
  - Describe what additional support the department will provide to ensure that the Bridge Fellow(s) is well acclimated into the program/university/city, as applicable

### 5.3 REVIEW OUTCOMES

Members of select ACS committees and the ACS Bridge Team will review all submissions. Possible outcomes from the panel review are as follows:

- 1) Approved
  - Full approval: Comments and suggestions from the panel review will be made available.
  - Provisional approval: Proposals can be provisionally approved pending submission of a supplement that discusses concerns raised in the panel review. The response will be reviewed by the aforementioned group(s), as appropriate.
- 2) Denied
  - Proposals with significant issues will be contacted to help them address these concerns, and encouraged to resubmit as appropriate.

### 5.4 VIDEOCONFERENCE WITH GRADUATE PROGRAM, BRIDGE TEAM, AND MEMBERS OF SELECT ACS COMMITTEES

Once the proposal has been reviewed and the committee has made a decision to move forward with the process, the project will schedule a 2-hour videoconference with members of review committee to gather more information and establish a personal link with the institution's leadership. A videoconference will include the following:

- Institution liaison (if not the chair or DGS)
- Chair of the department and the Director of Graduate Studies

- A selection of graduate students

The videoconference provides the institution an opportunity to discuss specific efforts that support minority students. Details of how this is organized will be provided in advance. In cases where the project has already conducted an in-person site visit this step can be waived.

#### **5.5 REPORT PREPARED AND APPROVAL ISSUED**

After the review as described above, the ACS Bridge Team and the select ACS Committees will recommend the institution, receive approval, and begin receiving Partner benefits. The team will also provide a brief evaluative feedback report to the department where appropriate; to outline specific actions they might consider to further improve their support for students.

#### **5.6 SITE VISIT BY ACS BRIDGE TEAM AND SELECT ACS COMMITTEE MEMBERS**

Site visits will be conducted with departments that admit students that have been recruited through the ACS Bridge Program resources. The main goals of the visits are to build relationships with faculty and students, understand the program's components, and visit with students recruited by the institution. Visits will also provide a chance to inform faculty and students of the ACS-BP, IGEN, and other related efforts (New Faculty Workshop, Career Mentoring Resources, related ACS and NOBCCHE National Meeting programming, etc.). The visiting team members will also learn about research activities and their perspectives on diversity as well as how ACS may help in their efforts.

Although our intention is to visit all institutions that accept students, time constraints may limit or delay the implementation of this activity for some departments.

#### **6. EXPECTATIONS OF BRIDGE PARTNERS**

The following are expectations for continuing as a recognized Partner:

1. Complete an annual survey on institutional diversity efforts and demographics
2. Identify and recruit students to serve as peer mentors to students brought in by the ACS-BP
3. Participate in collaborative discussions with other Partners and the ACS-BP on practices that improve all programs
4. Engage faculty / staff / students both internally and externally in discussions that improve the access to and culture of graduate education for all students
5. Inform ACS-BP of all offers and student acceptances from the ACS-BP application pool
6. Work with ACS-BP to track student progress
7. Renewal of certification should be completed every 5 years or with the change of the Director of Graduate Studies (DGS), whichever happens first.

For institutions that accept Bridge Students, we will require ongoing communication with the local site leader for periodic updates on student progress. Where possible, we may ask the institution to provide information on students that participated in programs created for students from the ACS-BP applicant pool, but were independently recruited, for comparison reasons. This will be done with appropriate permissions and precautions.

More details about the ACS Bridge Program are available at [www.acs.org/bridge](http://www.acs.org/bridge). The ACS Bridge Team encourages inquiries and consultation during the proposal writing process. Inquiries can be directed to Joerg Schlatterer (202-872-8734) [j\\_schlatterer@acs.org](mailto:j_schlatterer@acs.org) or [bridge@acs.org](mailto:bridge@acs.org).