Broadening Participation in Pre-College STEM Programs

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Diversity Programs in Engineering


NOTE: “Other” includes the following race categories: Native Hawaiian or Other Pacific Islander, American Indian/Alaska Native, and Two or more races. Numbers for the year 2000 are from the Decennial Census. All other years are population estimates. Prior to 2000, Asian includes Native Hawaiian or Other Pacific Islander. The category “Two or more races” was not an option prior to 1996. Race categories exclude persons of Hispanic ethnicity.


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Sample Program Model: The CATALYST Academy

- One-week residential program focused on introducing URM and first generation high school students to engineering and engaging them in faculty-led research projects.
- Annual cohort of 36 students from schools across the country
- Partnering Organizations include: Project High Jump, the Kohala Center, the Motorola Foundation, Upward Bound Programs, Society of Hispanic Professional Engineers, Polytechnic High School, and others

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Best Practice Model: Urban Bird Gardens

- Partnership of the Cornell University Lab of Ornithology & Seven Hispanic Serving Community Based Organizations in Chicago, Los Angeles, New York City, Houston, Phoenix, and Miami

Planning Steps Included

- Community Partner Interviews
  - To develop best practices in working with Latino community
  - To better understand the resources and needs of organizations working with Latino families
  - To better understand the needs and strengths of their communities

- Community Profile Research
  - To better understand communities and larger context
  - To better understand community dynamics
### AAUW – Why So Few Women in STEM?

<table>
<thead>
<tr>
<th>Attract &amp; Retain Female &amp; Underrepresented Minority (URM) Students in STEM</th>
<th>Key Recommendations</th>
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<tbody>
<tr>
<td>Actively recruit women and URM students into STEM programs and majors</td>
<td>Send an inclusive message about who makes a good science or engineering student</td>
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<td>Emphasize real-life applications in early STEM courses and experiences</td>
<td>Teach educators about stereotype threat and the benefits of growth mindset</td>
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<td>Make performance standards and expectations clear in STEM courses</td>
<td>Take proactive steps to support female and URM students pursuing STEM experiences and majors</td>
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<th>Counteracting Bias</th>
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<td>Learn about your own implicit bias.</td>
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<td>Keep your biases in mind.</td>
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<td>Take steps to correct for your biases.</td>
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<td>Raise awareness about bias against women/girls and URM students in STEM fields.</td>
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<td>Create clear criteria for success and transparency.</td>
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Break Out Groups

1. Burning Questions & Challenges
2. Near & Long Term Priority Actions
3. Individual Action Plans
4. Small Group Report Out

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