Celebrating Partnerships:
2015 NACME Continuum Meeting

Falls Church Marriott, Fairview Park
Falls Church, VA

October 13-14, 2015
Corporate Sponsor
Connectivity 2015 Strategic Plan:
Scholarship Program (2010-2015)

• Purpose
  – Increase awareness about the accomplishments of NACME’s 2010-2015 Scholarship and University Relations plan
  – Increase awareness about the National Science Foundation (NSF) opportunities
  – Share the NACME Scholar program’s framework for the next five years
  – Present key findings from NACME’s NSF-funded research project, The Big Study
Connectivity 2015 Strategic Plan: Scholarship Program (2010-2015)

• Meeting Takeaways
  – Provide the audience with information about joint accomplishments
  – Brainstorm areas of mutual interest for joint grant proposal
  – Provide input to NACME Scholar program’s framework
  – Disseminate lessons learned from *The Big Study*
Accomplishments for 2010-2015 Plan

Aileen Walter
Vice President, Scholarships and University Relations & Corporate Internships
NACME, Inc.
Connectivity 2015 Strategic Plan:
Scholarship Program (2010-2015)

Goals:

• NACME’s program goals are accomplished through partnerships focused on four strategies:
  – Establish and deepen engagement through partnerships;
  – Build institutional capability;
  – Learn from our programs; and
  – Transfer and adapt knowledge
Connectivity 2015 Strategic Plan:
Scholarship Program (2010-2015)

**Rationale:**

Support institutions that demonstrate their capacity to recruit, admit, retain, educate and graduate URM engineering students
# NACME Scholars Program (Block Grant) Process

## Invitation to Submit Proposals
- NACME develops a Request for Proposals that outlines the requirements to be considered for a grant
- Extends an invitation to college and university presidents/deans of engineering to submit a proposal to NACME

## Selection Guidelines
- **Recruitment**
  Committed institutional leadership

- **Admissions**
  Published admissions policies that reflect a holistic approach

- **Pre-Matriculation Enrichment Summer Programs**
  Designed to enrich intellectual exchange & prepare students for life at a university

- **Community Building**
  A campus community of faculty, students, and administrators to increase student engagement

## Selection Process
- Identifies institutions that have committed to staffing, financial resources, and support structures to improve URM engineering student success
- Partnerships with institutions that have committed to increase the enrollment and graduation rate of URM engineering students

## Conditions of Award
- Payment Distribution
- Guidelines for selection of the NACME Scholars
- Grant award amounts
- Institutional Metrics:
  - NACME Scholars
  - All Minority Engineering Students
- NACME Scholar Orientation
- NACME’s Resume Platform to enable Scholar opportunity for Summer Internships
### Connectivity 2015 Strategic Plan:

#### Performance Metrics

**Institutional Metrics: NACME Scholars**
- Retain to graduation 80% of NACME Scholars
- Retain to graduation 90% of NACME Scholars who transfer from the community college

**Institutional Metrics: All Minority Engineering Students**
- Baseline enrollment and graduation rates are established for each institution’s engineering students by race and ethnicity.
- Retention rates and six-year graduation unit record counts and rates are requested and measured at the end of each year.
- Partnership agreements are reviewed during the final year of funding.
- NACME expects evidence of continuous increase of the unit record graduation counts and rates of underrepresented minorities from year to year.
## Connectivity 2015 Strategic Plan:
### NACME Funded Partner Institutions

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<thead>
<tr>
<th>COHORT 1</th>
<th>COHORT 2</th>
<th>COHORT 3</th>
<th>COHORT 4</th>
<th>COHORT 5</th>
<th>COHORT 6</th>
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</thead>
<tbody>
<tr>
<td>Arizona State U*</td>
<td>California State U, Los Angeles*</td>
<td>Kansas State U**</td>
<td>Drexel U*</td>
<td>U of Arkansas**</td>
<td>Texas A&amp;M</td>
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<tr>
<td>The City College of New York</td>
<td>California State U, Sacramento</td>
<td>Kettering U**</td>
<td>Purdue U</td>
<td>Louisiana State U**</td>
<td>San Jose State U</td>
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<tr>
<td>Florida International U**</td>
<td>New Jersey Inst. of Technology**</td>
<td>Michigan Technological U*</td>
<td>U of Michigan, Ann Arbor**</td>
<td>Morgan State U</td>
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<tr>
<td>Georgia Inst. of Tech**</td>
<td>NYU Polytechnic Inst**</td>
<td>Northern Arizona U</td>
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<td>U of Alaska**</td>
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<tr>
<td>Missouri U of Science and Tech**</td>
<td>U of Colorado – Boulder**</td>
<td>Prairie View A&amp;M</td>
<td></td>
<td>Polytechnic U, Puerto Rico**</td>
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</tr>
<tr>
<td>North Carolina A&amp;T</td>
<td>U of Texas, El Paso**</td>
<td>Rochester Inst of Tech**</td>
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<tr>
<td>North Carolina State U*</td>
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<td>Tuskegee U</td>
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<td>U of California, San Diego</td>
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<td>U of Houston</td>
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<td>U of Central Florida</td>
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<td>U of Illinois, Chicago*</td>
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<tr>
<td>U of Texas, San Antonio</td>
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<tr>
<td>U of Washington</td>
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</tr>
<tr>
<td>Virginia Polytechnic Inst. and State U</td>
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</table>

* Discontinued Program; **In-Kind Partner Institutions
### Connectivity 2015 Strategic Plan:

<table>
<thead>
<tr>
<th>NACME Partner Institutions</th>
<th>Making In-Kind Contributions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bucknell U</td>
<td>U of Akron</td>
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<tr>
<td>Cornell U</td>
<td>U of Alabama</td>
</tr>
<tr>
<td>Fairfield U</td>
<td>U of Bridgeport</td>
</tr>
<tr>
<td>Jackson State U*</td>
<td>U of Idaho</td>
</tr>
<tr>
<td>Milwaukee School of Engineering</td>
<td>U of Illinois Urbana-Champaign</td>
</tr>
<tr>
<td>Rose-Hulman Institute of Technology</td>
<td>U of Kentucky</td>
</tr>
<tr>
<td>Rutgers U</td>
<td>U of Maryland Baltimore County</td>
</tr>
<tr>
<td>Stevens Institute of Technology</td>
<td>U of Oklahoma*</td>
</tr>
<tr>
<td>SUNY Oswego</td>
<td>U of Southern California</td>
</tr>
<tr>
<td>Syracuse U</td>
<td>U of Texas at Dallas</td>
</tr>
<tr>
<td>Tennessee Technological U</td>
<td>West Virginia U</td>
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</tbody>
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* Discontinued Programs
NACME Scholars Supported
2010-11 to 2014-15 (n=3,472)

Average GPA = 3.3 on a 4.0 scale

NACME SCHOLARS BY ETHNICITY
- African American (1389)
- American Indian (157)
- Latino (1860)
- Other (66)

NACME SCHOLARS BY ACADEMIC DISCIPLINE
- Biomedical/Bio Engineering (182)
- Chemical Engineering (336)
- Civil/Environmental Engineering (413)
- Computer Engineering (297)
- Computer Science (142)
- Electrical Engineering (556)
- IE/OR (189)
- Mechanical Engineering (734)
- Other (86)
- Other Engineering (537)

NACME SCHOLARS BY GENDER
- Male (2326)
- Female (1146)
NACME ScholarsSupported
2010-11 to 2014-15

NACME SCHOLARS BY PROGRAM
(n=3,472)

- NACME Scholars - Supported Board Gift (1,668)
- Fellowships (32)
- NACME Scholars - Partner Inst. - In-Kind Gift (1,462)
- Pre-Engineering - Restricted Gifts (310)

NACME PAID SCHOLARSHIPS
(n=1,668)

- Graduates (848)
- Current (600)
- Dropped/Withdrawn (220)

$7,132,400 Total Block Grant Paid

NACME SCHOLARS – TRANSFERS FROM COMMUNITY COLLEGE (n=238)

- Graduates (138)
- Current (75)
- Dropped/Withdrawn (58)
Accomplishments for 2010-2015 Plan
NACME Scholar Graduation Rates and Survey Results

Dr. Christopher Smith
Director, Research and Program Evaluation
NACME, Inc.
Connectivity 2015 Strategic Plan:
Engineering Bachelor’s Degrees Awarded to URMs, 2013

Connectivity 2015 Strategic Plan:
Partner Institution Six Year Graduation Reports

• In a study of NACME Block Grant Institutions (for the first four years of the program):
  – The six-year graduation rate of NACME Scholars was 79.1 percent
  – The overall six-year graduation rate for minority students at these institutions was 39.3 percent
  – The overall six-year graduation rate for non-minority students at these institutions was 60.3 percent

• Follow up study in 2015-16 funded by the GE Foundation
Connectivity 2015 Strategic Plan:
Partner Institution Six Year Graduation Reports – Institutional Supports

- Multicultural Engineering Program (MEP)
- Program for Mastery in Engineering Studies (PROMES)
- Summer bridge programs
- Supplemental Instruction (SI) for STEM courses
- Residential learning communities
- Mentoring opportunities
- NSF-Funded Big Study looking at Success Factors for URMs at NACME Partner Institutions
Connectivity 2015 Strategic Plan:
NACME Survey Results – Highlights

• Annually, NACME Surveys Scholars in all years of enrollment
  – Orientation Survey for first year scholars
  – Graduating Senior Survey for final year scholars
  – Annual Survey for all other scholars

• Printed scholar reports and interactive data tool available at www.nacme.org
Connectivity 2015 Strategic Plan: NACME Survey Results – Highlights

How prepared do students feel to get an engineering degree based on their work in high school?  n = 293

- Very Prepared: 35.2%
- Somewhat Prepared: 45.4%
- Somewhat Unprepared: 14.0%
- Very Unprepared: 5.5%
## Connectivity 2015 Strategic Plan: NACME Survey Results – Highlights

### Student Services (n=290)

<table>
<thead>
<tr>
<th>Service</th>
<th>Available</th>
<th>Usage</th>
<th>Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Advising</td>
<td>96.8%</td>
<td>70.5%</td>
<td>44.6%</td>
</tr>
<tr>
<td>Supplementary instruction</td>
<td>68.9%</td>
<td>47.3%</td>
<td>24.4%</td>
</tr>
<tr>
<td>Tutoring</td>
<td>80.8%</td>
<td>41.5%</td>
<td>35.6%</td>
</tr>
<tr>
<td>Mentoring</td>
<td>70.1%</td>
<td>48.6%</td>
<td>46.1%</td>
</tr>
<tr>
<td>Programs to assist with transfer from a 2-year college</td>
<td>17.7%</td>
<td>8.9%</td>
<td>5.2%</td>
</tr>
<tr>
<td>Peer mentoring programs</td>
<td>53.6%</td>
<td>32.3%</td>
<td>23.4%</td>
</tr>
<tr>
<td>Research opportunities</td>
<td>86.5%</td>
<td>49.7%</td>
<td>37.3%</td>
</tr>
<tr>
<td>Internship or co-op opportunities</td>
<td>89.4%</td>
<td>66.5%</td>
<td>56.5%</td>
</tr>
<tr>
<td>Professional association membership</td>
<td>78.6%</td>
<td>64.2%</td>
<td>41.1%</td>
</tr>
<tr>
<td>Travel funds to attend conferences</td>
<td>58.9%</td>
<td>34.2%</td>
<td>35.4%</td>
</tr>
<tr>
<td>International research experiences</td>
<td>39.3%</td>
<td>5.4%</td>
<td>18.3%</td>
</tr>
<tr>
<td>Study abroad</td>
<td>75.4%</td>
<td>14.1%</td>
<td>35.5%</td>
</tr>
</tbody>
</table>
Connectivity 2015 Strategic Plan:
NACME Survey Results – Highlights

Do the NACME Scholars receive Pell Grants to finance their education? n = 189

- Yes: 66.7%
- No: 27.0%
- I do not know: 6.3%
Connectivity 2015 Strategic Plan: NACME Survey Results – Highlights

What are the educational plans for the NACME Scholars in their first year out of college? n=260

- Do not plan to pursue additional courses or degrees: 37.3%
- Pursue a master's degree in engineering: 16.2%
- Pursue some graduate school coursework: 9.6%
- Pursue some other degree: 6.5%
- Do not plan to pursue additional courses or degrees: 30.4%
### Connectivity 2015 Strategic Plan:
NACME Survey Results – Highlights

**Factors that "Greatly Influenced" Post-Graduate Plans**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional interests</td>
<td>61.8%</td>
</tr>
<tr>
<td>Working conditions (e.g., hours, equipment, working environment)</td>
<td>48.5%</td>
</tr>
<tr>
<td>Compensation package (pay, bonuses, etc)</td>
<td>45.6%</td>
</tr>
<tr>
<td>Job location</td>
<td>41.1%</td>
</tr>
<tr>
<td>Promotion opportunities</td>
<td>40.7%</td>
</tr>
<tr>
<td>Family-related reasons (e.g., children, spouse's job, desire to be near relatives)</td>
<td>22.8%</td>
</tr>
<tr>
<td>Worked previously for the employer in an internship/co-op</td>
<td>21.6%</td>
</tr>
<tr>
<td>Job in field of study not available</td>
<td>10.8%</td>
</tr>
<tr>
<td>Worked at a similar company as an intern/co-op</td>
<td>8.7%</td>
</tr>
</tbody>
</table>
Connectivity 2015 Strategic Plan:
NACME Survey Results – Summary

• NACME Scholars have significantly higher six-year graduation rates than other engineering students, specifically URMs
  – Well prepared out of high school
  – Publish best practices from universities
    • NSF and GE Studies
• The majority of NACME Scholars are high-needs students
• NACME Scholars vary in their usage of on-campus supports
• NACME Scholars have varied career goals, including venturing outside of engineering
Q&A