Engineering affects all of our lives in ways that were not imaginable 50 to 75 years ago. . . . we all have new conveniences and tools in our homes. . . . Unfortunately, people no longer understand what’s going on inside all these black boxes, and engineering has become a process that just a few people really understand. All of this means the role of engineers will be even more important in the future.

John Brooks Slaughter, Former President and CEO of NACME

### Highlights:
- Number of bachelor’s degrees has grown steadily since 2000: 68,735 in 2009 (ASEE, computer science excluded).
- The share of engineering degrees earned by members of the three major underrepresented groups declines as degree level increases.
  - 12% bachelor’s
  - 7% master’s
  - 3% doctorates.
- Temporary residents (“foreign students”) earned 55% of all engineering doctorates awarded in 2009 (ASEE, incl. computer science in engineering colleges).
- Mechanical and electrical engineering continue to be the largest disciplines, accounting for just over HALF of all new engineers in 2009 (ASEE).
- The most popular disciplines for women are different than for men: chemical, industrial and bio- engineering are key areas.
- The number of bachelor’s degrees earned by Hispanics has increased from just over 1,000 in 1979 to over 5,000 in 2008 (IPEDS).
- The number of engineering bachelor’s degrees awarded to Blacks has leveled off at just over 3,000 in recent years (IPEDS).

### Number of U.S. Engineering Degrees by Year and Level, 1979 - 2008

<table>
<thead>
<tr>
<th>Year</th>
<th>Bachelor’s Degrees</th>
<th>Master’s Degrees</th>
<th>Doctoral Degrees</th>
</tr>
</thead>
<tbody>
<tr>
<td>1979</td>
<td>10,000</td>
<td>5,000</td>
<td>300</td>
</tr>
<tr>
<td>2000</td>
<td>68,000</td>
<td>30,000</td>
<td>5,000</td>
</tr>
<tr>
<td>2008</td>
<td>80,000</td>
<td>40,000</td>
<td>6,000</td>
</tr>
</tbody>
</table>

### Number of Bachelor’s Degrees Earned by Members of Each Ethnic Category, Selected Years, 1979-2008

- **Hispanic**:
  - 1979: 981
  - 2008: 246,333
- **Black**:
  - 1979: 4409
  - 2008: 28,399
- **Am. Ind./ Alaska Nat.**:
  - 1979: 101
  - 2008: 109

Source: NACME analysis of IPEDS data via National Science Foundation’s WebCASPAR database system.

**URMs = Underrepresented Minorities – includes:**
- Blacks (non-Hispanic)
- American Indians/Alaska Natives
- Hispanics

**Data Source**: Trend analyses in this brief used degree data from the Integrated Postsecondary Education Data System (IPEDS) accessed via the National Science Foundation’s WebCASPAR Database, in which 2008 is the most recent year of data availability. Analyses for 2009 are based on data provided by the American Society for Engineering Education, Michael Gibbons, Director of Data Research and Programs. All analyses by NACME Research, Evaluation and Policy department.
Number of Engineering Bachelor's Degrees by Discipline and Sex, 2009
(Percent shown are percent female within each discipline.)

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Females</th>
<th>Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE/CS/CE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ME</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Civil/Env.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chem.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bio.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aero.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total BS degrees</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total females</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total engineering BS degrees, 2009</td>
<td>74,387</td>
<td>21,185</td>
</tr>
</tbody>
</table>
--> Awarded at NACME Partners, 2009 | 21,185 |
Engineering degrees earned by URMs, 2009 | 9,034 |
--> Awarded at NACME Partners, 2009 | 3,267 |
Percent Females, BS degrees, 2009, all | 18% |
--> Percent URM females, BS awarded at NACME Partners, 2009 | 24% |

Why two different data sources?
ASEE data are collected from colleges of engineering, so reflect the number of degrees awarded in those units, including 5,652 bachelor’s degrees in computer science. IPEDS data are collected from colleges and universities subject to Title V – i.e., they accept federal funds – so degrees are reported regardless of the organizational unit that awarded the degree. ASEE is limited to a specific set of some 360 colleges of engineering whereas virtually every college or university is included in the IPEDS data. ASEE is able to provide more immediate data (i.e., 2009 as shown here) but does not go back as far as the IPEDS data, the latter is better for long-term trends. ASEE also provides more detailed data, in general, about colleges of engineering and about the disciplines in which degrees are awarded in those colleges.

NACME Partner Universities

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California State Univ., Los Angeles North Carolina A&T State Univ. Univ. of California, San Diego
California State Univ., Sacramento North Carolina State Univ. Univ. of Central Florida
Cornell Univ. Northern Arizona Univ. Univ. of Colorado – Boulder
Drexel Univ. Polytechnic Institute of New York Univ. Univ. of Houston
Fairfield Univ. Polytechnic Univ. of Puerto Rico Univ. of Illinois, Urbana-Champaign
Florida A & M Univ. Prairie View A&M Univ. Univ. of Kentucky
Florida International Univ. Purdue Univ. Univ. of Maryland, Baltimore County
Georgia Institute of Technology Rochester Institute of Technology Univ. of Maryland, College Park
Illinois Institute of Technology Rose-Hulman Institute of Technology Univ. of Missouri, Columbia
Kansas State Univ. Stevens Institute of Technology Univ. of Southern California
Kettering Univ. Syracuse Univ. Univ. of Texas, El Paso
Louisiana State Univ. Tennessee Technological Univ. Univ. of Texas, San Antonio
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Milwaukee School of Engineering Tuskegee Univ. Virginia Polytechnic Institute and State Univ.
Missouri Univ. of Science and Technology University of Alaska, Anchorage West Virginia University

About NACME
Since its founding over 35 years ago, NACME has stayed true to its mission: To insure American resilience in a flat world by leading the national effort to expand U.S. capability via better engagement of African American, American Indian and Latino women and men in science, technology, engineering and mathematics (STEM) education and careers. NACME alumni hold leadership positions in industry, medicine, law, education and government. With funding from corporate and individual donors, NACME has supported over 22,000 students with more than $114 million in scholarships and other support. Currently, NACME provides scholarship support to more than 1,300 college engineering students through a national network of 51 partner universities. NACME has partnered with the National Academy Foundation and Project Lead The Way to launch a national network of urban-centered, high-school Academies of Engineering to strengthen students’ science and math readiness for college-level engineering. http://www.nacme.org.

Acknowledgements: This brief was completed by Lisa M. Frehill, NACME Director of Research, Evaluation and Policy (lfrehill@nacme.org). The author is grateful for 2009 data provided by Michael Gibbons of the American Society for Engineering Education and comments provided by the NACME Research and Policy Advisory Council: Linda S. Hagedorn, Iowa State University; Shaun Harper, University of Pennsylvania; Gary S. May, Georgia Institute of Technology; Jose Moreno, California State University, Long Beach; Watson Scott Swail, Educational Policy Institute; and Bevlee A. Watford, Virginia Polytechnic Institute and State University.