

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

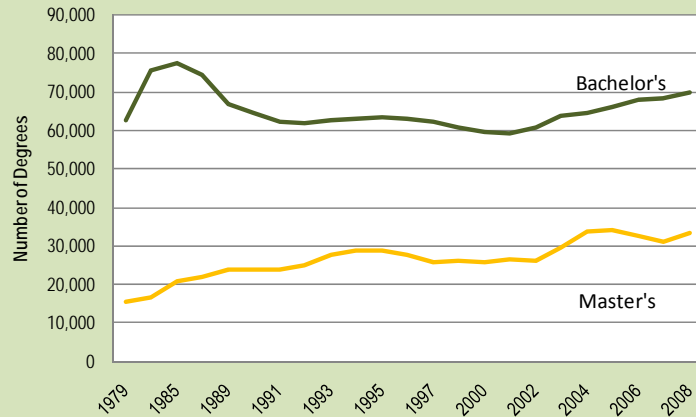
Highlights:

- Number of bachelor's degrees has grown steadily since 2000: 68,735 in 2009 (ASEE, computer science excluded).
- Steady growth in master's degrees since 1979: 33,175 in 2008 (IPEDS).
- 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.

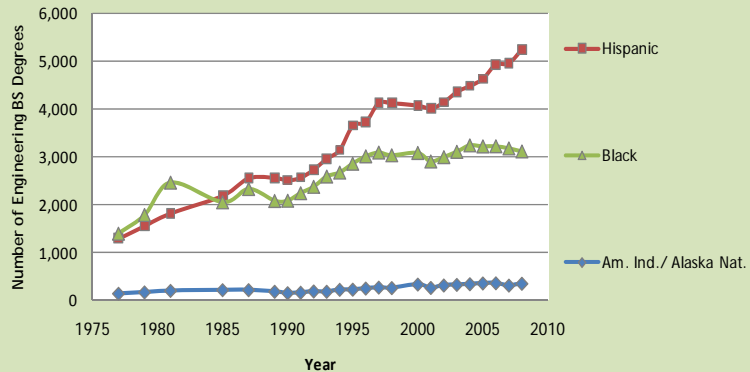
(Same findings with ASEE 2009 and IPEDS 2008 data.)

- 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



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

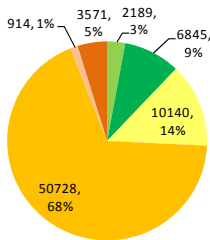


Source: NACME analysis of IPEDS data via National Science Foundation's WebCASPAR database system.

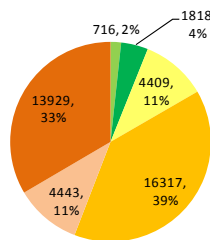
URMs = Underrepresented Minorities – includes:

- Blacks (non-Hispanic)
- American Indians/Alaska Natives
- Hispanics

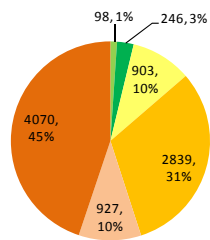
Bachelor's Degrees, Engineering, 2009 (n = 74,387)



Master's Degrees, Engineering, 2009 (n = 41,632)



Doctoral Degrees, Engineering, 2009 (n = 9,083)



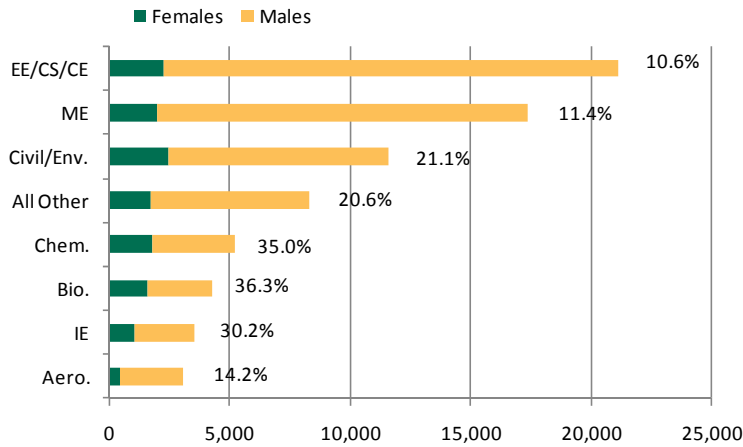
KEY

- URM females
- URM males
- US non-URM females
- US non-URM males
- Foreign females
- Foreign males

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

(Percents shown are percent female within each discipline.)



Total engineering BS degrees, 2009	74,387
-> Awarded at NACME Partners, 2009	21,185
Engineering degrees earned by URM, 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

Arizona State Univ., Tempe	Morgan State Univ.	Univ. of Akron
Bucknell Univ.	New Jersey Institute of Technology	Univ. of Bridgeport
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
Michigan Technological Univ.	The City College of New York	Univ. of Washington
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>.

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