# The State of Girls and Women in STEM

March 2018

K-12 Education

Girls and boys do not significantly differ in their abilities in mathematics and science, but do differ in their interest and confidence in science, technology, engineering, and math (STEM) subjects.[1,2]
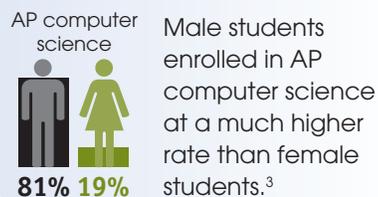
Female students' achievement in mathematics and science is on par with their male peers.[3]

Female and male students' participation in high level mathematics and science courses is similar, except for computer science and engineering.[3]

high level math and science

computer science and engineering
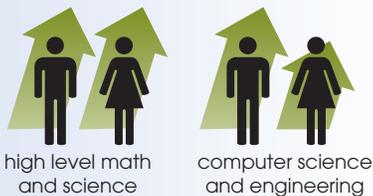
Female and male students took AP exams in some subjects at roughly the same rates in 2013, but males were more likely to take advanced level AP exams, including calculus BC, physics B, and physics C.[3]

AP computer science

81% **19%**

Male students enrolled in AP computer science at a much higher rate than female students.[3]

Higher Education

The rates of science and engineering (S&E) **coursetaking for women shift at the undergraduate level** and gender disparities begin to emerge.

57% • **50%** Women earn 57% of bachelor's degrees in all fields; 50% of bachelor's degrees in S&E.[1]

Within S&E, men and women tend to study different fields.

Men earn a majority of bachelor's degrees awarded in:[1]

engineering | computer sciences | physics

81% **19%** | **82%** **18%** | **61%** **19%**

Women earn a majority of bachelor's degrees in psychology, biological sciences, and social sciences.[1]

86% of early career doctorate holders with a science and engineering degree are either white or Asian.[2]

- **2.7** are Black women
- **3.6** are Latina
- **3.1** are other women racially underrepresented in science and engineering

STEM Workforce

Women remain underrepresented in the science and engineering workforce, with the **greatest disparities occurring in engineering and computer sciences**.

Overall Workforce | S&E Workforce

47% **50%** | **28%** **72%**

Women constitute 47% of the overall workforce and 28% of the S&E workforce.[1]

60% • **48%** • **26%** • **15%** Female scientists and engineers are concentrated in different occupations than men, with relatively high shares of women in the social sciences (60%) and life sciences (48%) and **relatively low shares in computer and mathematical sciences (26%), and engineering (15%)**.[1]

Black women, Latinas, and other women racially underrepresented in STEM comprise fewer than 1 in 20 employed scientists and engineers.[2]

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[1] Google for Education (2016). Diversity Gaps in Computer Science: Exploring the Underrepresentation of Girls, Blacks and Hispanics.

[2] Educational Research Center of America (2016). STEM Classroom to Career: Opportunities to Close the Gap.

[3] National Science Board, 2018. *Science and Engineering Indicators 2018.* Arlington, VA: National Science Foundation (NSB-2018-1).
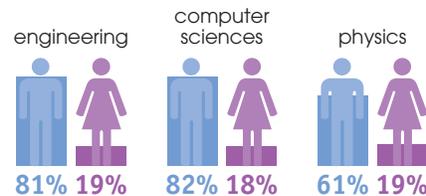
[1] National Science Board, 2018. *Science and Engineering Indicators 2018.* Arlington, VA: National Science Foundation (NSB-2018-1).
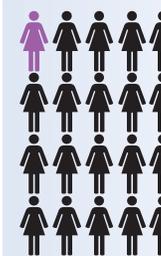
[2] National Science Foundation, National Center for Science and Engineering Statistics. (2017). Women, Minorities, and Persons with Disabilities in Science and Engineering: 2017. Special Report NSF 17-310. Arlington, VA.

[1] National Science Board, 2018. *Science and Engineering Indicators 2018.* Arlington, VA: National Science Foundation (NSB-2018-1).

[2] National Science Foundation, National Center for Science and Engineering Statistics. (2017). Women, Minorities, and Persons with Disabilities in Science and Engineering: 2017. Special Report NSF 17-310. Arlington, VA.

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