

WOMEN IN STEM*

* STEM = SCIENCE, TECHNOLOGY,
ENGINEERING AND MATHEMATICS

MYTHS ABOUT WOMEN IN STEM

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BACK TO SCHOOL

Five Myths about Girls and Science

Source: NSF Press Release 07-108

1. **Myth:** From the time they start school, most girls are less interested in science than boys are.
2. **Myth:** Classroom interventions that work to increase girls' interest in STEM run the risk of turning off the boys.
3. **Myth:** Science and math teachers are no longer biased toward their male students.
4. **Myth:** When girls just aren't interested in science, parents can't do much to motivate them.
5. **Myth:** At the college level, changing the STEM curriculum runs the risk of watering down important "sink or swim" coursework.

For information about these myths, see

http://www.nsf.gov/news/news_summ.jsp?cntn_id=109939

MYTH: WOMEN DON'T GO INTO SCIENCE

In 2005, women received over 40% of all BA/BS degrees awarded by U.S. 4-year colleges and universities in the following fields:

Astronomy (43% women)

Biology (62% women)

Chemistry (52% women)

Earth Sciences (43%)

Mathematics (45% women)

Ocean Science (50% women)

Psychology (78% women)

SOURCE: NSF SRS S&E Degrees 1966-2006

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MYTH: THERE ARE FEW WOMEN IN ENGINEERING & COMPUTER SCIENCE BECAUSE THE COURSE WORK IS TOO DIFFICULT

Fact: Women are less than 25% of engineering and computer science majors in 4-year colleges and universities.

- The major reason is that relatively few girls enter college with an interest in taking engineering and computer science courses. Thus, few women are exposed to these disciplines.
- Among college freshmen indicating an intention to major in engineering or computer science, there is no difference in the drop-out rate for men and women.

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MYTH: WOMEN DON'T BECOME ENGINEERS AND COMPUTER SCIENTISTS BECAUSE THEY AVOID MATH

*Fact: Women do not avoid math. Since the mid-1980s, they have been almost half (45-48%) of all undergraduate math majors.**

*Fact: In the mid-1980s, women were almost 40% of computer science majors.**

Women are now less than 25% of engineers and computer scientists because girls in middle school and high school have been socialized to believe these fields are not for them

* NSF Science and Engineering degrees 1966-2006
Tables 34 and 35

MYTH: WOMEN CANNOT HANDLE MORE ADVANCED SCIENCE COURSES

In 2006, women received over one-third of all doctoral degrees awarded to U.S. citizens and permanent residents in the following fields:

Chemistry (35%)

Earth/Atmospheric and Ocean Sciences (38%)

General Biology/Botany (47%)

Biomedical Sciences (49%)

Cell & Developmental Biology (50.6%)

SOURCE: NSF SRS S&E Degrees 1966-2006

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MYTH: WE MUST BE PATIENT AS THE U.S. PIPELINE FILLS

Fact: The number of U.S. women receiving PhDs in most STEM disciplines has not increased in 10 years (1997-2006).

Fact: the number of U.S. men earning doctorates in engineering, chemistry and physics has decreased markedly in the past 10 years.

The limited increase in the proportion of US women earning doctorates in STEM is primarily due to decreasing enrollment of men who are U.S. citizens or permanent residents.

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MYTH: ONCE THE PIPELINE FILLS WE WILL HAVE GENDER EQUITY

In biomedical fields the proportion of women with doctorates has exceeded 40% for two decades. But, in basic science departments of medical school the proportion of women associate professors is still below 30%, and the proportion at full professor rank is only 20%.*

* AAMC Report on U.S. Medical Faculty 2008

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