

# Women in science? Universities don't make the grade

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Despite years of trying to improve the number of women undergraduates in science and engineering, a new study shows most universities are failing. Not only are women lagging behind their male classmates, efforts to close the gap too often focus on students instead of faculty and institutional structures.

This is first study that looks at the full range of programs for undergraduate [women](#) in [science](#) and engineering in the U.S. It gathered information from nearly 50 difference programs.

Researchers found ongoing issues with the atmosphere towards women in the classroom, the structure of academic programs, and poor faculty attitudes. The teaching environment, they found, "often portrays science and engineering as highly competitive, masculine domains." While many universities are committed to increasing the number of women pursuing these "elite fields," their programs too often focus on things such as peer mentoring—instead of creating real structural change. The result, say the authors, is that universities are contributing to the ongoing wage [gap](#) between men and women, as well as the continuing dearth of skilled scientists and engineers in the United States. Gender divisions in college education are significant because people who pursue scientific careers usually receive an undergraduate degree in their field.

Mary Frank Fox, a professor in the School of Public Policy at the Georgia Institute of Technology, Gerhard Sonnert (Harvard) and Irina Nikiforova (Georgia Institute of Technology) conducted the study,

which was funded by the National Science Foundation. The findings appear in the October issue of *Gender & Society*, the highly-ranked journal of Sociologists for Women in Society.

The paper points out that while women earn 58 percent of all undergraduate degrees in the U.S., when it comes to science and engineering they're still far behind men. In fact, women receive only 21 percent of degrees in the field of computer and information science, and only 19 percent of engineering degrees.

Fox and her co-authors found that university program directors believe women's self-confidence and their knowledge about careers in science was a bigger obstacle than their academic ability. At the same time, the hostile classroom climate in may be affecting student's self confidence in science and engineering courses. Fox says the key issues facing undergraduate women were: a lack of supportive peer relationships, a lack of faculty advisors, unsupportive classroom climates, a lack of both faculty and administrative commitment to undergraduate women, and little attention paid to gender equity on campus.

Despite seeming to understand the problem, the authors found that many institutions did not try to change the climate in the classroom, create more faculty advisors, or improve and strengthen the faculty commitment to educating [women in science](#) and engineering. Instead, they found programs often left these key structural obstacles "untouched,"—especially when it came to faculty. Diversity training for [faculty](#), mentoring of [undergraduates](#) and new course components are examples of programs that could make a difference, researches say.

Schools need to focus less on "easy" but ineffective fixes, such as social activities, and more on challenging their existing institutional arrangements. Fox says many of the programs she and her colleagues studied have "set the goal of increasing their numbers of women

students, without working to improve the climate of the departments they will be recruited to."

Successful programs, she says, find ways to integrate their core academic components with activities such as hands-on research opportunities for students.

Provided by Sociologists for Women in Society

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