

ATTRACTING AND RETAINING WOMEN ENGINEERS:
A PERSONAL PERSPECTIVE

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Like most high school juniors, I was able to narrow my career interests to a particular area, but not to a specific career. Since my academic interests were in math and science, my dad, who was not an engineer, encouraged me to attend a women in engineering summer program at Stevens Institute of Technology.

Benefits of Women in Engineering Program

The most beneficial aspect of the women in engineering program was that it exposed me to the diversity and versatility of the engineering profession and an engineering career. During the week long program, I participated in engineering labs, industrial plant visits and panel discussions. Through engineering labs conducted by engineering professors, I obtained an overview of the different engineering disciplines. During the plant visits, I was made aware of the many challenging projects confronting engineers. By the end of the week, I realized that engineering was a means to an end rather than an end in itself. I also realized that with an engineering degree, I could have a challenging and ever changing career.

During the panel discussions, female students and engineers shared their personal engineering experiences as students and engineers. They told of the challenges they faced as well as the rewards they received. During this time, we also discussed my individual concerns about pursuing a career in engineering.

As a result of my experiences at Stevens, I decided to pursue an engineering degree. In the fall of 1987, I entered Virginia Tech as a freshman engineering student.

Retaining Women in Engineering at a College Level

I believe I was fortunate at Virginia Tech. I don't recall ever feeling isolated because I was a female engineering student. The engineering faculty treated both men and women students equally. Male engineering students treated women engineering students on the same level as other male students. Looking back on my experiences at Virginia Tech, I believe there are two important things colleges can do to retain women engineers.

First, it is important to expose engineering students to the diversity and versatility of the engineering profession. Many students, who aren't informed as to the diverse opportunities for engineers, believe that since the college engineering curriculum emphasizes design and theory that engineers primarily do research and design. As a result, many engineering students who are not interested in research or design drop out of engineering. By exposing students to various career opportunities and career paths for engineers, engineering becomes more tangible and appealing to more students. Thus, more students are likely to remain in engineering. This exposure to the different career opportunities is especially important to female engineering students who usually have had less exposure to engineering as they were growing up.

At Virginia Tech, the professional engineering societies and individual engineering departments organized industrial plant trips, speaker luncheons, and career expositions to provide students with the opportunity to see the practical side of engineering.

Colleges can also retain women in engineering by developing support mechanisms which integrate women into engineering rather than isolating them from other students and engineers. Many colleges establish programs which are designed specifically for women engineers; however, I believe that by singling out women engineers you only create more problems for female engineers. The women feel more isolated. Their associates often become resentful because women students are given special assistance. This in return makes women engineers feel more isolated. The best way to reduce the isolation some women engineering students feel is to make men and women feel more comfortable working together. This can be accomplished by giving men and women as much opportunity as possible to work together. At Virginia Tech the male and female engineering students continually worked together on class projects, in study groups, in study lounges and in professional societies. As a result, the male and female engineers were very accustomed to working together and most female engineering students did not feel that they were treated any different because they were women.

Industry's Role in Attracting and Retaining Women in Engineering

As a female engineer now working in industry, I believe that the biggest contribution corporations can make to attracting and retaining women engineers is to provide female engineering role models for today's young women. Corporations should encourage their female engineers to interact with young women and share their experiences as engineers. Employee participation in educational partnerships, career days, and professional societies provide opportunities for female engineers to help educate young women on the diversity and flexibility of an engineering career.

Currently, Michelin Tire Corporation has a partnership program with a local junior high school. Through this program, I had the opportunity to share my experiences as an engineer with junior high teachers, counselors and students. Through my interaction with the students, I believe I not only served as a role model for young women, but I also helped expose young people to the opportunities available in engineering.

In summary, I believe that women in engineering programs are a good tool to help educate young women on the career opportunities in engineering. These programs also help reduce many of the fears young women have concerning engineering; however, I believe that the education must not stop with young pre-college women. Colleges and industry must continually work together to educate people of all ages about the opportunities and challenges in the engineering profession. Through education more young women will naturally be attracted to engineering.

Finally, colleges should develop mechanisms which integrate women into engineering. This will help men and women feel more comfortable working with each other, which will help build a supportive environment for female engineering students. As a result, more women will remain in engineering.

