

# Supporting women.



# A legacy still in the making.



Strong women in engineering at Northwestern have solidified a foundation for success for generations to come.



When **Carolyn Krulee** began working at Northwestern Engineering in the 1960s, she found the school's few female students felt lonely and isolated. The programs she started to support these women have continued to change the school's culture beyond her retirement in 1996.

Under **Ellen Worsdall**, who took the mantle of assistant dean from Marla Privitera nearly 20 years ago, these programs have grown and expanded. Recently, Krulee and Worsdall discussed how female engineers support each other and how the McCormick School of Engineering empowers women to grow into leaders and global influencers.

**Ellen (to Carolyn):** I meet alumnae all the time who ask me if I know you. Then they'll say the only reason they're an engineer is because you helped them get through the program. It's crucial that students have someone in the engineering school they can trust and approach.

**Carolyn (to Ellen):** When I first came to work here in the early 1960s as Associate Dean William Brazelton's secretary, there were six women in engineering. I was curious and asked why weren't there more women here?

I asked to talk to these young women, and they told me they felt isolated and had no one to study with. Some of them would say, I'm flunking physics because I'm a woman. I would say that has nothing to do with it. So, we decided to put all the women together in the same class. That had an impact because they had someone to study with, someone to talk to.

**Ellen:** Women tend to hold themselves to a higher standard. I have female students come to me and say, I'm failing everything. When I look at their grades, they have a B- average, but to them, that's failing. Getting women together also helps leverage positive peer pressure. They tell each other, if I did it, you can do it.

**Carolyn:** At first, we didn't have enough women at McCormick to create a Society of Women Engineers chapter. Instead, we started a group called Women in Tech. It began as more of a social thing, and then it moved into talking about what being women in labs and classes was like. Little by little, female enrollment in engineering grew. By 1976, there were enough women to create a student chapter of SWE.



**NOW WE TELL WOMEN THAT EVERYONE STRUGGLES IN ENGINEERING. THE STRUGGLE HAS NEUTRALIZED, AND THE PIPELINE OF FEMALE ENGINEERS IS GETTING FULLER. THAT'S NOT ONLY GOOD FOR WOMEN—IT'S ALSO GOOD FOR EVERYONE.**

**ELLEN WORSDALL** Assistant Dean for Student Affairs

**Ellen:** That idea of community is still relative today. If students don't feel a sense of belonging, if they feel they don't matter, they aren't going to stay. SWE still provides programming and support for women. About seven years ago, graduate students said they wanted the same thing. So, they started Grad SWE. Now, they even mentor the younger students.

**Carolyn:** We knew it was important to show grade school girls they too could study engineering. We started the open house—now called Career Day for Girls—in 1971. The first year, 20 people came. We thought that was great!

**Ellen:** This year, Career Day for Girls drew 139 students!

**Carolyn:** The only problem with that first open house was that we couldn't find any female administrators or faculty to sit on the panel.

**Ellen:** It's important for students to see someone leading who looks like them. When we talk to junior high students and ask what they want to do for careers, a lot of female students will still say they want to be teachers, nurses, doctors, or lawyers. And if you ask them why, they say it's because they want to help people. That gives us a platform to explain that engineers help people solve problems every day, too.

**Carolyn:** At the time, I interviewed grade school students and found that all the movies they saw featured men in the primary role, with the ladies as support. They were the secretaries, nurses, or assistants.

**Ellen:** That still happens, even now. When women study science, they choose natural sciences over engineering. A colleague told me it's the "CSI" effect. The TV show *CSI* features cool women with natural sciences backgrounds. We need a Northwestern alumna in Hollywood to write a TV show about a really cool female engineer.

**Carolyn:** Yes!

**Ellen:** Here at McCormick, we're lucky to have support from above. Dean Julio M. Ottino has supported our Women in Computing group. With his help, Northwestern sent the largest student contingent of any school to the Grace Hopper Celebration, the world's largest gathering of female technologists.

**Carolyn:** It's also amazing to see the loyalty of our alumnae. They want to give back. They remember being female students and struggling at times.

**Ellen:** Now we tell women that everyone struggles in engineering. The struggle has neutralized, and the pipeline of female engineers is getting fuller. That's not only good for women—it's also good for everyone. Engineers are problem solvers, and the more diverse a group is, the better the solutions are.

EMILY AYSHFORD