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MISSION AND OBJECTIVES

Since 1969, Purdue's Women in Engineering Program has been committed to increasing the recruitment, retention, and graduation of women engineering students. Each year, we reach out to support and inform more than 4,000 girls and young women — from elementary school through graduate school.

MISSION:

The Women in Engineering Program at Purdue University is dedicated to enriching the profession of engineering through the full participation of women. We develop and direct activities that provide:

- P encouragement for girls and young women to study engineering.
- information about careers and companies.
- ega an environment conducive to the successful completion of students' studies.

We also strive to maintain strong relationships with alumnae, friends and employers who generously support our program.

OBJECTIVES:

- To provide career information and encouragement to pre-college girls and young women to continue achievement in math and science and consider engineering as an appropriate career choice.
- 7 Encourage women to matriculate at Purdue University in the College of Engineering.
- 7 Ensure a climate in the College of Engineering that allows young women to reach their full potential.
- 7 Provide opportunities for women engineering students to develop leadership skills that can be utilized in their future lives.
- 7 Encourage women to consider graduate education and academia among their options upon graduation.
- Maintain open communication with alumnae and their employers to encourage their continued participation in and support of the Women in Engineering Program.



The Women in Engineering Program could not achieve its mission to enrich the profession of engineering through the full participation of women without the generous support of our donors. We are taking part in *Ever True: The Campaign for Purdue University* capital campaign. The campaign is an exciting endeavor with transformative potential and is made possible both by the generosity of our alumni and friends and by the commitment of our faculty, staff, and students. If you would like to make a contribution, please go to giving.purdue.edu or contact Claire Chandler at 765.494.0671 or cechandler@prf.org.

CHANGE THE CONVERSATION



>HOW WIEP PROGRAMMING HAS CHANGED

Did you know that the Women in Engineering Program (WIEP) will celebrate its 50th Anniversary in 2019? In celebration of 50 years of efforts to inspire, recruit, retain and graduate more women engineers from Purdue University, we thought we'd share how our programming has changed over the years.

When the program was started in 1969, as part of Freshman Engineering, there were 47 women studying engineering at Purdue. That was less than 1% of the engineering student body. The faculty and staff who championed the formation of WIEP thought that the reason that women weren't enrolled in engineering was that they weren't aware that it was an option for them. Their main focus, then, was on recruiting women to the engineering program, and they had a goal of enrolling 1,000 women in 5 years. They worked hard to raise awareness among women, and they almost met their goal, enrolling just under 1,000 women by 1974. But when they looked at retention/graduation rates for women versus those of the men, they saw that women were retained and graduating from engineering at about half the rate of men.

This differential in retention/graduation made those in WIEP ask questions about what could be done to close the gap. One of their findings was that women didn't have the same skillsets and familiarity with equipment as the men did. So they added some offerings to the program that would give current women students exposure and training in laboratory equipment, tools, etc., in an effort to ensure that the women in the engineering program were prepared and possessed the same information that the men had. They also continued to raise awareness on the engineering profession among high school girls. Over time, the types of preparation programs changed and adapted to the needs of the students, and the retention/graduation rates for women slowly climbed.

At some point, the special programs to prepare women weren't needed anymore, and they were discontinued. WIEP and its activities became a connector for women students — a place where students could meet and network with each other and with women engineering alums. WIEP also offered activities designed to share information about careers, strategies for success, and affirm support for women engineering students. The awareness raising activities discussed above morphed into recruiting activities, meant to showcase Purdue Engineering and encourage those thinking about studying engineering to enroll at Purdue. About 20 years ago, WIEP started offering outreach activities — programs designed to spark (and then nurture) an interest in engineering in particular and in STEM in general for pre-college students in junior high and early high school. And about 10 years ago, those pre-college outreach activities were extended down to Kindergarten age.

From an organizing framework perspective, we could say that the first phase of the program was about raising awareness that engineering was a choice. The second phase of the program was meant to shore up women's skills so that they were on par with men's. And the third phase was about community building. We've come a long way in our program with regard to our programming, and there are no longer differences in retention/graduation rates for women and men. But today only 25% of the engineering student body is female, so we still have a long way to go.

PROGRAM FEATURE — Exploring Engineering

Exploring Engineering at Purdue

Twice each academic year, we invite high school juniors and seniors, along with their parents, to a day-long Purdue Engineering focused recruiting event. We connect them with faculty, staff and students from each of the engineering programs to learn more about degree options, with current students to learn more about student life, and with alumnae to learn more about life after college. This program would not be possible without the participation of our great faculty, staff and alumnae, and we wouldn't be able to keep everyone on track without our almost 100 student volunteers per event! Over the last 5 years, over 2,600 juniors and seniors have attended one of our Exploring Engineering @ Purdue events, and brought with them over 3,100 parents.



Quotes from Participants:

"Super educational! I loved talking to the professor and the grad student who were both very passionate about their field." "Showed me how much you can do with an engineering degree and how you don't know where you'll really end up."

"This day made everything about college less terrifying and I feel more confident about campus life." "It was cool to learn about all the different places and opportunities the students have at Purdue."

"I loved hearing the students' insight about everything! It was one of the most helpful things in allowing me to see if I'd like Purdue." "I really like how my daughter heard about the rigors of the program and what to expect but also that there is help available and to not be afraid to ask for it." "My experience was awesome. I asked a lot of questions and they were extremely respectful and nice."



"Purdue helped students like me see our future in engineering and get on the path of professional success. It is important that women in engineering recognize the programs that helped us get where we are today and that we all look back and support those programs."

-Barbara Haney, B.S. Industrial Engineering, Purdue University

ALUMNA FEATURE — Barbara Haney (BSIE 1979 Purdue)

How did you get into engineering and how did you use your engineering degree in your career path? I'm from Oklahoma. In high school, I'd planned to become a history teacher. One causal trip through the library at my high school changed that plan forever. I decided to major in engineering because of a book in my high school library.

Yes, that is correct — I wandered through the library and picked up a book that would lead me to my career and to Purdue! The book, "Design for the Real World," was written by a professor who had taught at Purdue. Although I did not know this at the time, the book is a world-renowned classic on the subject of design and engineering to solve the greatest challenges. I was completely inspired by the examples in the book, and knew right then that I wanted to become an engineer.

I'd never heard of Purdue. However, my parents had both attended Northwestern University, in Illinois, and they knew of Purdue's reputation for engineering. I learned more, and liked that Purdue had programs in so many engineering disciplines. During my first semester, I went through materials engineering, chemical engineering, and maybe several others. I discovered manufacturing, picked industrial engineering as my major, and as they say, never looked back.

I found out about Purdue's strong connections with industry when I got to campus. It seemed like everyone was working as interns and Co-Ops. These young students were engaged in their professions, contributing in these companies, and living all over the country to do so. I wanted to have that experience, and so I signed up for the Co-Op program, coming out of my freshman year, and was hired by Kodak, in Rochester, NY.

Why did you choose to attend Purdue? What has your Purdue Engineering degree meant to you, or allowed you to do?

Working as a Co-Op was the greatest part of my college experience. The experience at Kodak taught me how to be on my own and be a professional. Compared to retail (my only previous experience), I made a lot of money, and did not have to look for a job every summer, like other students who worked as interns did. But the most important thing for me was the confidence that I developed through this experience. Upon graduation, I went to work at IBM's brand-new location in Tucson, Arizona. After that, I moved to Intel, and worked in the US and China in semiconductor manufacturing for most of my career. From Intel, I went to Medtronic, and launched new medical devices, like pacemakers, into high volume manufacturing.

Why do you support the Women in Engineering Program at Purdue? What advice do you have for young women who are studying engineering? I was in one of the first Women in Engineering Seminars, which is now ENGR 194. I was very fortunate to have this opportunity to learn from women who spoke at the class. To me, they were like rock stars: they had big responsibilities, at places like NASA, and their accomplishments were so impressive. Hearing their stories helped me develop confidence that I could succeed in engineering and have a career at one of these cool places. I am sure that without the experiences I had through the Women in Engineering Program, I would not have been prepared for the Co-Op program.

For students who are sure that engineering is their path, WIEP elements help to solidify that decision. For others who are not so sure, my advice is: Get on the bus and see what the ride is like. What's that mean? Try the curriculum, get involved in the student programs and organizations, and evaluate the academic program options. You can change your mind later. Don't hold back because you "aren't sure yet," or because you don't think you are strong enough academically

in math and science. You don't have to be the best student to be successful. You have a lot of years ahead of you — get the academic credential that is going to help you now and in the future.

Purdue helped students like me see our future in engineering and get on the path of professional success. It is important that women in engineering recognize the programs that helped us get where we are today and that we all look back and support those programs. As an alumna, I am proud to be able to contribute financially to WIEP, so that other young women can benefit from the program.

VALUED VOLUNTEERS

ALUMNI AND CORPORATE PARTNERS

PROGRAM	NAME	
JEEP	Amanda Bade	
JEEP	Sara Batman	
JEEP	Natalie Boger	
JEEP	Tracy Chariton	
JEEP	Diana Clute	
JEEP	Allison Coleman	
ENGR 494	Stefanie Darlington	
AA	Kelly Featherstone	
JEEP	Erika Fotsch	
JEEP	Allison Graban	
2R	Melanie Grande	
JEEP	Selina Hicks	
JEEP	Julie Hildebran	
JEEP	Sara Hoffman	
JEEP	Joan Jang	
JEEP	Rachel Janney	
JEEP	Amanda Johnson	
JEEP	Srishti Khurana	
JEEP	Ashley Koeplin	
AA	Kate Kustermann Rivera	
AA	Bridette Lauzze	
JEEP	Brittany Leigh	
AA AA	Sharon Marchinski	
JEEP	Melissa Marcum	
JEEP	Savannah Marstall	
JEEP	Meghan McKendry	
JEEP	Taylor Mowery	
JEEP	Jessica Pilotte	
M&M	Patti Poppe	
AA	Katie Reis	
JEEP	Devon Stangland	
JEEP	Andrea Taylor	
AA	Morgan Thome	
JEEP	Megan Tobias	
AA	Kim Underhill	
AA	Charise Williams	
GWEN	Jennifer Zinn	

BS CHE; BS CH BS BME BS BME BS CE BS; MSE BS IE BS MF BS ME BS ME; MS ME BS AAE BS CHE BS ME BS CF BS CHE BS ME BS CF BS ABE BS CHE BS MF **BS MF** BS ME BS ME BS CHE BS NE BS IE BS CHE BS CE BS IE; MS IE

BS CHE

BS CHE

BS ABE

BS IE

BS ME

BS CHE

BS MGMT

PURDUE DEGREES

Cargill Dry Corn Ingredients Cook Medical Inc. Probo Medical, Inc. JPS Consulting Engineers Caterpillar, Inc General Cable Corp **GE** Aviation 3M Allison Transmission Whirlpool Corporation NASA Langley Research Center ExxonMobil Precision Castparts Corporation **GE** Transportation Eli Lilly and Company **General Motors** EMCS, Inc. **Clarke Solutions** Solvay Composite Materials **Delolitte Consulting 3M Corporation** Dickinson-Wright PLLC Accenture Eli Lilly and Company Enercon **XPO** Logistics Honda Manufacturing of Indiana TranSystems **Consumers Energy Company** Deloitte The Dow Chemical Company Colorcon, Inc. Accenture Envelop Facility Technologies Kimberly-Clark Deloitte Digital **Roche Diagnostics**

COMPANIES

Abbreviations and Acronyms Dictionary

WIEP Programs

AA- Access Alum
ENGR 494- Women in Engineering Senior Seminar: Gender in the Workplace
GWEN - Gradudate Women in Engineering Network
I2R- Innovation to Reality
IGED- Introduce a Girl to Engineering Day
JEEP- Juniors Exploring Engineering at Purdue
M&M- Mentors and Mentees

Degree

BS- Bachelor of Science MS- Master of Science MSE- Master of Science in Engineering

Program

AAE- Aeronautical and Astronautical Engineering ABE- Agricultural and Biological Engineering BME- Biomedical Engineering CE- Civil Engineering CH- Chemistry CHE- Chemical Engineering IE- Industrial Engineering ME- Mechanical Engineering MGMT- Management MSE- Materials Science Engineering NE- Nuclear Engineering

PURDUE FACULTY, STAFF AND STUDENTS

PROGRAM

IGED	ABE Ambassadors
IGED	Peter Bermel
M&M	Kelly Busch
JEEP	Anne Dransfield DeLior
I2R	EPICS Space Day Team
I2R	Carolin Frueh
GWEN	Linda Mason
I2D2	ME Ambassadors
IGED	Dan Taylor

NAME

SCHOOL/DEPARTMENT

School of Agricultural & Biological Engineering School of Electrical & Computer Engineering Davidson School of Chemical Engineering First-Year Engineering Program EPICS (Engineering Projects in Community Service) School of Aeronautical & Astronautical Engineering The Graduate School School of Mechanical Engineering School of Agricultural & Biological Engineering



Thank you to all of our valued volunteers. The success of our programming from January - June 2018 wouldn't have been possible without the outstanding support from the listed alumni, faculty, staff, students, and friends who graciously volunteered their assistance to WIEP.

OPPORTUNITIES FOR ALUMNAE ENGAGEMENT

There are many ways for you to get involved with WIEP. Listed below are some volunteer opportunities. If you have an interest, please complete this online form. The form will provide us with information for our database.

These opportunities are open to everyone and unlimited in number. Let us know you are interested, and we will get you set up.

- Access Alum *informal chats with current students while on campus visiting, recruiting, etc.* Needed: alumni to inform us when they'll be on campus and available for an event.
- WE Link connecting with high school seniors as they apply and ultimately decide whether Purdue engineering is the place for them. Needed: guest bloggers sharing experiences that encourage and inspire. Visit The Engineering Experience Blog.
- WiECoNEXTions Needed: engineering graduates in industry, academia, government, non-profit, medicine, law, and business to act as an online mentor or coach to students. This one-on-one connection is facilitated through our user generated WiECoNEXTIONS online platform.

These programs are looking for recent alumnae (within the last 10 years). If you meet that criteria, let us know you are interested, and we will invite you!

• Exploring Engineering at Purdue days – one day on-campus recruiting programs for high school juniors and seniors. Needed: panels of engineering professionals less than 10 years from graduation to talk about what they do in the "real world"

These programs need inspirational and engaging speakers whose talks are interactive with a message aligned to course/ program objectives. There are a limited number of openings. If you let us know you are interested, we will be in touch if we find a good fit.

- ENGR 194 *Women in Engineering Seminar for first year students.* Needed: motivational alumnae who share college experiences and relate those to where they are now and what they do in their positions.
- Mentors & Mentees (M&M)/Graduate Women in Engineering Network (GWEN) Undergraduate and Graduate student mentoring programs. Needed: facilitators of interactive/workshop style topics including but not limited to: life skills, engineering roles, non-traditional paths, life/work balance, finances, Entrepreneurship, global etiquette.

If you are interested in doing outreach programming near where you live, let's talk to see if becoming an Engineering Outreach Partner is right for you!

 Engineering Outreach Partner (EOP) Initiative – sharing our outreach model, best practices, training, and other resources. Needed: alumnae partners who can help share WIEP's vision and passion for advancing youth education by leading precollege students in hands on engineering activities and/or interactive discussions.



Women in Engineering Program

Neil Armstrong Hall of Engineering, Room 1245 701 W. Stadium Avenue West Lafayette, IN 47907-2045

> wiep@purdue.edu www.purdue.edu/wiep www.purdue.edu/designlife

