LEHIGH UNIVERSITY | P.C. ROSSIN COLLEGE OF ENGINEERING AND APPLIED SCIENCE

CHOICES

Charting Horizons & Opportunities in Careers in Engineering and Science

MARCH 21, 2025

ORGANIZERS AND SUPPORT

LU SOCIETY OF WOMEN ENGINEERS

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Co-Vice President- Dianareli Dolores
Co- Vice President- Miki Sakai
CHOICES Co-Chair- Hanna Essey
CHOICES Co-Chair- Bailey Flanagan
Co-Outreach Chair-Amelia Otto
Co-Outreach Chair- Ella Rodrigues
Event Coordinator- Victoria Swider
SWE Dinner Coordinator- Addison Hostetler
Marketing Chair- Naajiha Mushayeed

Faculty Advisor- Professor Christina Haden
CHOICES Program Manager – Chayah Wilbers

LEHIGH UNIVERSITY | P.C. Rossin College of Engineering and Applied Science

rexroth
A Bosch Company

SUMMER CAMP

Registration is now open for our CHOICES Summer Camp. Scan below for more information

ABOUT US

INSPIRING YOUNG ENGINEERS SINCE 1996

We are passionate about promoting women in STEAM through our various CHOICES programs. The entire CHOICES experience, through the one-day program in the spring to our weeklong summer day camp, is designed to prove that STEAM is accessible to everyone -- its fun, challenging, interesting, and, in a word...cool.

610-758-6311

INCHOICE@LEHIGH.EDU

ENGINEERING.LEHIGH.EDU/CHOICES

PROJECTS

SESSION 1

Electricity in Action
Electrical and Computer Engineering

Electricity is all around us and we can use it to do amazing things. In this session, you will leverage electricity to light things up with a paper circuit and make things move with your simple motor

Separations and Squishy Materials in Chemical Engineering
Chemical and Biomolecular Engineering

Get ready to explore the exciting world of Chemical and Biomolecular Engineering! In this hands-on lab, you'll dive into the science of squishy materials and separations—two important areas of chemical engineering. Explore cool experiments that show how engineers design processes to purify, mix, and create useful materials.
Come experiment, explore, and see how chemistry and engineering come together to solve real-world problems!

Atomic Legos
Material Science & Engineering

In this hands-on activity, student participants use ball-stick models to build three - dimensional objects representing materials and crystals at the atomic scale. Participants will build models (Atomic Legos) representative of materials used in many real-life applications and learn how different engineering properties are influenced by the crystal geometry.

Make it Move!
Bosch Rexroth

Discover the power of hydraulics in this one of a kind hands on lab! Learn about remote motion and force multiplication using Hydraulics in several experimental steps.

PROJECTS

SESSION 2

Colorful Capsules: Design, Build, and Test Drug-Delivering Beads
Bioengineering

What if you could create tiny, colorful capsules that deliver medicine exactly when it's needed? In this activity, you'll use alginate (a material from seaweed!) to make squishy beads that mimic real drug delivery systems. First, you'll mix and drop alginate into a calcium bath to form your beads. Then, you'll get creative by experimenting with different concentrations to change the bead's strength and release rate. Finally, you'll test your beds using colorful dye to simulate how medicine spreads in the body. Watch the colors burst and diffuse as you discover how scientists design hydrogels to solve real-world medical challenges. Ready to engineer y our way to the perfect bead?

Robot Games!
Computer Science Engineering

Join Lehigh's CompSci in Bethlehem club as we host fun robotics - themed activities and games including bowling, soccer, and relay races! Discover the capabilities of robots and how they impact our daily lives.

Anti-H2Glow-Heroes
Environmental Engineering

STEM City is in peril, and everyone knows it's Dr. Glimmer's fault. Her Glitterstorm has taken over the water supply, leaving it filled with toxic sparkles, glowing germs, and streaks of mysterious dyes. Once upon a time, Dr. Glimmer was just another Swiftie, jamming out to "Anti-Hero" and dreaming of being the next big name in STEM. But now she's taken her Anti-Hero anthem to the extreme:

🎶 "It's me, hi, I'm the problem, it's me!" 🎶

Her ultimate goal? To make STEM City glow brighter than the Eras Tour with polluted water that shimmers, sparkles, and shines—but can't be safely consumed.

That's where YOU come in. Your mission: become the Anti-Anti-Heroes. Using cutting-edge water filtration designs, you'll need to reverse the effects of the Glitterstorm, clear the glowing particles, and restore the town's water to its natural state.

The fate of STEM City—and the clean water supply—is in your hands. Time to channel your inner Fearless scientist, team up like The Squad, and show Dr. Glimmer that even in a world filled with glitter, clean water is the ultimate End Game.

PROJECTS

SESSION 3

#Shook- Building Structures for Earthquake Resiliency
Civil and Environmental Engineering

In this exciting hands-on lab, you'll explore how earthquake ground motions affect buildings and discover how civil engineers design structures to be stronger and safer. Using shake tables, you'll test different building designs to see how they respond to seismic waves and learn about resonance—the way some buildings naturally amplify shaking. Through experimentation, you'll uncover engineering strategies that help structures withstand earthquakes, keeping people and communities safe. Get ready to shake, test, and engineer for a more resilient future!

Is There a Doctor in the House? A Smooth Running ER
Industrial Systems and Engineering

Let's talk about flow - specifically, how patients move through the Emergency Department. Systems Engineers look at processes and activities where there are lots of moving parts that need to work together to achieve their goal, and an Emergency Department is a great example to discover what some systems engineers do.

Build It, Race It: DIY Toy Cars!
Mechanical and Mechanics Engineering

Get ready to design, build and race your own toy car just like a mechanical engineer! In this hands-on lab, you'll explore the science of motion, friction, and energy while customizing your car for speed and performance. Learn how engineers design real vehicles, test different materials, and make improvements to create the ultimate racer. Will your car be the fastest? Let's build, test, and find out!