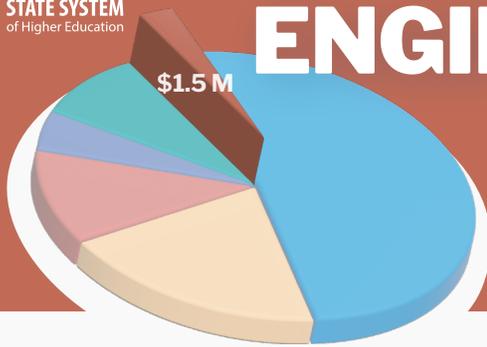




ADDRESSING THE WORKFORCE SHORTAGE:

ENGINEERING



THE STATE SYSTEM IS SEEKING \$112 MILLION IN NEW FUNDING*

\$1.5 million of that amount will be used for financial aid to reduce costs for students pursuing jobs in engineering

The POWER of PASSHE:



840 engineering students at PASSHE universities



257 PASSHE engineering graduates are working in PA



8% of PA's engineer shortage can be filled by PASSHE by 2030

The Need:

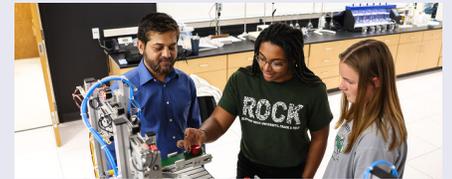
There is a shortage of engineers needed to build critical infrastructure, such as broadband expansion, roads and bridges, water services, rail, air and clean energy projects, among many others. Without more engineers, these projects risk being delayed, scaled back, or eliminated.

PASSHE Solution:

The State System is expanding engineering programs and is seeking a targeted investment of \$112 million in new funding to produce more graduates in six high-growth jobs, including engineering. PASSHE plans to use \$1.5 million to provide direct financial relief to high-need engineering students, saving them an average of \$5,000 per year.

** PASSHE is also seeking \$573.5 million, an inflationary increase of \$21 million (or 3.8%), that combined with the \$112 million in new funding for targeted student support would enable the Board of Governors to consider freezing the basic in-state undergraduate tuition rate for an unprecedented fifth consecutive year.*

Engineering Innovation



For decades, it was assumed that engineering labs had to be expansive, dedicated buildings filled with expensive equipment. And in many universities, that's still the case. However, more and more of these labs are suffering from underutilization, poor functionality, and inefficient use of space, necessitating expensive renovations.

When **Slippery Rock University** added mechanical and civil engineering programs to its School of Engineering, SRU opted for a solution that still involves state-of-the-art equipment but that uses space in a more innovative fashion.

SRU's new engineering labs are part of a trend in higher education where classrooms and laboratories are coming together in one space, known as the "class-atory." This allows institutions to maximize their physical assets and provide students with more flexible ways to learn.

"These are modern laboratories with multiple modes of operation," said **Louis Christensen**, assistant professor of physics and engineering. "I can have lectures or group discussions that I would have had in a classroom and then easily move to a demonstration without switching rooms or buildings. This reinforces the concept of engineering that happens both in your discussions and also in practice."

'Soccer Mom' Poised To Become Civil Engineer



When **Karah Donahey** started in construction, she didn't want to be known as the "young blonde girl." She wanted to be respected in the male-dominated field and she succeeded, working her way up to supervisor at a modular home builder.

But her career path hit a wall. Karah needed something more: a college degree.

"I went as far as I could up the ladder, but I got to the point where everything was a lateral move," Karah said. "I had to either move across multiple companies or get a degree."

The mother of two school-aged daughters started taking courses at community college while

working, then transferred to **Slippery Rock University** in 2020 as a full-time student.

"I didn't realize how many different routes I could go with an engineering degree," she said. "I thought I was coming here to be a civil engineer, but I can go into environmental, geotechnical, or structural engineering, as well as project management, where you can apply a little bit of everything and not just specialize in one thing."

While taking classes, the Butler County resident is also interning at PennDOT. She contributes to a bridge design unit analyzing hydrology reports and load checks, while making sure bridge designs are structurally sound with the proper culvert pipes installed.

Karah's college degree and hard work will pay off. She has a job waiting for her. After graduation, she will join PennDOT as a civil engineer, making the state's infrastructure safer for all Pennsylvanians.

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EDUCATION

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BUSINESS

COMPUTER SCIENCE

ENGINEERING

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