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Construction

ACE Mentor Program exposes students to architecture, engineering and construction

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Gannett Fleming engineer and construction manager Richard Heinick, leads an ACE Mentor workshop on construction management. The program informs high school students about careers in architecture, construction and engineering. - (Photo / Amy Spangler)

Allison Hanna knew early on that she wanted to pursue a degree in landscape architecture.

Her interest only grew after she attended workshops sponsored by **ACE Mentor Program of Central Pennsylvania** during her senior year at **Cumberland Valley High School**.

“I was able to get a more in-depth feel about landscape architecture,” said Hanna, now 25 and a landscape designer for **Snyder, Secary & Associates LLC** in Susquehanna Township.

The program she attended is part of ACE Mentor Program of America, a national nonprofit with a local chapter representing Cumberland, Dauphin, Lancaster and York counties. ACE stands for architecture, construction and engineering.

The local outfit mentors 100 to 140 local high school students each year during weekly two-hour sessions that run after school from October to March. The sessions are led by practicing architects, engineers, construction managers and skilled trade workers who help paint a picture of their professions.

The goal is to help students figure out — before they start applying to colleges — if they want to pursue a construction-related field.

"I knew what I wanted to do, but a lot of kids don't know," said Hanna, who now runs the Cumberland County ACE program, a subchapter of the Central Pennsylvania program

Real test

Last Thursday at the **Cumberland Perry Area Vocational Technical School**, it was engineer and construction manager Rich Heinick's turn to lead a session for the Cumberland County program, which has about 25 students.

He wasted little time giving students a crash course in construction management.

"Why am I here?" he asked the group. "I want to save you some anguish and your parents some money."

Heinick, who has been with Cumberland County-based engineering giant **Gannett Fleming** since 1974, has been involved with ACE since its inception more than a decade ago. Each year he addresses the students about construction management and then splits them into groups to work on a mock construction project.

"It's important to know what you're getting into," Heinick told the students before breaking them into groups. "If we can help you decide what to do, that's good. If you realize this is not for you, that is darn near as good."

In the workshop, students were asked to act as general contractors. Heinick plays the role of project owner. He also brings in real industry professionals with whom students must work during the exercise to get their projects built.

They include a construction attorney, a local building codes inspector, a surveyor, an excavator, an electrician, a plumber and a materials testing technician, as well as suppliers for concrete, stone and steel.

The students must work together and follow the proper steps to complete their project. In this case, it was an automotive dealership renovation.

To make the simulation more realistic, Heinick throws in a few curveballs, including inspection failures that force teams to redo certain sections of their projects.

Finding direction

The project work, which is part of each ACE session, is meant to help students better understand the construction process and being part of a team.

"I learn something new every day," said Eileen Spila, a junior at **Trinity High School** who aspires to be a civil engineer and work in transportation like her mother.



Students Brennan Flory, left, and Caeden Smith, center, meet with Barbara McLemore, vice president and corporate ethics officer of Gannett Fleming, during a team exercise on construction management, part of the ACE mentor program, at Cumberland Perry Area Vocational Technical School. - (Amy Spangler)

Spila heard about ACE from her math teacher, a former Gannett Fleming employee who volunteers with ACE. The experience prompted her to start an engineering club at Trinity, which she hopes will inspire other high school students to consider engineering.

Junior Caeden Smith, a homeschool student from East Pennsboro, said the ACE work sessions have helped him learn leadership and communication skills.

Smith has been thinking about a career in civil engineering and said ACE has given him a better understanding of what he might experience if he studies it in college.

Many students who attend ACE programs will go on to pursue college studies or technical training in construction-related fields. ACE also offers a few small scholarships each year to promising participants.

If ACE programs had been available in Central Pennsylvania when Nick Fox was in high school, he might have picked a different career.

Fox is a construction lawyer and current chairman of the Central Pennsylvania chapter. He studied business at Penn State and, after college, briefly worked in commercial construction. He didn't stick with it, however, and left in 2008 to attend law school.

"Had there been ACE, maybe I would have studied something different (in college)," he said.

He now works for **Saul Ewing Arnstein & Lehr**.

But Fox said he has no regrets. He said he's glad the local chapter was started in 2007 to give area high school students the exposure to different careers that touch construction.

Giving back

Gary Tucker, a senior mechanical engineer at **Sharpe Engineering** in Lancaster, hopes to see more high school students studying engineering.

Construction is booming and many companies are looking for people to hire, he said. His company, which needs electrical engineers, is no exception.

But Tucker, who is near retirement, also is thinking about the future of his profession. ACE is a way to reach more young people before college and get them thinking about career opportunities.

Tucker is an ACE mentor in Lancaster County.

“The industry has been good to me for 45 years and I want to give back,” he said. “This is one way.”

He believes students who go through ACE — and hear from a range of professionals — will be less likely to change majors in college. Some students go through ACE more than once.

A student in Allison Hanna’s program, who has gone through ACE three times, started out with interests in landscape architecture, but later shifted his focus to civil engineering and then construction management as he went through the program.

Joe Connor, a project architect at **Beers + Hoffman Architects** in Lititz, volunteers with the Lancaster County program. He’s also been a mentor in Dauphin County, which has a separate track for students interested in skilled trades such as electrical or masonry.

Most ACE programs have sessions about the building trades, but Dauphin County’s program allows students to pick between professional services and hands-on building trades. Students also can get exposure to careers in both union and non-union shops. The ACE experience might prompt some students to apply for more formal technical training and a job after high school or it could help them get into an apprenticeship program.

“There are great opportunities in these fields for these kids, depending on how they do their training,” Connor said.

Mentors needed

One challenge is getting mentors to commit to ACE each year, Connor said. But volunteers could make a difference in persuading young people to move back home for work, which benefits local companies in the long run.

Some of the people that best connect with students are those who most recently entered the workforce, he said.

Younger mentors like Hanna can help students get a better handle on what to expect in and after college. The students can talk to these mentors about the college experience, internship opportunities, job prospects and the realities of day-to-day work. Hanna went to **Temple University** and moved back to Central Pennsylvania in 2014.

Older mentors can share experiences of working in the field and what has changed over the years. They also might be in a position to make hiring decisions for their companies.

Tucker said anyone who has gone through ACE would get serious consideration from his company.

Meanwhile, it’s just as important for ACE to reach new companies and attract new mentors, said Fox, who is chairman of the Central Pennsylvania ACE chapter. The worker shortage in construction-related fields is not improving. And it may get worse as state and federal governments look to tackle large public infrastructure projects.

Fox and other board members admit that programs like ACE tend to get overlooked by companies because ACE is a longer-term solution to staffing shortages. And in a tight labor market, most companies are hoping for quicker results.

Nonetheless, local board members are hoping more working professionals will get involved.

“The ultimate payback of the program, especially for any of us investing time as a mentor or speaker, is trying to create a workforce and cultivate an environment where kids see these opportunities,” Connor said.

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