

# Lake Erie College's HVACR Training: *Everybody Wins*



Lake Erie College was established in 1856. So, it's no surprise the northeast Ohio campus has a wide range of HVAC equipment: chillers, hot water boilers, pneumatic systems... pretty much everything.

With this mixture of old and new distributed throughout the school's 18 buildings, maintenance can be challenging, and tight budgets add another layer of difficulty. These issues were top of mind for campus Facilities Director Herb Dill and Facilities Manager Rob Goe in 2015 when they came up with an elegant solution.

*"We thought it would be a great idea to start a night HVAC class, where we could have people come in and actually work on our buildings, and the buildings would be our lab," said Dill. "It would be a good way to help people gain certifications and real-world experience and help us supplement our workforce."*

Dill and Goe began devising a curriculum to help adults gain a foothold in the trades. They'd attended seminars that worked exclusively on new equipment. But what about units that are rusted or missing screws? Or located in a crawl space and difficult to reach? And what about the theory – the why – behind the work?

"We wanted to create a program where students understood the difference between a technician and a parts changer," said Goe. "When people understand the how and the why they become more involved in the process and grow as technicians. They're not just doing something because someone told them to. They understand it."

## HVACR Bootcamp

Lake Erie College President Brian Posler liked the idea, but the program was a little outside the box for a small liberal arts college, and he needed to see more. He asked Dill and Goe to come up with a business plan, and, over the following year, they gradually made their case. The program started in 2016.

Their goal was to make Lake Erie College HVACR as rigorous as possible from day one. They wanted their students to qualify for the most challenging certifications from Environmental Protection Agency (EPA), Occupational Safety and Health Administration (OSHA®), and others, as well as give them the critical thinking skills they'd need to work independently. Dill and Goe believed a challenging course would increase their students' value when applying for jobs and union membership.

"We wanted people to say, wait, you went through the Lake Erie College HVAC training, you must be good," said Goe.

The students worked on everyday projects: fixing steam leaks and rooftop condenser fans. In addition, Dill and Goe helped them with their resumes and brought in HVAC companies to discuss the workplace.

None of this had ever been done before at Lake Erie College, so there was no template for getting it off the ground. Along with their full-time day jobs, the two had to figure out the curriculum and everything else. "We were every part of it: admissions, marketing, curriculum development, teachers," said Dill. "We did the whole thing."

## Teaching with Authenticity

Dill and Goe have designed the program to give students as much functional experience as possible. One of their go-to methods is breaking equipment in specific ways and asking students to fix it.

"We look at it from a real-world standpoint," said Dill. "Your employer holds you to a standard, and they expect the best out of you every day. They expect you to show up, not be late and be prepared. We do that from the very first class."

Another strategy is selecting one student to oversee each project, helping them gain leadership experience organizing a group.

"We tell them: You're in charge of this furnace, make sure you get it running," said Goe. "I don't care who you assign to make it happen; just go through it and make sure everything is connected and it's working."

Sometimes students think their instructors are kidding about being ready for anything, but they soon find otherwise. In one instance, a lecture was held on the rooftop of the campus library to repair a heating unit – in a snowstorm.

Some of the students weren't wearing suitable clothing for outdoor work – one was wearing shorts and flip-flops. Goe told them they could opt out and wait in the library, but the class was going up on the roof.

"I told them you have to be prepared," said Goe. "You better have extra clothes in your work truck because you could get wet and need a change. We told them right from the beginning. We're not going to hold back."

The program has also been an education for Dill and Goe, who have learned that teaching means knowing the material on an entirely different level. It's helped make them better at their facilities jobs.

"The adjustments we make, the things we do every day, and the way we diagnose things are much different now," said Goe. "When you teach it, you start to work out some of your own bugs."

## Trane and NC3 Help the Program Level Up

In 2017, Dill and Goe visited the National Coalition of Certification Centers (NC3) headquarters in Kenosha, Wisconsin. They wanted to see the lab NC3 and Trane had built, hoping they might learn a few things they could incorporate into their curriculum.

At the same time, Trane was concerned about the lack of HVACR training programs in that part of Ohio. Trane was interested in helping them grow the program with a state-of-the-art lab, like the one at NC3; however, this would require significant investment from Lake Erie College. Not a slam dunk at all. But after a series of conversations, President Posler was convinced, and the project moved forward.

The lab opened in 2018, giving instructors and students a whole new take on HVACR work. In addition to the diverse technologies sprinkled around campus, they now had access to the latest and greatest Trane equipment.

## Two Types of Students

Not long after the lab opened, Dill and Goe reached out to local school districts to offer daytime classes for high school students. Ohio had recently changed its rules on high school workforce development programs, giving schools extra incentive to find trades education programs, like the one at Lake Erie College.

Dill and Goe had to start from scratch on a new curriculum focused on high schoolers. The new offering would be more introductory and less rigorous than the night program, aimed at an entirely different population. While the night students were motivated young adults, mid-20s and older, the high school groups were full of kids who didn't always know what they wanted.

"We started building these crazy projects for our high school classes," said Goe. "We'd have them build lamps out of black pipe and wire up different things so they could learn about electrical. We wanted them always to have cool things to do. We were worried they might get bored."

Lake Erie College has continued to grow its HVACR program, recently adding welding to the mix. Dill and Goe went to an NC3 welding class, and soon the lab had a welding booth and a virtual welder. They are particularly grateful for the support they've received from NC3 and Trane.



"You're talking about two guys who didn't know how to do any of this," said Goe. "We had never taught anything officially, and NC3 and Trane NC gave us really solid ways to build our curriculum and get this going."



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