Cal Poly Mechanical Engineering Lab Receives $250,000 Gift

SAN LUIS OBISPO – Cal Poly mechanical engineering students focusing on heating, ventilation, air conditioning and refrigeration (HVAC&R) will receive real-world experience in a newly renovated lab, thanks to a $250,000 gift from Critchfield Mechanical, Inc. (CMI).

“The new lab will give HVAC&R students exposure to and practical experience with commercial equipment similar to what they will see in the field,” said mechanical engineering professor Jesse Maddren. “Until now, we have had to structure our lab courses around computer labs, design activities and field trips, primarily because we didn’t have a hardware lab for the students. The new hardware sharpens the focus of the lab, which is to teach students the basics that will allow them to innovate for the future.”

Joe Critchfield, who started San Jose-based CMI in 1977, is a long-time supporter of the HVAC&R program. He made the lab donation to recognize the contributions of Cal Poly engineers to his company.

“I’m frequently asked how we started CMI and have it grow,” Critchfield said. “The answer is: We hired a lot of great engineers from colleges — predominately Cal Poly — whom we could teach to design and build air conditioning. It just seems that students who come out of Cal Poly are ready to work as soon as they graduate.”

Critchfield, who has sponsored the annual Cal Poly HVAC&R golf tournaments for the past seven years, estimates that three-quarters of the 50 to 60 engineers at his firm are Cal Poly graduates. “The company made the gift because we want more Cal Poly students to come work for us,” he said. “The lab is one more way to give students a practical, working knowledge of HVAC&R systems.”

Work on the Critchfield Mechanical HVAC&R Laboratory started in October and is expected to finish in early March. Maddren said the current phase of the project incorporates a number of standard energy-saving features, such as a condensing boiler and variable speed drives on the new pumps and fans.

“Future plans for the lab include more ‘non-standard’ systems and components, such as a chilled beam, an under-floor air system and a ground source heat pump,” said Maddren, adding that the renovation should spur continued Cal Poly success in student competitions.

“In the international design competition hosted by the American Society of Heating, Refrigerating and Air Conditioning Engineers, we
received third place last year and first place the year before in the HVAC Systems Selection and Design categories,” he said. “The lab will provide the students with an excellent opportunity to understand the equipment side of things so they can continue as international contenders in the design competition.”

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