

Austin Peay to offer Siemens-backed mechatronics bachelor's degree

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Austin Peay State University is on track to be the second university in North America to award a bachelor's-level Siemens Mechatronic Systems Certification Program, and the University hopes to launch the program as early as fall 2019.

"It's a highly coveted program that allows students to be Siemens-certified at three levels," Matthew Anderson, interim chair of the APSU Department of Engineering Technology, said. "First is a certificate, second is an associate degree, third is a bachelor's degree."

Several community colleges in Tennessee offer the first two levels in partnership with Siemens, but only Middle Tennessee State University offers the bachelor's degree.

In order to land Siemens as a partner, Austin Peay bought high-level mechatronics training equipment and sent Anderson to Berlin, Germany, this summer to undergo Siemens training.

Anderson is now qualified to teach the Siemens mechatronics program at the certificate, associate and bachelor's levels. He'll teach students on the new equipment as early as the spring semester, he said.

WHAT EACH LEVEL MEANS

Even though several Tennessee community colleges offer the certificate- and associate-level Siemens training, such programs are rare globally. And the bachelor's level is in its infancy.

Austin Peay will award associate- and bachelor's-level Siemens-backed degrees.

Here's the difference among the levels:

- Level 1 (certificate): Siemens calls workers with this level of training "mechatronic system assistants." They are "well-grounded machine operators" trained to maintain and troubleshoot mechatronic systems.
- Level 2 (associate degree): Siemens calls workers with this level of training "mechatronic systems associates." They are "highly skilled technicians" who can manage, investigate, repair and troubleshoot mechatronic systems.
- Level 3 (bachelor's degree): Siemens calls workers with this level of training "mechatronic systems professionals." They are a "designer of and expert on" mechatronics systems who can design, manage and improve the systems.

"The bachelor's degree is designing the systems, not just maintaining equipment," Anderson said. "It would be helping set up the system, optimizing it, managing it."

GRANT BACKS TRAINING, EQUIPMENT

The mechatronics equipment and faculty training were paid for with a U.S. Department of Defense Office of Economic Adjustment grant awarded to the Pennyriple Area Development District to administer Fort Campbell Strong, an initiative to support the economic health of counties near the Army post. The counties are Stewart, Montgomery and Robertson in Tennessee and Christian, Todd and Trigg in Kentucky.

The payoff is obvious.

"Look at all the industry we've had coming in the last few years," Dr. Russ Longhurst, associate professor in the APSU Department of Physics, Engineering and Astronomy, said. "We've got LG Electronics, Hankook, Google, and the list goes on.

"We have a readily available workforce coming out of the military consistently," he added. "If we could get those folks some training in high-tech manufacturing, it would put the area in a much better position to recruit industry. But it would also help the current industry here by supplying them a skilled labor force."

The grant money is intended to help meet the needs of military and civilian students, Fort Campbell Strong documents note.

The Siemens format dominates mechatronics automation worldwide, "therefore, it is imperative that any certificate- or degree-awarding mecha-



Joshua Schlenker and Ushma Patel, both of Clarksville, and APSU lab technician Timothy Daniel examine the new mechatronics equipment. (Photo: Benny Little,)

tronics program follow training standards developed by Siemens,” the same documents read.

The grant is in its second of two years and has provided about \$300,000 to Austin Peay to buy the mechatronics equipment and \$60,000 for Siemens training, according to Fort Campbell Strong documents.

The grant also has provided about \$350,000 of equipment and training at Hopkinsville Community College and \$185,000 of equipment and training at the Tennessee College of Applied Technology campus in Clarksville.

WANT TO LEARN MORE?

- Read more about the mechatronics equipment at <https://tech-labs.com/products/amatrol-mechatronics-learning-system>.
- Learn more about the Siemens Mechatronic Systems Certification Program at <https://www.sitrain-learning.siemens.com/DE/en/content/SMSCP-Siemens-Mechatronic-System-Certification-Program.do>.