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Energized: Industry leader gears up with UW–Oshkosh Electrical Engineering Tech program

Written Laurie Schlosser, University of Wisconsin–Oshkosh

A University of Wisconsin–Oshkosh engineering program and a regional manufacturer of electric power protection units are collaborating to create a pipeline of highly skilled, locally-rooted talent and sustain mutual growth, innovation and long-term success.

Switchgear Power Systems (SPS), headquartered in Winneconne, WI, creates electric power protection units known as switchgears—used across the globe in transmission and distribution systems, substations, industrial facilities, commercial buildings and some residential settings—as well as metering cabinets and large-scale outdoor (heated and cooled) equipment enclosures.

The company’s partnership with UWO provides engineering students with a real-life look at the industry. In turn, SPS is cultivating talent for its and the industry’s future.

“This partnership is more than a gesture; it’s a strategic investment in the future,” Muhammad Asim Ali, electrical engineering manager at SPS, said. “By fostering strong ties between academia and industry, we’re building a vital bridge for talent management and business growth—right here in our local community.”

**Working together**

The idea of the collaboration sprung up a couple of years ago when Ali connected with Ahmed Nasif, UWO associate professor.

Ali, who has served on the advisory board of the UWO engineering program since 2023, was looking to share his passion for engineering with students and help foster the next generation of engineering talents in Wisconsin.

Nasif was looking to bridge the gap of theory and practice for Electric Power Systems and Distribution, a junior-level course in the Electrical Engineering Technology major. He said SPS supports UWO in enhancing student curriculum, providing students with real-world perspectives and competitive advantages that elevate their potential and helps students out-perform their peers. The partnership also boosts the visibility and appeal of UWO’s engineering program.

Sheldon Fletcher, an applications engineer at SPS, provided a series of five guest lectures at UW–Oshkosh during the spring 2025 semester and the class had the select opportunity to tour the SPS plant in Winneconne.

“We are very thankful to the leadership and the engineering team at Switchgear Power Systems for providing this exclusive opportunity to UW–Oshkosh students,” Nasif said. “Through the lectures and the plant visit, the students really got a great glimpse of what it takes to build a switchgear from scratch—through design, fabrication, assembly, testing and process optimization. We all learned a lot and were very impressed by the energy and enthusiasm we felt being at SPS, which is a gem of a company in the Fox Valley.”

Company leaders say SPS has experienced tremendous growth in recent years due to the high demand of data centers, alternative energy sources, along with traditional electrical grid expansion and upgrades.

**Experiential learning**

Recent graduate Eddy Ayala**,**a native of Chicago, Illinois, said the guest lectures were informative and tied directly to the course.

“What I liked most about these lectures was how they taught us about transformers using their specific industrial applications. In class we usually cover applications to the material we cover—but very briefly. I think they provided a lot of application to our course material that we otherwise would not have received.”

Ayala said the lectures were interactive—they were capped with quizzes at the end of each—and the plant visit to SPS was well-organized.

“We managed to cover a lot with just an hour to visit and they had no problem with us staying longer,” he added.

Paul Price of Oshkosh, who also graduated this spring, said he was able to better connect theory and practice by having an industry professional educate the class on the concepts and be able to point to specific techniques and parts used in the field.

“Then, going from the classroom to SPS’s facility, solidified these connections, allowing me to form mental models of how theory is applied to real-world customer solutions.”

Another student in the class said power distribution centers caught his attention during the plant visit.

“I could not believe the size of them and was even more shocked when I heard SPS produced 40 of them per year,” Michael Deluca said.

SPS promotes itself as utilizing the “latest, state-of-the-art fabrication equipment” in a clean and quiet atmosphere.

Nasif said the company employs UWO student interns as well as offering full-time employment opportunities. UWO’s electrical engineering graduates are in demand as they prepare to enter the workforce.

Nasif reported that SPS recently hired UWO graduate, Logan Frosch, as a full-time engineer. Frosch completed an internship at SPS in summer 2024.

Ali thanked Nasif and Gregory Kleinheinz, chair of the department of engineering and engineering technology, for helping foster the partnership and trusting the SPS “vision” for the future.

SPS, a family-owned business, began in 2007 with six employees at a facility in Oshkosh. In 2010, the company relocated to Winneconne, where it continued rapid growth.

By 2012, SPS completed the first of many expansions and had grown to a team of 50 employees. The company earned its Women’s Business Enterprise National Council certification in 2017, reflecting its commitment to diversity and excellence. Today, SPS employs more than 300 and continues a “tradition of growth, innovation and strong family values,” according to the company.

“Having companies of SPS’s caliber right in UWO’s backyard is priceless for students, our programs and the regional economy’s talent-generation efforts,” Kleinheinz said.