

SIUE engineering camp inspires future problem solvers, innovators

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EDWARDSVILLE - The Southern Illinois University Edwardsville School of Engineering's (SOE) state-of-the-art Student Design Center was buzzing with drone activity on Wednesday, June 13, as students from across the nation engaged in hands-on learning during the School's 2018 Engineering Camp.

The dynamic camp, sponsored by Phillips 66 Wood River Refinery, and supported by MiTek, exposes high school students to the world of engineering. The SOE welcomed 52 students from across the country for two week-long camp sessions held June 3-15.

Campers explored the opportunities that exist through SOE programs that span the industry, including computer science, construction management, mechatronics and robotics, and civil, electrical, computer, industrial and mechanical engineering.

“At our School of Engineering high school summer camp, our campers apply their enthusiasm, creativity and innovation as they learn about the wide range of opportunities ahead of them,” said SOE Associate Dean Chris Gordon, PhD. “The camp provides an opportunity for students to learn, discover, become inspired and get a taste of college life at SIUE.”

During Engineering Camp, participants toured Phillips 66 Wood River Refinery and got a first-hand look at the water treatment processes that occur at SIUE’s Environmental Resources Training Center. Engaging camp activities included robot creation, bridge building, computer game development and more.

“I’ve always been fascinated with engineering,” said 14-year-old Orion Gregory, of Glen Carbon. “I like solving problems through unconventional routes. The lectures have been interesting, and I’ve also enjoyed socializing with others who have a shared interest in engineering.”

This year, faculty from the SOE’s mechatronics and robotics program also led an activity that involved the programming of a drone to complete a circular challenge.

“We know many students have drones or RC cars in their homes, but they are most likely controlled manually through a remote control,” said Mingshao Zhang, PhD, assistant professor in the Department of Mechanical Engineering. “With this activity, we are giving them the basic ideas of control and automation and teaching them how to program a drone. They’re telling the drone, ‘This is what you are going to do for me. And, I need you to do it.’ They get excited when they realize they’re accomplishing the challenge.”

“The preciseness needed to do the drone activity, the coding and programming, was interesting and made it fun,” said 17-year-old Phil Gokhman, of Chicago.

“Our mechatronics and robotics program is heavily focused on mobile robotics as a research area,” explained Nima Lotfi, PhD, assistant professor in the Department of Mechanical Engineering. “We are also getting into work with drones. This activity is an interesting way for students to learn the fundamentals of mechatronics systems.”

“I love engineering so I thought I would try out this engineering camp,” added 14-year-old Ishan Shah, of Chicago. “I have a lot of drones at home, so I liked doing that activity. The whole campus is motivating and seems to bring out my desire to do more.”

Erin Kaelin traveled from Denver to participate in SIUE’s Engineering Camp.

“I think it’s cool to find out how things are made and be a part of the creation process,” the 14-year-old said. “My favorite part was when we built robots.”

St. Louis native Kristen Wallace, appreciated the breadth of the camp’s activities, sparking her interest in a variety of engineering specializations.

“I’m interested in environmental engineering, so I liked the tour of the Environmental Resources Training Center,” Wallace said. “I have heard that SIUE is a great school for engineering of all types, so I researched and was excited to find this camp.”

SIUE engineering students mentored the participating students and helped inspire the next generation.

“Our campers learn from our hands-on activities as well as from the mentorship of our School of Engineering faculty and staff, and our camp counselors, who are students from the School of Engineering,” said Gordon.

“Campers come from across the country to experience our unique facilities, programs, partnerships and expertise,” he added. “Several campers return to campus as freshmen poised with a head start on determining which areas excite them the most.”

The [SIUE School of Engineering](#) offers one of the most comprehensive and affordable engineering programs in the St. Louis region with eight undergraduate degrees, five master’s degrees and a cooperative doctoral program. Students learn from expert faculty, perform cutting-edge research, and participate in intercollegiate design competitions. Companies in the metropolitan St. Louis area provide students challenging internships and co-op opportunities which often turn into permanent employment. Students gain hands-on experience in the School’s state-of-the-art facilities, including the brand-new Student Design Center.