Electrical Engineering Student Charges Ahead/On

By: Desiré Bennett

Paul Keppler is the UC College of Engineering and Applied Science Engineer of the Month for May. Paul maintains a 4.0 GPA in his junior year in the electrical engineering Technology program while working toward a Bachelor of Science degree.

Indiana resident Paul Keppler says that location, a vast array of programs, and affordability led to his decision to choose the University of Cincinnati. “I researched and found that the University of Cincinnati was within commuting range, offered the engineering program that I desired, and was affordable,” he said. “I also learned that UC has a reputable engineering program for electrical engineering technology and, upon graduation, UC can assist me in finding a job within my major using the connections UC maintains with companies worldwide.”

Following high school, Paul joined the US Navy and spent two years training as a Nuclear Electrician, so choosing to study electrical engineering technology was a natural fit. “I chose the field of electrical engineering at UC to strengthen and reinforce my existing knowledge of electrical and electronic systems,” he said. “I had a fascination with electrical gadgets growing up and started working on electrical projects as a young member of the 4-H program.”

After spending two years as a nuclear electrician, Paul spent four years being responsible for the repair, maintenance, and operation of various electrical components aboard a Naval Nuclear Submarine. “After completing my service in the Navy, I was hired as a technician at American Electric Power (AEP) where I was responsible for troubleshooting, maintaining, and operating electrical generating equipment,” he said. “When I exited AEP and was accepted to the University of Cincinnati, it seemed fitting that I pursue a Bachelors of Science in Electrical Engineering Technology because of my passion for electricity and time working with electricity – after all, I had been working on various electrical equipment for years and my acceptance into UC was my first opportunity to learn the design and improvement of electrical systems.”

Ultimately, Paul says, it was the possibility of participating in cooperative education that most caught his attention. “The co-op program stood out to me after being introduced to the school,” he said. “The idea of being able to help pay for my education while gaining valuable work experience for my future resume seemed too good to be true, but yet it was!”
Paul has completed three co-op semesters at AMP Electric Vehicles, located in Loveland, Ohio, where he works as the lead electrical engineer. He says that, among many things, he has learned how to research and develop electric vehicles, including delivery trucks and busses, during his co-op experience. “In designing the electrical layout for each vehicle, I have to communicate effectively when working with every department within my co-op employer, from mechanical, software, operations, and marketing,” he said. “I learned that it is critical that mechanical engineers know the size and amount of electrical equipment that needs to fit into the vehicle. This includes battery packs, computers, wiring, and distribution boxes.”

In addition to research and development, Paul worked on various engineering initiatives – from working with individuals in software engineering to the marketing department. “I had to work with the operations manager to keep him abreast of the parts that my designs required, the cost, and availability of each part. I [also] had to work with my chief engineer to ensure that, as a new electrical engineer, my electrical designs were accurate and followed electrical and automotive codes,” he said. “And I learned from marketing what customers wanted to see included in an electric vehicle and what features were non-essential.”

He says that his co-op experiences also helped him to learn how to integrate multiple electrical devices from many manufacturers into one package. “This requires reading and understanding technical manuals, manufacturers’ data sheets, and bench testing new devices.”

When he is not in the classroom or doing co-op work, Paul serves as the president of the Basic Utility Vehicles Club (BUV). The BUV Bearcats, a volunteer student organization, designs and builds low-cost utility vehicles. As president, in addition to balancing the budget, organizing club events, and recruiting new members, he is responsible for teaching new members how to construct the BUVs and run the machine shop equipment.

According to Paul, a vehicle endurance competition for design proof of concept is
held annually between several organizations on a rugged terrain environment. “The BUV Bearcets works with The Institute for Affordable Transportation (IAT),” he said. “This is a not-for-profit public charity devoted to improving the lives of the world's poor by providing simple, low-cost vehicles in order to facilitate community transformation.”

He also just recently joined the National Society of Leadership and Success. Paul advises fellow students to take part in the University Experience. “As a non-traditional student I miss out on the events and fun events that occur around the University all the time,” he said. “Join a student organization, as they can be opportunities to learn something new and provide networking opportunities for future occupations.”

Paul is looking forward to his senior year and the challenges that lie ahead.