

How to take control of electrical engineering grad recruitment

With a foot in each camp of industry and academia, Paul Acarnley, electrical engineering consultant and manager of the E3 Academy, explains how companies can break the cycle of stressful annual recruitment for electrical engineers. He set up the E3 Academy, a UK non-profit organisation that develops electrical engineering talent, in order to help.

“I’ve spent a lot of my life in academia, working at Newcastle University researching and developing electric drives,” says Acarnley. “After a failed attempt to retire, I was invited to help run the E3 Academy from some of my old colleagues at the university, and I have been running it for the 14 years it has been around.

“I also do some consultancy in the electric vehicles area, mostly government funded projects. So, I can see both the current state of the industry from my consultancy work, and the academic side from my work at the University and with the Academy. Having my toes in both means I can see in real-time the demand and supply of talent in the industry, and the major issues that employers are facing.”



More than 45% of engineering employers surveyed in [Engineering UK's 2019 report](#) reported recruitment difficulties. The same report identified that even the most positive projection of graduates entering engineering is still 20,000 fewer than needed. The skills shortage in electrical engineering is particularly tight and is getting worse, so schemes like the E3 Academy are more important than ever.

“Although I’ve always loved research and discovering new things, my proudest achievement in my career has been nurturing people – encouraging their careers in engineering,” says Acarnley “I get to do that every day running the E3 Academy, and I get to support the industry I love by helping it secure the best and brightest young talent amidst all the ongoing recruitment issues.”

How the E3 Academy works

The E3 Academy works as a triangle linking a partner company with a student and a university, benefitting all three in the process. The partner company gets a reliable pipeline of top talent into its graduate scheme, students get financial support and a guaranteed job after graduation, and the university gets links with employers.

“Students apply to us at the same time they are applying for university,” says Acarnley. “The Academy itself does not select the students but sets a common framework across all of the universities and employers. This makes the scheme accessible to employers that might otherwise think twice about a sponsorship scheme. We also do the admin by collecting applications, responding to applicants, gathering references, then sending them through to the applicants’ chosen companies.

“It’s then up to the companies to make their selection and draw up a shortlist of their candidates. Once the students get an offer, they visit in person so that they and their partner company get a realistic view of one another. It’s more about developing that personal relationship and networking than it is about the technical knowledge: are these people, or is this someone, you feel you can work with? It’s a two-way street.”

The sponsoring company then provides funding to support its students through a 3-4 year BEng or MEng degree course before they start at the company full time as graduates. During their studies, the sponsor company also hosts scholars for eight-week summer placements while the E3 Academy runs a summer school to give opportunity to pick up a wider perspective, as well as networking.

“The main goal of the work placements and summer schools is to build the soft skills you wouldn’t necessarily learn at university. Scholars also get to network with their partner company and peers, building those relationships much earlier on.”

Turning the recruitment challenge on its head

The E3 Academy is currently on a mission to double the number of partner companies it works with, particularly in newly electrified sectors, such as aeronautics and e-mobility.

“Every year, engineering managers and HR leaders face the same challenge when recruiting graduate electrical engineers,” says Acarnley.

“They spend time and resources competing for a shrinking pool of graduates. Then they spend more time onboarding and integrating them into the business. It’s a merry-go-round that is stressful and demanding, and often has variable results.

“We are turning this on its head by providing a framework for forward planning. Employers get more control and certainty over future resourcing, with a steady stream of graduates who are already loyal to their business. It’s an approach that is flexible enough to work whether you need 10 graduates every year or one every other year.

“Employers get the opportunity to snap up talented young people early and mould them through work experience and by suggesting courses that will underpin their future career.

“What we’ve found over the years is that our partners, first and foremost, are looking for people that fit in with their company. And this is what companies get with the E3 scheme. On a scholar’s first day, they walk in the door and know everyone by name, and everyone already knows them. Through the summer placements they have effectively been working there for a few years. This is the Academy’s value compared to someone starting on their first day after only a couple hours of interviews.”

Excellent retention rates

“This familiarity generates loyalty. More than 80% of our scholars stay with their employers for more than two years, and often much longer. The scholars want to pay back the investment made in them. This retention rate is one of the key reasons our partners continue working with us over many years.

“All in all, the Academy takes the uncertainty out of graduate recruitment for partner companies, while they also gain loyal, dedicated employees.

“There are lots of companies out there that base their recruitment on poaching from their competitors. This might work in the short-term but creates problems in the long-term. When you poach people, you typically have to offer them more pay, but you’re also recruiting people that are poachable. It’s an expensive strategy that doesn’t produce a loyal workforce.”

The future of graduate engineering recruitment

Acarnley envisions a time when engineering companies will view this way of recruiting young talent as the norm.

“We want companies to develop the mindset that this is the best possible way to recruit grads – investing early to get loyal, dependable, valuable employees that repay that extra investment tenfold.

“For the approach to work successfully, it needs mutual trust and respect from all three corners: the students, the universities, and the companies. When it works well, it works brilliantly. Individuals blossom and the companies reap the benefits. The key to success is having a framework in place that is accessible to both large and small companies to help them get the most from student sponsorship.”

Contact Paul Acarnley at manager@e3academy.org to learn more.