

engineering opportunities 2009

The education, careers and training guide
for school leavers, students and graduates



What do employers look for when they are recruiting young engineers? And what should you be looking for in an employer?

It's an excellent time to become an engineer. So when you set out on the road to a career in the industry, it's worth remembering that while an employer is checking you out during an interview, it's also your chance to size them up. They may look fierce, and they're picking you, of course. But don't forget, you're picking them too.

Even in difficult economic times, good engineers are much in demand. The sector has suffered from critical skills shortages for a number of years so employers are keen to fill the gaps that they see as crucial to their future, and young people are vital to that effort.

"The future of our engineering is our graduate scheme," says Martin Grady, recruitment manager at automotive

consultancy Ricardo, which serves carmakers and suppliers all over the world from its base near Brighton.

"We're conscious of the fact that we have a skills pipeline to fill in the future, and we want to attract the best talent that we can," adds Peter Scraton, the head of human resources at Essex-based specialist technology firm E2V.

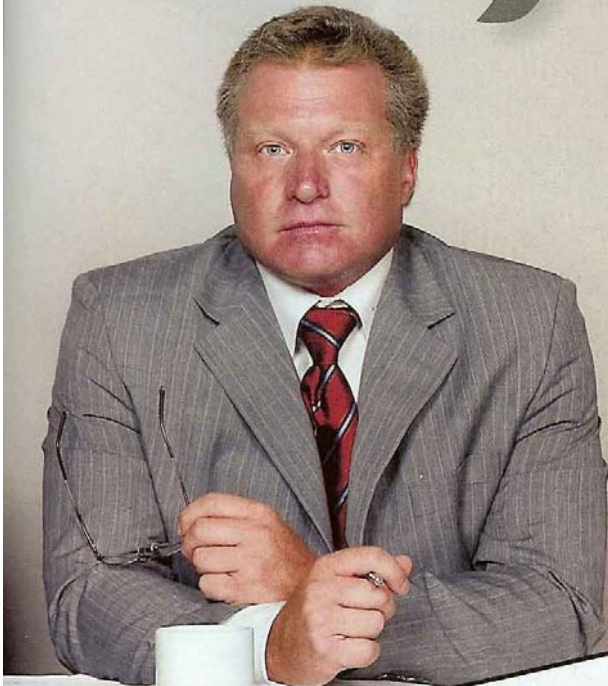
So, what should you be looking for in a potential employer? As well as the usual benefits such as a decent salary, pension schemes, travel allowances, holidays and healthcare programmes, the thing that really makes engineers of all types tick is the chance to work on exciting projects – the bigger and bolder the better.

At E2V, for example, you could end up working on technology used by NASA in

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Doing the rounds

Keep an eye on companies coming to universities, colleges and recruitment fairs near you as part of the annual 'milkround' of graduate opportunities. These can provide valuable exposure to engineering employers, and allow you to get a sense of what they have to offer. Many of the functions of the traditional summer and autumnal milkrounds are now performed online, so it pays to be up to speed with the websites of The Graduate Recruitment Bureau (www.grbuk.com) and Milkround (www.milkround.com).

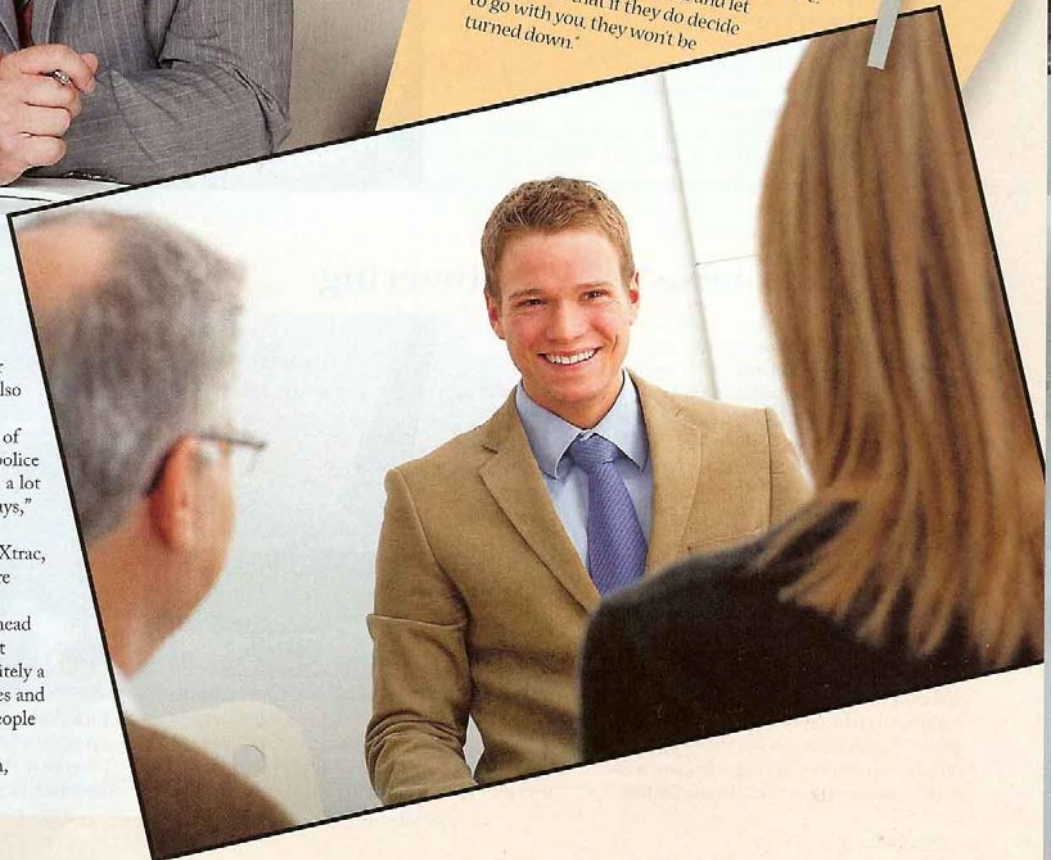
If you make it to interview, try to remember to relax, even though the experience can be nerve wracking at the best of times. Smile, especially during small talk. 'It's as important as a handshake,' says Global. Try to avoid clamming up, but also avoid the temptation to babble. EPC recommends starting conversations on a positive note, rather than moaning about the traffic or weather.

Do your research on the company before the interview, and ask questions – people like talking about their businesses and it shows you're interested. It sounds obvious, but make sure you turn up on time for the interview and are smartly dressed. If in doubt about dress code, err on the side of conservative.

And if you want the job, say so. 'This is one of the variables for the employer,' says EPC. 'Take it out of the equation and let them know that if they do decide to go with you, they won't be turned down.'

a space telescope, or by luxury carmakers for cruise control in their most advanced models. You could also help to contribute to imaging equipment that has saved members of the public from fire, or helped the police to track down criminals. "We touch a lot of people's lives in many positive ways," says Peter Scraton.

At transmission technology firm Xtrac, engineers create gear systems that are used by more than half the teams in Formula One racing. Jane Gilham, head of human resources, says: "The direct association with motorsport is definitely a draw." Xtrac recruits both apprentices and graduates each year, and looks for people who can demonstrate an interest in engineering and motorsport, or both,



Applying for jobs

through college work, work experience or hobbies. "It could be kids with a mechanical aptitude – someone who likes taking their BMX apart and putting it back together at home," Gilham says.

At Ricardo, which received 600 applications for its graduate positions this year, Grady says that the company looks for a minimum of a 2:1 and will also expect good results for important subjects such as physics, maths and sometimes chemistry at A level. The company has an urgent and growing need for electronics engineers, and hired a specialist agency to take on more of these at graduate level this year.

Candidates who make it to the interview stage can expect to attend a day-long assessment centre at Ricardo's HQ, featuring a technical interview, a site tour and a presentation from a Ricardo graduate employee. The lucky ones who are signed up for the graduate programme – Ricardo took on 40 in the most recent crop – can expect to rotate around the company's different departments, be assigned a mentor, and to get hands-on pretty quickly. The company will also help its young engineers toward chartered status in the first two years of their employment.

Apprentices at Xtrac, meanwhile, work toward NVQ level 2 qualifications in engineering operations and the national certificate in mechanical engineering as part of complementary college work. Just as at Ricardo, they experience each department of the business before getting the chance to specialise. At any one time there are around 10 apprentices working within the organisation. "We've been ardent supporters of apprenticeships for years," Gilham says. "We do that so we can grow and develop our specialist skills."

You can hardly have missed the doom-laden headlines about the collapse of banks and financial institutions all over the world over the last couple of months; engineering provides an alternative to financial services that can provide a happy professional home for bright, motivated and technically skilled people.

"Engineering is one area of the economy that is actually tremendously resilient," says Tobias Reed, chief executive of EPC Global, which recruits civil, oil and gas and power engineers to projects all over the world. He predicts that engineers to help build and run new power stations are going to be in particular demand over the next few years.

And he points out your engineering skills could take you anywhere in the world. "It might be worth learning languages such as Chinese or Arabic as an extra skill to boost your employment prospects," he suggests.

"Learn one of the languages that can be used in booming markets such as the Middle East, or with Chinese partners, which is going to be more and more important." ■



Ricardo looks for graduate engineers who have achieved at least a 2:1 degree

A career in aerospace engineering

Ben Adams, operations director at engineering consultancy Atkins Aerospace, says the company looks for graduates with a minimum of a 2:1 in their degree. It recruits from leading engineering universities including Imperial College London, Oxford and Bristol – the latter being one of the key locations in the British aerospace industry, and where Atkins Aerospace is based. "We look for people of intellect and attitude," Adams says. "We like bright engineers who have the right kind of attitude, relish a challenge and love getting involved."

Although the company recruits aeronautical engineers, other disciplines such as mechanical and electrical engineering also provide its talented young employees. Because the company is part of the much wider Atkins group, resources are pooled, meaning graduate employees can also gain experience in areas such as nuclear power and defence. Atkins



Atkins Aerospace has carried out work for high-profile clients such as Airbus

Aerospace will be on the look-out for systems engineers in the coming years who can work on landing gear and fuel technology. Adams says the company likes to recruit graduates

with industrial experience, although it's not a prerequisite. "We find that you can see the difference with graduates that have that experience," he says.