

## Case Study: Alumni

**Zoe, MEng Materials Science and Engineering**  
**Graduation Year: 2010**

**Job Title:** Graduate Mechanical Engineer

**Employer:** Transport for London

**Department:** London Underground

### What has been your career path up until now?

I began my career whilst still at University. After my 2nd year, I decided to do a summer placement in order to gain some relevant experience, which I knew would be useful when I had to look for jobs in my 4th year. I managed to get a placement with Angel Trains and spent three months with them. They made sure I had interesting projects and taught me a lot about the industry. This placement is what made me keen to continue work with the railway. As part of my 3rd year, I was required to do a placement over the summer. This time I had a railway placement with Bombardier Transportation in Derby. This gave me a different view of the railway and I got to see the manufacture of trains, including new tube trains. This was really exciting as it's the only place left in the UK that manufactures trains. Throughout my 4th year, I knew that I wanted to work for TfL. I was particularly drawn to the vast amount of opportunities available as London Underground owns all aspects of the railway, not just one part. Also, I was interested in the challenges that LU has to face in order to keep the railway running and thought learning about these, from the people who've had to face them would be invaluable.



**“I was interested in the challenges that LU has to face in order to keep the railway running...”**

- Zoe

### What does your job involve?

The graduate scheme is very structured in that you have many support systems around you to ensure you get help when you need it, placement opportunities and someone to ask those “silly little questions”. However, it's also incredibly flexible – you choose every placement that you do, how long for and what projects you may do in it. Before this stage though, I started with six weeks of operational placements – 3 weeks working in a station and 3 weeks of train driving. Both of these were really fun at the time, but also really useful in my engineering placements as not many people around me have been able to do the same thing. I'm currently working in a project team that designs the modifications to the infrastructure required in order to allow for longer, new trains. This involves going to design meetings, meeting with stakeholders, modelling the performance after modifications, conducting technical studies and more. I'm really enjoying this placement as I'm always kept busy with additional bits and pieces of work as well as my longer term projects. As well as working in different placements, I'm involved in projects to teach students about railway engineering before they go into their GCSE year. This was an amazing experience that taught me a lot and it was an opportunity I wouldn't have got without TfL supporting the promotion of engineering from a young age.



### **What are your future plans?**

I'm planning on continuing my training, concentrating more on rolling stock and roll off the scheme into a rolling stock job. However, with all the areas of the company left to see before then, anything could happen!

### **Did you choose your course with this particular occupation in mind?**

I originally opted to study Mechanical Engineering at Imperial College, but I did not manage to get the grades. Fortunately, I was offered a place on the Materials Science and Engineering course. I'm very happy with how it turned out now as I learned many skills and gained lots of knowledge that is transferable to any problem. As the 4th year approached, I spoke with the Institution of Mechanical Engineers (IMechE) when I was applying for jobs to ensure it was accredited. A lot of employers would only accept candidates that had IMechE accredited degrees. I signed up for Associate membership and they confirmed that it was, making it possible to do my current job.

### **What skills did you develop within your degree that you find useful in your present role?**

I found that learning about mechanics on a microscale gave me knowledge that can be applied on the macroscale and so was suitable for going into a Mechanical Engineering role.

### **Did you gain work experience or an internship whilst at ICL?**

See above.

### **Did you use the Careers Service or go to Careers events? E.g. job fairs, employer talks, etc.**

I found the Careers Service very useful. I booked a few one-to-one sessions with an advisor who gave me very detailed advice and helped me look at a broad range of job opportunities.

### **Could you give us one or more career tips for Imperial graduates?**

Looking back, I'm really glad that I took the initiative to apply for a summer placement in my 2nd year. This helped me get my internship in the 3rd year, which both contributed massively to getting my current job. I wouldn't have been able to speak so confidently throughout the application process for TfL if I didn't have this experience. Doing summer placements meant I acquired lots of practice at the application process, and gained experience before the 4th year.

