

## Case Study: Internship

**Yehia Amar, Third Year Chemical Engineering Student**

### **Which company did you undertake work experience with?**

The National Nuclear Laboratory

### **How did you go about finding the internship?**

I spoke to a student who completed a placement there in the past, so I contacted HR and asked for more information. They told me that they advertise these placements towards the end of every autumn term. So I searched the website early last academic year and saw industrial placements and summer placements advertised there. (Incidentally, a few weeks after I applied, an NNL representative actually sent my department an email which was circulated to students about the placements.)

### **What was the timescale for your application?**

I applied in late November. They contacted me a few weeks later to arrange an interview which was held in early January. I received a formal offer a few weeks later, early Feb. I had applied to about 10 or so other placements as well.

### **What was the application and interview process like?**

The application process was very straightforward. Following a CV and cover letter screening, the next stage was an hour long phone interview with my soon-to-be Team Manager. This was about 50% technical in nature, and 50% competency questions.

### **How big was your team and where did it sit in the organisation?**

I joined the Waste Residues and Processes team which is a sub-team of the Waste Management and Decommissioning Team. This is quite a small team of about 10 people in my immediate vicinity in the large office. However, the entire WM&D team at NNL consists of about 200 people. It plays in my opinion a crucial role in the organisation, generating well over a third of NNL's revenue.

### **What was your role and what did it involve?**

NNL has a wide range of work and a lot of what they do is technical consultancy to its customers. I was involved in two projects; one of them was about a major problem in the UK regarding legacy fuel waste in storage ponds. Sellafield Ltd is investing heavily in understanding how waste has behaved over the last several decades of storage and I investigated from a fluid mechanics perspective the rate of water ingress in fuel cans that are stored in deep ponds at Sellafield site. During my placement I worked with project



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**- Yehia Amar**



managers, technical experts and business managers.

### **What was the most valuable thing about your work experience?**

My work placement was an extremely valuable experience as it has opened my eyes to a variety of challenges in nuclear waste, which is one of the UK's most serious challenges. During my placement I got to sit in and contribute to important business conferences including one which had senior people from Japan, American and UK nuclear technology companies, which taught me the subtle differences in the challenges the industry faces in different countries. However I would say that the most valuable experience for me academically was the opportunity to tour a facility where spent fuel analysis and processing takes place. My manager specifically arranged this for me to prepare me for one of my modules this year at Imperial on nuclear materials, as this facility is the prime facility in the country for nuclear materials. Also, this placement gave me the confidence to pursue postgraduate research studies in an energy-related area.

### **Do you have any tips for future Imperial students looking to make the most of their summer?**

I would advise Imperial College students to pursue a summer work placement in an industry which they think they might be interested in joining but are not 100% sure yet. Let the internship be a test for you as to whether this is the career you are really interested in launching after university. For students thinking of pursuing postgraduate education following your degree, do a research placement at a university, a research institution or a company's R&D department.