



## THE SECRET GRADUATE: THE TRUTH FROM INSIDE AN INDUSTRIAL PLACEMENT

**TCE'S SECRET GRADUATE**  
TALKS CANDIDLY ABOUT  
HOW TO GET THE BEST OUT  
OF THE ALL-IMPORTANT  
WORK PLACEMENT

**I**n this article, I aim to lift the lid on industrial placements in order to shed some light on the highs and lows of these much-valued CV fillers. I am about to go into the last year of a Masters in chemical engineering at an IChemE-accredited university in the UK. I will remain anonymous so that I can give an open and honest account free from vetting by the company's communications team. Anonymity will allow me to speak freely, and to give an accurate account of my experience to help you decide if industrial experience would be a useful thing for you to do.

Throughout my course, we were always encouraged to try to get industrial experience; we were told it would look good on our CVs, and that it would make us more employable post-graduation.

Following these encouragements, I began my search with great zeal. The search took longer than I anticipated - I began applying for placements in October, and finally got through to the interview stage the following May. Two phone interviews later, and I had secured a three-month placement within a fairly large oil and gas company.

I had about four weeks from receiving the offer to get my act together (to pack my Perry's and Coulson & Richardson books) and relocate. Having just finished a fairly substantial university project the semester before, I felt like a real engineer, and was ready to tackle whatever the company would throw at me. I had visions of designing separators, and carrying out calculations using HYSYS models, or doing activities where my work would have an impact on the project the company was working on. As

you can imagine, I went into the office on my first day expecting great things, and wanting to feel like a real chemical engineer.

## BOOK WORM

Following the standard introductions to just about everyone in the office (and only remembering about two names – thank goodness for name badges), I was shown to my desk. For a while I was left to my own devices, so I studied a piece of paper with some block diagram on it that had been left on my desk with great intent because my computer login was yet to arrive.

When my line manager got the chance to speak to me, I received some form of explanation of what my job would be, but the reality was that I was handed things and told to read them. For the first two days I sat and read documents and I had no idea why, or what I was to do with them. I took some notes as I read, but I felt as though I must have missed something, or misunderstood the task. I asked a few questions about what I was meant to do, but it all proved inconclusive until halfway through my first week, when I had a meeting with someone who had set me a project.

After the meeting with the project organiser, I eventually found out what I would be doing during my placement. It turned out that I would be doing what I like to call 'dry work' – in other words, no numbers, no equations, no feeling like a real chemical engineer for me. I was to write a manual. To say that I felt deflated and underwhelmed is an understatement.

My placement would consist of research and writing a document. I chose chemical engineering because it had maths, calculations, and problem solving. By the looks of things, my biggest problem during the placement would be to get the contents page of the document to behave (ironically, despite my best efforts and many a tirade at the computer screen, it never worked).

## FAILING TO PLAN

During the application process, I was asked what I would like to get out of the placement; however when I arrived at the company, it almost felt like what I said had been lost in translation. The let down when I did find out about my project would have been easier to deal with had there been some contact with the person making up the task beforehand to give me an idea of what I would be doing. Candidates will often mention the skills that they want to gain from a placement during an interview, and something that employers could do is make a personal plan for the student to see if the placement has furthered their professional development. This could be facilitated

with a review meeting at the end of the experience. This would provide the student with documentation about what they did and learned, and would be useful for future applications.

## FROM LEMONS TO LEMONADE

During the first few days of my placement I tried to reassure myself that it would still be a good experience, and that, if anything, I was getting paid to do something quite easy, and would still have something to write about in my CV. However, as I sat despondently looking out of the window inspecting the cars in the carpark (remember it was an oil company, so there were some crackers), I had something of an epiphany. I realised that the placement would be what I made of it. Yes, the work might not be what I imagined, but if I made the conscious effort to make the most of it, do a good job of the document, and learn as much as I could along the way, then it would all be worth it.

So, from that point on, I started to listen in to the conversations going on around me in the office. I picked up on the processes that run on an offshore platform, the relationships between departments in the office, and the way projects are carried out in a company. As important as technical knowledge is, I came to realise that learning about how to work in an office environment is just as important; the project is the team, and finding how you fit in is a vital part of being a chemical engineer.

Everyone I came across in the office was more than happy to answer my questions, or to explain things to me. Asking questions is an important aspect of a placement; there is a whole wealth of knowledge around you from different backgrounds, and from those at different stages in their careers. I spoke to graduates, senior engineers, and managers; all of whom wanted me to get as much as I could out of the placement, and to help me in any way they could. It's important to acknowledge that you are a student, and are not expected to know all the answers – so ask as much as you can, while you can.

## JOINING IN

Following a few conversations with colleagues, I was able to show that I was ready and eager to do other tasks as well as work through my document. The chemical engineers around me gave me some work to do – to them they were dull tasks that they disliked doing, but to me it was the most interesting thing in the world. This also helped me to multitask as I had to prioritise certain jobs over others, which gave me yet another insight into what a chemical engineer has to do. I learned how to use the computer programs that store project documents, how to lay out documents in

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a professional manner, and how to extract information from other documents. Doing these tasks made me feel like more than 'just a student', and I felt as though I had contributed something to the bigger picture.

I was able to see the stark differences between being a student in the sterile university environment, and moving into the raw working environment. I saw how the topics I had learned through the curriculum translated into the real world of engineering.

At first, it seemed as though I had learned next to nothing at university so far because there were no familiar McCabe-Thiele diagrams, or energy balances; however there was a comforting moment when I came across a copy of Perry's handbook in the office. After a few weeks, I was able to see how the principles covered at university tied in to form the basis of a career, and that made me realise that university could hardly finish quick enough until I could get out into the world and learn how to be a working engineer.

### HINDSIGHT

My placement gave me an opportunity to learn a business from the inside; I was able to observe working practices, and to see the hierarchy within an organisation. The placement was a steep learning curve, but one I am grateful for because I have a better idea of life post-graduation. I was able to see studies such as LOPAs and HAZOPs covered at university come to life in a project meeting, and to see the expectations of chemical engineers in a project team. Such interludes from the document I was working on made me feel like part of the team, and I was given responsibility to complete tasks within a timeframe to the same standard as

a 'real engineer'

This experience did, however, make me wonder if the transition between university and the workplace might not seem so extensive if a better interface were in place. The leap could be made easier through representatives from industry giving lectures to students – an incredibly useful insight for students to give them an idea of what to expect after they get given their degree parchment.

I sometimes wonder if the seemingly 'dull' project was a test on my employer's part to see what I would make of the task. They would be able to gauge if I would sulk and do the bare minimum while twiddling my thumbs at my desk dreaming of more exciting activities, or whether I would take the initiative and manipulate the project to fulfil their expectations, as well as my own. It did take me a few days to adjust to the project, and realise that I was not as competent as, say, someone halfway through a graduate scheme. Following my experience, however, I do have a better idea of the learning curve to expect when I graduate.

Although the work was different than I was expecting, I had an incredible experience where I feel as though I learned more in these months than my time at university; I have met people who gave me career advice, and brightened my day on a dreary Wednesday when Friday seemed miles away. Following the experience, I am really looking forward to starting my career as a chemical engineer, and as I go to apply for graduate jobs, I will have something that looks good on my CV, including experiences to talk about in interviews. And I feel more employable.

### WHAT ARE YOU WAITING FOR?

So, to the student I say: get your CV ready and start applying for placements now – you will use university knowledge, you will learn (lots), and even if the work might not be quite what you expected, you can turn it around and make it into something useful. To employers reading this article, I would encourage you to consider offering placements to students (if you do not already) and ensuring you are doing as much as you can to make the experience worthwhile; it will give them a valuable insight into industry, and, who knows, you may find your next employee in the process. Ah, that reminds me, I best make a start on graduate applications. Well, good luck in your search whether it be for an industrial placement, or your next placement student. I hope you enjoy the experience as much as I did mine – between you and me, I don't want to leave.

THE SECRET GRADUATE IS A FINAL-YEAR MASTERS CHEMICAL ENGINEERING STUDENT AT AN ICHEME-ACCREDITED UNIVERSITY IN THE UK

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