INDUSTRIAL PLACEMENTS; BEYOND ACADEMIC LEARNING

Industrial placements are often a highly valuable and important part of any degree course, but are not always considered by students when applying. I cannot stress enough the value of the extra year; it gives you the opportunity to gain some experience in your chosen field and better prepare yourself to enter the world of work.

After a lot of thought, I decided that I wanted a course which taught both Computer Science and Electronics Engineering. This had the benefit of keeping my options open, which was particularly important as I was unsure of what field would most interest me. With the course I selected, I could work as anything from a computer programmer to a hardware engineer. When applying for my placement, I was fairly certain that the software side would suit me best; my CV reflected this. However, I actually got a placement as an Electronic Engineer, something I had not had a huge amount of experience with. It turned out to be an eye-opening experience and I now know that this is the job for me.

When you first start your industrial placement, you will quickly learn the stark difference between knowledge and understanding. University furnishes you with a good knowledge of your chosen subject, but it is often difficult to truly understand the concepts and why they are being taught. By immersing yourself in the working environment for a year, you gain an understanding of the concepts you have learned and how these concepts are utilised to resolve everyday problems.

I worked for a total of fourteen months at a BAE Systems site in Rochester, Kent. The site is involved in a wide variety of work, but specialises in cockpit display systems for pilots, mission computers, flight control systems and inceptors (control sticks). During my placement, I worked on a research programme developing a small computing solution for the mission systems element of the business. This would be used to sample data from various sensors around the aircraft and display the information on one or more of the cockpit display elements.

For the first few weeks, I found it incredibly difficult to make progress. At university, you are only exposed to relatively simple circuit designs in order to illustrate the concepts being taught. By contrast, the circuit designs at BAE Systems are incredibly complex and utilised technologies with which I was unfamiliar. Over time, I began to develop a better understanding of the concepts I was taught and how they could be utilised within the technologies and processes used at BAE Systems. This helped me to design a major part of the computing solution in the first few months of my placement. By the time Christmas came around, I was holding a bare circuit board with my design. It was really great to participate in getting my design built, then testing and integrating it into the overall system. My final task was to document my design with a datasheet so that it could be utilised as a building block within other products at BAE Systems.

While on your placement, you also begin to appreciate that there is much more to learn than just your subject matter. You must learn the processes and procedures that must be followed at your particular employer. You must have a good grasp of time management and task prioritisation. You must also have a decent level of people skills; you are often dealing with colleagues, customers and suppliers on whom your work may depend.

Whatever you may be doing; make the most of any opportunities that come your way. Due to the course I have selected, my knowledge of Electronic Engineering is not as extensive as someone taking a dedicated course. The placement has given me the chance to greatly enhance my knowledge of this area and learn concepts which I had not dealt with before. I was also able to experience different aspects of work at BAE Systems in Rochester and at other sites.

Thanks to my progress over the year, I have been given a conditional job offer and sponsorship for the final year. In addition, I have organised a sponsored final year project; utilising the knowledge and experience gained during the year to hopefully improve my results. The fourteen months spent at BAE Systems have been more valuable than I could have possibly imagined. I have emerged with a greater understanding of my subject

and of myself. I had the chance to experience a job with which I had little experience; as it turned out something which I have enjoyed immensely.

We all feel a sense of accomplishment in the work that we do, no matter what the subject matter. It is this that we strive to find in our place of work; it is ultimately what makes our work enjoyable. I get this feeling when I see a piece of electronics that I have designed; when it is integrated into a larger system and works as was intended. At the very least, the industrial placement is an opportunity to try and find this feeling; to find the job that is right for you

All in all, the industrial placement year is an invaluable experience that should not be missed. If you have the option, I highly recommend that you make use of the opportunity. At worst, you will come away with experience to enhance your CV for future job applications and have some idea what work is like. At best, you will gain an understanding of your chosen subject and what aspect of this most interests you. This is something that cannot be taught; you must learn this lesson for yourself.

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