FdEng Mechanical Manufacturing Engineering – My Experience at Newcastle College

I’m 46 years old and have 30 years’ experience in engineering, covering many many sectors from Shipbuliding to Civils, Nuclear to Defence, Subsea Oil & Gas and plenty of others in between.

I served an apprenticeship as a Plater before moving into an office based CAD role in 2011 and finally becoming a Project Engineer in 2013.

In autumn 2016 my employer, Responsive Engineering Ltd, studied the skills gap inherent with an ageing, though massively experienced and capable workforce, and driven by the Managing Director, Graeme Cook, and the Head of HR, Alison Reynolds, decided to invest in the future of the company.

Newcastle College were approached and a class dedicated to REL employees was to be set up to study for a Foundation Degree in Mechanical Manufacturing Engineering.

There were 10 places available, which every company employee was eligible to apply for, and an interview process, involving Alison, was used to identify the most suitable candidates.

I enquired about the course and was initially hesitant, given my age at the time, thinking I’d be too old, but was encouraged, by Alison, to apply. I have always had an excellent professional relationship with Alison since she joined, what was then Pearson Engineering Services, in 2009 so I acted on her advice, applied for one the places on the course and was pleased to be chosen as one of the successful applicants.

The course started in February 2017 and the first semester, which included Engineering Maths & Electrical Science was a massive wake-up call to me. With 30 years having passed since I left school I found these 2 modules extremely difficult at first and I wasn’t alone in that respect, however, the tutors, Geoff & Zuni were patient and kept putting the penny in until eventually the penny dropped.

It became apparent to me as we progressed through the 2nd semester that most of the topics used the same formulae in different guises to calculate missing values. It is a huge advantage to be proficient at Maths, something admittedly I have always struggled with, but not essential, as later modules proved with all of our tutors Dave Harrison, Keith Willis, Kevin Stach & Geoff and Paul Johnson providing fantastic tuition and additional support, and also, it must be said, especially in Dave’s case, fantastic stories from their industrial careers which certainly helped with some of the modules, if you payed attention you were actually learning without realising it at the time.

CAD, Engineering Design, Power Transmission & Advanced Mechanical Science, whilst still relying on good math skills, also required a good amount of applied knowledge and experience and this is where I found I had that in abundance.

Over the course of each year we also had to produce a Work Related Learning Project and give a poster presentation about your chosen topic. In the first year I found this relatively easy, given my job role and experience, to identify a suitable subject, however, for the second year I decided to go way out my comfort zone of fabrication and set myself a real challenge, so, after being prompted by Graeme Cook decided to undertake an investigative study of Wire Arc Additive Manufacturing and compare the potential cost savings versus traditional CNC Reductive Manufacturing methods.

Having scored 80% for my first WRL project in year one I had set a really high bar to try and improve my score on a topic I knew very very little about, consequently I “only” scored 75% for the second WRL project, however, I’m actually more proud of that mark than the first year WRL project because I was so far away from my area of expertise.

Overall I found the whole FdEng course extremely challenging, (especially trying to keep up with my work duties and frequently working late, coming in early or working weekends to keep on top of my workload), very frustrating at times, immensely time consuming, (don’t think you’ll get away without being prepared to spend many weekends sat with your college work spread out in front of you on the dining room table).

Ultimately though, I have to say the course was massively enjoyable and because I put in the absolute maximum effort possible, I took a great deal from the course and I’m proud to say I achieved an average score well above 80% to achieve a distinction…….and to think I wasn’t going to bother applying until Alison encouraged me.

John Blackburn 26/4/2019