Placements at BAE Systems 2018

Ben

My work experience placement was at BAE Systems but more specifically I worked in Air Sectors. It began on Monday with tours around the Typhoon hangar (302) at Warton. We then as a group of 10 took a company bus to the ‘ASK’ Centre. This is where the new apprentices spend their first 6 months to learn all of the basic skills they must acquire to become an engineer. Then to finish the day we was split into one’s, two’s or three’s with a host. We had a brief discussion with our hosts and decided on the logistics for the week. My hosts where called Donal Brannigan and Matthew Wilson.

On Tuesday we met at 8:45am at the Warton reception with my two colleagues for the week and both of our hosts. Myself, Nathan and Tom where taken to the building we were going to be placed in for the week (Air Sector). We set off running by taking part in a lecture about aerodynamics with Chris Lee - I loved this particular discipline because it was very physics based and on how the aircraft is specifically built to travel at massive speeds in the sky. Then with one of our hosts being Donal we had a brief discussion about systems engineering which Is about the computer systems that you can’t actually see on the aircraft unless you take away the outer most panels that give it it’s aerodynamics. To finish Tuesday we went to the flight simulations building and took part in a futuristic virtual reality programme and virtually flew a typhoon round the Mach loop with Matt Wilson and a 12-week summer intern. It was without a doubt the highlight of my week because I was able to see the perspective of a pilot who fly’s the great aircrafts that are manufactured at Warton. After that we looked at the potential 6th generation of cockpit for the Typhoon and the F35 that is soon to be put into production.

Wednesday was just full of information. To begin the day, we had a meeting with a current Typhoon fighter pilot who had a seriously negative view on the business as a whole. It was another side to people’s thoughts however by the end of the week we had come to the realisation that the pilot is renown to be very negative. Next we had another lecture, on LEAN engineering, again very interesting because we spoke about how if you fractionally improve in lots of different areas by time you come to the end product there are improvements on a massive scale, Steve Tiley took that. To add to my third day of employment we talked about weapons integration with a man called Paul Ellis – this is about how different variants of weapons fit onto typhoon platforms and when shot whether it causes the aircraft to become unstable because of the imbalance of weight on either side. After that so, toward the end of the day we spoke to Andy baker (Head of the apprenticeship schemes) who told us about early career opportunities and ways into the business. This gave me a great understanding of the different schemes. To complete Wednesday we spoke to Don Ross about design and concept – it was very interesting to find out the whole process behind BAE Systems when they have an order for a certain aircraft. Generally, what happens is that an air force or another customer reaches out to BAE and gives them a specification on how they want the aircraft to perform. After that the BAE design and concept team come together to draw up detailed designs for the aircraft they want to build. They then run computer based test to make sure it would run smoothly. BAE then give the customer a price quote which could change at any given time. This means the new aircraft is ready for production manufacturing – newly built aircrafts are regularly updated and upgraded until they are out of service.

Thursday – the final full day of employment under BAE Systems. To start the day off we had Kevin Fisher talking to us about structures, this was about the aircrafts internal structure and skeletal design. The skeletal design is the build what is underneath all the looms of wire that are connected to a super computer that helps the pilot in serious situations and alerts him if there are issues mid-flight. Next we spent the most part of 3 hours in FTE (flight test engineering) with Fred Eastham. This was a good experience to have had because we got what they do seriously explained to us. They send aircrafts into the sky and record their altitude and speed and other statistics to test if an aeroplane is performing how it should for sustained periods of time. We saw all of their equipment like what they watch the aircrafts movements. Then, in the same department we did two tasks in one of their many technology labs and did riveting on aircrafts panels and soldiered looms of wire to a control pad. After that we spoke to Donal Brannigan about support, support is about FOD (foreign object debris) and spare parts or tools for engineers and pilots. Basically, the support team decide what vital parts of an aircraft are so relevant and likely to break and make spares – the spares are left in a specific place that all engineers and pilots are aware of. Finally, we had a placement wash up with Donal and we discussed everything we have done also what we would change for the next people to do the work experience.

On Friday, it wasn’t like a normal day in an office doing things and speaking to different people but it was in-fact possibly the most important part of the week. What we did was as a group so in my case myself, Nathan and Tom had to summarise everything we did and present it to all of our hosts and any visitors. I think it went really well and I feel I left a good image of myself at BAE Systems.

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Hollie

My work experience placement was at BAE Systems in Warton. Throughout the week I did many different activities and met a lot of new people, it was a great experience.

On Monday we had an induction and met all the other students on work experience with us, we were also given an insight on BAE systems and what they do. I met my host for the week and I found out I was working in Human Errors with another student. We then had a tour of the 302 hangar, which was where the typhoons are assembled. After we went to Samlesbury to see where the apprentices work at the ASK centre, it was very interesting.

On the Tuesday I went to the Human Errors work office where I met everyone who worked in that section, we were given a desk and area to work and they were all very friendly. My host, Alex, talked to me about what Human Errors is and what they do. I learnt that it is the link between the pilot and machine and how well they work together, it is a very important factor of the designing of a plane. We went into a team meeting with the Human Errors workers and it was interesting to find out all the different jobs within the section. Then in the afternoon we went to the VR Cave, which has a virtual reality headset which is being used to get data to design a future cockpit in tens of years. We had a go and played some of the games which had been used in the testing, we were able to move objects on the screen with just our eyes. It was really fun and we had a great time there.

The next day, Wednesday, My host gave me and the other student a small project to do. We designed a future cockpit and drew our ideas of the 6th generation fighter jet. We were told about all the new technology and weapon systems that’s now available and what will be in 30 years. We also went on a tour in the 358 hangar which was on the other side of the runway. In the hangar was 2 tornados from Saudi Arabia and lots of typhoons. At the end of our tour a typhoon was landing so we put on hi-vis jackets and were able to watch it land and see the pilot. It was very exciting and a great thing to see.

Thursday was my last day working in Human Errors. We were given another small project to design a UAV (Unmanned aerial vehicle) ground control system. This was very challenging and we had a lot to think about as it had to be hidden from any enemy’s. Afterward we went on a tour in the Low and High Speed Wind Tunnels. This was my favourite tour as it was the most interesting and we were able to walk around the Low Speed Wind Tunnel as it was so big. We learnt how the air has to be turned so it’s a straight as possible so the best data is given off the model being tested on. In the High Speed Wind Tunnel we had to put on helmets and crawl into it and we were told about how it all works. It is able to go up to Mach 3.4 so almost 4 times the speed of sound. I enjoyed it a lot.

Friday was our last day at BAE Systems and we had to plan and present a presentation as a group about what we had done during the week. I was very nervous for it but it went well as the people working there helped us a lot. At the end we were presented with certificates and awards. Working at BAE Systems for a week was an amazing experience and a great opportunity. It has given me a good insight into what working is like, what different jobs are available and I am very thankful to be picked to go.