The mathematics, mechanics and electronics required for

Business, Industries

The studyof engineering will allow me to further develop my interest in findingsolutions and solving complex problems. As it is my curiosity in the theorybehind it and the real-world applications of aerospace engineering that makesme keen to explore this at a higher level. Myfoundation year at Oxford Brookes University has not only taught me theintroductory mathematics, mechanics and electronics required for engineering, but done so through examples of engineering application.

Additionally, part ofmy first semester involved the reverse engineering of both four and two-strokeengines. I was required to write a report on the purpose of reverse engineeringand the engines themselves. The act of researching appropriate information andfinding suitable academic sources are two examples of the year contributing tome learning the required skills needed to be successful at undergraduate study. I waslucky enough to attend a week-long programme with JLR and Aston Martin. I spentmy time in lectures and talks; listening to professional engineers explaininghow various components worked together. I spent the last days in a group taskwhere we designed and built a 4×4 battery-powered car, this project gave me avaluable insight into how functioning as a team is critical for an engineer. Igained further work experience at the National Grid, working on a task whichinvolved designing an infrastructure capable of gas distribution to a town. This was then presented to senior management; I led the talk, answeredquestions and explained how the system worked.

Although both these experiencesare in different branches of engineering, I view them as being vital todeveloping my interest in the field. Problem-

solving is crucial in engineeringand working through the difficulties and complications in designing aninfrastructure was extremely rewarding. Explaining ideas clearly and preciselyis an essential skill for an engineer and I believe my work experience hashelped me develop in this area. Finishing my Duke of Edinburgh Bronze, Silverand Gold Awards were some of the best experiences I have had. Strong teamworkwas essential to success, and I believe my determination to see the awardthrough to the end shows commitment to a target.

My ownresearch, conducted whilst completing an EPQ has been into the how advancementsin aerospace technology will affect the future of exploration. Privatecompanies and reusability being a major part of the concluded future, rocketslike the Falcon 9 by SpaceX are examples of this, they are reducing orbitallaunch costs through developing ways in which previous stages can land and bereused. My EPQ has taught me important time management skills and how to workindependently on a task. Learninghow the world works and applying scientific theories to a design captivates me. The science behind spacecraft and aerospace engineering allows me to explorethis curiosity. My interest in space can be traced back to my first visit tothe National Space Centre. I remember being fascinated by the planetarium andthe idea of how we could venture out into space; however, I never envisaged thefield as a possible career path.

At the time such projects were only carriedout on a national scale, but more recently a different approach has beenfostered and private companies like SpaceX who are embarking in the first stepstowards a new world of space

transportation. The approach of Elon Musk and hiscompany SpaceX has amazed me, their achievements as a start-up space company inSilicon Valley are astounding. Much of their rockets are built by themselves, allowing efficient and cheap space travel, an unusual approach to thetraditionally expensive industry. The question that remains is, are we startingto see a new type of ‘ space race’ within the sector