#3-Sample of Chemical Engineering SOP

Society needs engineers that can and will change the world. Studying engineering has always appealed to me, mainly because it relies heavily on problem-solving and combines my two favorite subjects, Maths and Science.

I have been drawn to Chemical Engineering mainly because I have a real passion for Chemistry, Maths and Biology. But also because it can lead to a diverse career ranging from the prospect of working in established industries such as oil and gas to the pioneering of valuable new materials and techniques such as nanotechnology, fuel cells, and biomedical engineering.

A further driving factor fuelling my interest is my desire to participate in the search to develop new cutting-edge, sustainable ways of providing energy for the global population. During my academic career, I realized just how fundamental Chemistry is to our world. I find the diversity of organic chemistry most interesting, from how one simple movement of a functional group can result in such different physical properties to the fact that 1-methyl butyl ethanoate can make the flavoring in foam banana sweets. I have completed a number of work experience placements.

Whilst at the Radiology department at North Tyneside General Hospital, I gained an insight into the importance of complex machines such as X-Ray, MRI, and CT scanners. During my last summer holiday, I secured an extra 5 days with the specialized engineering company DUCO Ltd, based in Newcastle. This was an amazing experience that gave me real-world insight into working within an engineering company. My main placement was in the drawing office, learning to use widely employed industry software such as AutoCAD, Mathcad, and Inventor.

I was lucky enough to spend time with the mechanical engineers and the analysis team. I also persuaded AMEC Environment & Infrastructure UK to allow me to spend a week with their Structural Team, Civil Engineers, Geotechnical Engineers, Mechanical Engineers, and, most enjoyably, Process Engineers, where I was able to work on real projects going out into the world.

I have most recently completed a week placement with Fabricom Offshore Services. I learned more about how the oil, gas, and water are separated on the rigs and the treatment process.

I also completed a two-day training course on PDMS (3D CAD). In year 12, I took part in the Engineering Education Scheme. For the duration of this project, our team was paired with DUCO Ltd. We were set a real-world problem from DUCO, and our ability to find a solution was tested. We had to develop a system capable of controlling the temperature of a subsea umbilical at temperature extremes.

During this project, I attended a residential trip to Newcastle University where we used the facilities to carry out research and develop our system. We were invited back to DUCO to carry out more tests and further improve our system.

At the end of this scheme, we presented our findings to a panel of judges in the form of a 40-page report and a 15-minute presentation. My team and I were awarded the Nissan Rose Bowl for best performance.

I also gained a Gold Crest Award from the British Science Association during this process. I found this experience incredibly rewarding and intriguing as it gave me an insight into the steps that go into

the research and development of a new system. It also helped me gain confidence when giving presentations and facing questions about the work.

Running two part-time jobs concurrently as well as volunteering and fundraising for the Teenage Cancer Trust, demonstrates my strong work ethic and determination.

These involve flexibility, organization, and very good interpersonal and problem-solving skills, traits which are essential to succeed as an engineer. In conclusion, I believe I could be a real asset to your university. I am very driven and have a real desire to succeed in all walks of life.