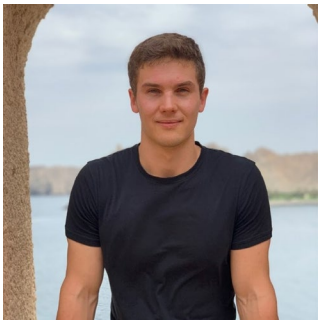
Cameron Halliday



Research student

Chemical Engineering enables a very broad set of careers. My interests are around energy and the environment, particularly in the context of preventing global warming. The energy industry is going through massive upheaval as pressure builds to reduce CO2 emissions while the sector continues to provide reliable power to society. My PhD work has coalesced around fighting global warming with a technology known as Carbon Capture & Storage.

For me the opportunity to work on energy projects all over the world has been a big factor directing my career. Below are some of the projects I've been fortunate enough to work on and where Chemical Engineering has taken me so far.

Process safety studies on offshore oil & gas production facilities (Baku, Azerbaijan)
Insights into cutting-edge renewable energy technologies (Reykjavik, Iceland)
Troubleshooting operational issues at an Aluminium production facility (Dubai, UAE)
Exploring the future of the energy industry, from solar fuels to electric aviation (Houston, US)
Presenting a bench scale prototype of research (Milan, Italy)

Post 16 Education	**Higher Education**
AS Levels Further Maths, Geography & EPQ	MEng Chemical Engineering with Management
A Levels Maths, Chemistry, Physics,	MSci, PhD, MBA Chemical Engineering Practice

Chemical Engineering is about using science and maths to solve problems in industry.

What industries? Historically, "industry" referred to oil & gas, chemicals, cement, mining, and other heavy industrial sectors. Today, "industry" refers to almost everything, from pharmaceuticals and drug discovery, to semiconductors and renewable energy. The problem-solving abilities of a Chemical Engineer are highly valued everywhere and many use their skills in finance, government, and business.

What problems? Efforts to address global warming, cure cancer, prevent pollution, discover novel materials, understand complex systems, and halt the spread of diseases, are often spearheaded by Chemical Engineers.

WHY IT MATTERS... CHEMICAL ENGINEERING

Loughborough University

Why did you choose to study Chemical Engineering?

Chemical Engineering is a great option for those who enjoy using maths and science to solve problems. Whether or not you know what problems you want to tackle Chemical Engineering provides a toolkit for approaching any problem, and the exposure to decide / explore what you're passionate about.

You learn how to break down and solve complex problems while maintaining a high-level perspective. For me I saw this combination of zooming-in to tackle detailed tasks and zooming-out to see the whole picture as a valuable skillset and (more importantly) enjoyable work.

Cameron's experience as a student

Studying at university is a fantastic experience both professionally and personally. Moving away from home can seem daunting but it is also liberating, the freedom to decide when and how to do what you want to do is a big part of the university experience.

You'll meet people from very different backgrounds and be exposed to new ways of thinking. You'll be in a 'work hard, play hard' environment where you get out what you put in. You'll fail in a safe place where you can learn from your own experience. These experiences are invaluable and hard to replicate elsewhere.

Cameron's Career

After my undergraduate degree I decided to continue my studies at the graduate level. I joined Massachusetts Institute of Technology (MIT) in Boston, USA to pursue a PhD in Chemical Engineering and an MBA at the Sloan School of Management. My PhD research is in the field of energy and the environment with the aim of tackling global warming and I'll be starting at MIT Sloan in September 2020.

Cameron's advice: Deciding on an undergraduate degree is as much about deciding how you want to think as what you want to think about. Engineers, Physicists, Economists, Biologists, Lawyers, Doctors, Mathematicians, all see the world in a slightly different light. No one perspective is necessarily better than another and most of the worlds big challenges involve contributions from individuals with each of these backgrounds plus many more. I suggest thinking carefully about how you want to approach the challenges you're passionate about, in addition to what those challenges may be.

Loughborough University offers undergraduate degrees in

Chemical Engineering