Daniel Miramontes Subillaga

Research Student

My research revolves around the large-scale manufacturing of catalysts. Catalysts are carefully designed for a specific application in the lab, but those carefully designed catalyst are produced over long periods of time and in small quantities. My research offers a way to produce these catalysts in large quantities and in a continuous manner. In industry this translates into cheaper operating costs, more profit and less impact on the environment.

This is what chemical engineering is all about, making ideas happen, that would otherwise be too expensive or difficult to make

My undergraduate degree helped me to think as an engineer, which doesn't mean that you are restricted to work in engineering related fields. It teaches you to look at the world in a different way, making you capable of adapting to other environments and tackling complex problems with ease.

As a Chemical Engineer tapping into different science subjects is crucial; maths, chemistry, physics, etc… I use them daily and I enjoy learning more about them every day. Subjects like technical drawing were incredibly useful during my undergraduate degree and now as well, being able to provide an accurate graphical representation of different designs is essential for bringing your ideas to life. For the past couple of years, I've been developing my computational skills, developing simulations of real-life processes, or automating simple calculations. I'm able to learn these things on my own thanks to the skills I've sharpened throughout my academic career.

Post 16 Education	**Higher Education**
I went to a Spanish school. 6th form / post 16 would be equivalent to Secondary School / Bachillerato. During Bachillerato, I undertook many subjects, the relevant ones for engineering are the following: Maths + Further Maths, Chemistry, Physics, Technical Drawing	BEng. Chemical Process Engineering MSc. Chemical Engineering PhD. Chemical Engineering (Current)

Daniel's advice: Take the time to be curious about the things that interest you, even if they are new things. Don't be afraid to step outside of your comfort zone, you might find that you are incredibly passionate about those new things you've been shy to try out or old things that you have been scared to give it your best. At the end of the day, only you can make the best decision for yourself and having more information about what you like will ensure you make the right decision.

Daniel's experience as a student

Studying for my undergraduate degree is probably going to stay with me as one of the best times I've had and will have for the rest of my life.

Getting to operate a sodium chloride pilot plant during the last year alongside my peers was one of the most interesting things that I got to experience during my undergraduate degree. I had the role of both a shift leader and a shift engineer – in charge of effectively coordinating the operation of the whole plant. It was at this point where I felt how important my journey as an undergraduate student had been, applying all the skills that I had developed.

Your undergraduate degree will give you the proper tools for you to develop your thinking.

You'll be able to tackle issues from so many different perspectives and creative ways, you'll understand how things work / don't work, how to adapt and how to think quickly and effectively.

Career

I am currently a PhD student in the field of catalysis and particle technology. With a bachelor's degree in Chemical Engineering and a Master's in Chemical Engineering as well. The time during my bachelor's and my master's degree were important for me, as I realised that I was interested in a research career and other passions (e.g., computational tools).

Loughborough University offers several undergraduate degrees in Chemical Engineering and Chemistry

All Loughborough's undergraduate degrees offer the opportunity to include a work placement as part of the course.