Erica MacLachlan

Degree studied: MSc Hydrogeology

Year of graduation: 2011
(Awarded MSc with Distinction)

Prize-winner: Best MSc Hydrogeology Student 2010 - 2011

Why did you choose to study this particular course at Strathclyde University?

I chose Hydrogeology as I have always been fascinated by the movement of water through the subsurface and how it affects our environment. I chose to do the course at Strathclyde due to the University's well regarded reputation both academically and within the civil engineering field.

Which course modules did you particularly enjoy?

The Hydrogeology and Aquifer Mechanics modules were fundamental to my degree; however I also really enjoyed the Environmental Microbiology and Ecology modules. This was another thing that attracted me to the course, the wide ranging modules that you can choose from.

You were awarded the Department’s prize for Best MSc Hydrogeology student, which also took into account your successful research dissertation. Can you tell us more about your research?

The MSc in Hydrogeology gave me the opportunity to study not only how the biotic and abiotic interact, but also to really start understanding the complexities involved. Natural cementation of geological formations occurs constantly over time due to physiochemical and biological reactions. My dissertation looked at using a bug slurry of bacteria and colloidal silica, to reduce the permeability of non-cohesive soils. This has the potential to also be utilized in many other geotechnical and hydrogeological applications.

What are you doing now and what are your plans for the future?

Due to the MSc in Hydrogeology and my research project I was lucky enough to be awarded an EPSRC-funded PhD working within Professor Lunn's BANDD research consortium.

For the future I hope to continue to research how bacteria are transported within the subsurface and how they affect the underlying strata.