FOUNDATION

Sinéad Marsh

MEngSc Biopharmaceutical Engineering

Before I came to UCD, I was a full-time student studying Biotechnology at University College Cork. I have always had a keen interest in science and I achieved a first class honours in my Bachelor's degree. I enjoyed immersing myself in college life during my undergraduate degree, both academically and through extra-curricular activities, such as volunteering as a peer support leader for first year students, a homework club mentor at a local DEIS secondary school, and as vice-chair of the UCC Biology Society. I have also volunteered with Age Action, the DSPCA and Suas Educational Development because volunteering is very important to me. I believe I have had a very well-rounded experience at UCD as I have immersed myself in my studies as well as UCD societies and campus life.

I lived on campus all year whilst working as a Team Leader with UCD Residences. I thoroughly enjoyed this role as it gave me the opportunity to enhance the experience and home environment of hundreds of UCD students living on campus. I have also been on the UCD Women+ in STEM society committee all year and this experience has significantly prepared me for both my future career and life in general. I enjoyed planning and partaking in very diverse and plentiful student events and opportunities using the vast resources provided by UCD. As part of my masters degree, one module involved attending the National Institute for Bioprocessing Research and Training (NIBRT) and receiving a tour of the pilot plant.

Furthermore, I have been allowed to perform a research project at NIBRT as part of my third semester at UCD and I have already gained invaluable skills and experience during my time here. I would not have been given this chance without the well-organised UCD MEngSc programme. I learned to be more innovative, adaptable and business-aware.

I believe my undergraduate degree taught me the basics of chemistry, microbiology, biochemistry and related subjects, but my MEngSc degree has taught me how to optimise processes and products, implement innovative solutions to global biopharmaceutical manufacturing challenges, plan and design modern manufacturing facilities, and how to produce more cost effective and safe biopharmaceutical products whilst following Lean Six Sigma principles. I have also learnt a variety of other soft skills and technical skills including presentation skills, teamwork, scientific communication, R-Studio programming and the use of gPROMS software for bioreactor modelling and control.

I plan to use the award to fund equipment to set-up a podcast related to the School of Chemical and Bioprocess Engineering which focuses on chemical and bioprocess engineering topics for example, interviewing academics and members of industry to breakdown myths about engineering, topics aimed at teenagers to encourage their uptake of engineering and other STEM subjects, and episodes interviewing undergraduate/postgraduate students to discuss interesting topics such as the projects they are undertaking, research work they will complete during the summer and/or tips when applying for placement/jobs. Other ideas include episodes discussing current affairs related to students who will be entering the workforce/academia.

I would like the donors of my scholarship to know that I am using this award to fund a STEM-related and engineering-focused podcast with interesting conversations and guests that will offer insight, spark curiosity and challenge listeners to rethink what they know about the changing world. Furthermore, choosing topics related to equality, diversity and inclusion (EDI), such as ways to support diversity in a student cohort and how to make UCD a neurodiversity friendly campus, would thoroughly enhance the UCD student experience. Lastly, I believe that creating a podcast would be a very memorable and enlightening way to commemorate Aoife and continue her legacy of having a positive impact on the SCBE students.

Currently, I am completing my third semester of the MEngSc programme and thoroughly enjoying completing a research project at NIBRT near the UCD Belfield Campus. This experience has reinforced my love of research and I hope to obtain employment in a research lab once I graduate. I may seek employment in a research lab abroad to gain more experience and knowledge prior to potentially applying for a PhD position or further study.

My current interests include Cell and Gene Therapy (CGT), particularly CAR-T cell therapy, as an emerging field and I would love to be involved in researching CGT and Advanced Therapy Medicinal Products. I put forward the creation of a new position on the UCD Women+ in STEM society called a Postgraduate Representative to promote and organise events aimed at Masters and PhD students. I was successfully elected for this position and I volunteered many hours throughout the year towards planning career talks, PhD advice sessions, STEM site tours, fundraising events and more. One event which was extremely important to me was a raffle, brunch and panel discussion that I suggested to celebrate International Women's Day which raised over €1300 for Women's Aid.

Also, I received the UCD Advantage Award for this role as well as my Team Leader position on campus. I would like to extend a huge thank you to my parents, Andrew and Marie, my siblings, Brian and Emer, and my boyfriend, Sean, for their unwavering support and guidance during my studies at UCD. I would also like to say thank you to all the lecturers and staff at the UCD School of Chemical and Bioprocessing Engineering for sharing their knowledge and experience with me throughout the year. I am also sincerely grateful to the donors of UCD who have made this award possible and for giving me the opportunity to commemorate Aoife's legacy.