

Professional Certificate Manufacturing of Cell & Gene Therapies and Vaccines

1 Trimester (January start) - hybrid teaching



Introduction

Ireland has a strong reputation as a Centre of Excellence for biopharmaceutical production. All of the top 10 global pharmaceutical companies have a presence in Ireland and the sector as a whole employs over 30,000 people and contributes €54 billion in exports. There has been significant, sustained investment in recent years and this is set to continue due to the benefits which companies see in our highly skilled workforce, proven track record and the supportive ecosystem.

Vaccines and cell and gene therapies (CGTs) are an emerging and rapidly growing area of interest and Ireland is poised to continue expansion of manufacturing into this exciting area. This programme will provide students with an appreciation of the science and challenges associated with CGT and vaccine manufacture as part of their continuing professional development (CPD) and support them to pursue a successful career in the field.

Course Highlight

The programme and its academic faculty are closely linked with the National Institute for Bioprocess Research and Training (NIBRT) which is a global centre of excellence for training and research in biomanufacturing. Content will be delivered by a blend of industrial leaders and academic experts using a hybrid approach ensuring a high quality, relevant curriculum accessible both in person and remotely.

Course Content and Structure

The Professional Certificate comprises 15 credits of modules (three modules). The modules will be delivered in a hybrid format with the option to attend in-person lectures on the UCD campus or to study remotely. Lectures will take place on Friday evenings from 2 - 6 pm over the Spring trimester (12 weeks, Jan - May).

Further Study

The credits gained can be used toward further postgraduate qualifications offered by UCD should participants wish to pursue a higher qualification e.g. Graduate Certificate (30 credits) / Graduate Diploma (60 credits)/ MEngSc in Biopharmaceutical Engineering (90 credits).

Modules Offered:

- Cell Therapy Technologies and Processing
- Gene Therapy and Vaccine Technologies and Processing
- GMP Manufacturing of Advanced Therapeutics

Why study at UCD?



Graduate education

12,800 graduate students; 17% graduate research students; structured PhDs



Global community

9,500 international students and a 300,000 alumni network across 165 countries



Global Profile

UCD is ranked in the top 1% of higher education institutions worldwide



Global careers

Dedicated careers support; 2-year stayback visa to work in Ireland





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Career Opportunities

The Professional Certificate is suitable for Science and Engineering graduates currently working in the biopharmaceutical industry or looking to move into the sector, who wish to expand their skill set to take advantage of the growth in the vaccine, and cell and gene therapies space. The number of companies active in this area is currently growing with Pfizer, Takeda, WuXi, MeiraGTx, VLE, Avectas, Onk and Orbsen Therapeutics leading the way.

Industry Testimonial

David Connolly

Head of MS&T, MSD
Dunboyne



Applicant Profile

- Applicants must hold an honours undergraduate degree (NFQ level 8) with a minimum upper second class honours or international equivalence in a relevant Engineering, Science or Technology programme. However, all applicants will be assessed on a case-by-case basis and relevant or extensive work experience will be taken into account.
- Applicants whose first language is not English must also demonstrate English language proficiency of IELTS 6.5 (no band less than 6.0 in each element), or equivalent.

Tuition Fees

Tuition fee information is available on www.ucd.ie/fees.

Facilities & Resources

Teaching will take place in parallel in-person on the UCD campus and online. Students will have an opportunity to tour the NIBRT facility which is a purpose-built, multi-functional building replicating the most modern industrial bioprocessing facility. The total building area is approximately 6,500 m² over two floors.

Related Masters Programmes of Interest

- MEngSc Biopharmaceutical part-time
- MEngSc Biopharmaceutical full-time
- MEngSc Chemical Engineering

Industry will need strong technical capabilities, and in-depth good manufacturing practice (GMP) know-how, to be ready for advanced therapeutics manufacturing within the next 3-5 years. Having a stackable approach to building the skills required, will benefit many experts and leaders currently working in biopharma. The offerings in cell therapy technology, gene therapy, vaccine technology and advanced manufacturing platforms have come at the right time to accelerate upskilling in this exciting area.

CONTACT US

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This programme receives significant interest so please apply early online at www.ucd.ie/apply