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# MTU

Ollscoil Teicneolaíochta na Mumhan  
Munster Technological University



in association with



KUEHNE+NAGEL

**FINALIST**

PHARMA  
EDUCATION &  
TRAINING  
AWARD



## Certificate in **Biopharmaceutical Processing (Level 7)**

<https://www.cit.ie/course/crebip7>

# Programme Summary

This certificate (*Special Purpose Award*) allows students to attain a knowledge and an understanding of the principles of Biopharmaceutical Processing and its underpinning science. The course predominately covers both cell culture and purification of biopharmaceuticals covering all unit operations, good manufacturing practices, validation and process analytical technology. The Certificate comprises of two modules namely, Biopharmaceutical Upstream and Downstream whereby the students gain significant theoretical knowledge through lectures and site visits. This Certificate upskills professionals from small to large molecule processing. It has an excellent reputation as a Continuing Professional Development (CPD) enabler.

## Delivery

The academic year comprises two semesters, with each semester consisting of 13 weeks.

The Certificate in Biopharmaceutical Processing consists of two modules, and is delivered one night a week over a full academic year (typically Tuesdays; 6.30pm - 9.30pm).

**Semester 1 : September of each academic year**

- Module Upstream Processing

**Semester 2 : January of each academic year**

- Module Downstream Processing

Practicals will be delivered in MTU and in the National Institute for Bioprocessing Research & Training (NIBRT) for 2 days in January. NIBRT replicates a state of the art industrial bio processing facility.

Detailed information of both modules is outlined in the following links

<http://courses.cit.ie/index.cfm/page/module/moduleId/10092>

<http://courses.cit.ie/index.cfm/page/module/moduleId/10093>

## Entry Requirements

Candidates preferably will have a BSc or BEng or equivalent to complete the programme. Higher Certificates in Engineering or Science (Level 6) will be considered.

## Cost

Course fee is €1,100 or €1,650 if undertaking NIBRT training (2 days)

## Enquiries

Please contact: PET.DEPTCork@mtu.ie or sandra.lenihan@mtu.ie

## How to Apply

Applications can only be made on MTU Cork's Campus Online application system

<http://www.cit.ie/course/CREBIPR7>

*I currently work in a pharmaceutical company as a QA manager supporting a Biotech Drug substance manufacturing plant. However, prior to this I worked in the same company supporting the small molecule API manufacturing site. At the time the opportunity to move to Biotech arose I had very little understanding of Bioprocessing given my background of 12 years in small molecule with a Master's degree in Analytical Chemistry. I was looking for a course that could provide me with a high-level understanding of Bioprocessing and primarily an understanding of the relevant product protection control strategies. Given I was working full-time in a Management role, I needed to find a course option where I could quickly learn on a part time basis in order to support my team and the business. The Special Purpose Award in Biopharmaceutical Processing at MTU offered what I needed. I found the course very informative and I learned exactly what was needed for my particular learning objectives. There was an excellent practical element to the course with an opportunity for students to visit NIBRT to better understand the practical application on a pilot scale. The course also offered an excellent overview of the micro control strategy required and why it is critical to Bioprocessing. I have since recommended this course to colleagues who are seeking to gain an understanding of bioprocessing to supplement their primary technical expertise, all of whom found it equally beneficial.*

## Nathania Lahive

*Kinsale Biotech Quality Assurance, Eli Lilly SA*

*I work as a lead process engineer in the pharmaceutical industry and I'm involved in the design of new biopharmaceutical plants and modifications to existing biopharmaceutical plants (e.g. introduction of new products). I found the course beneficial as it gave me a good overview of the biopharmaceutical process and its unit operations. I found it useful to learn about bacteria, endotoxins, viruses and contamination in general. As an engineer these are topics I was not very knowledgeable on prior to the course but it is important to understand them when working in the industry. There was also a good practical element to the course with the laboratory sessions in the MTU Labs and NIBRT.*

## Máire O'Sullivan

*Process Engineer, Janssen Sciences, Ireland (Biologics)*

*Working in the areas of Automation and MES Engineering, I enrolled on the course in order to gain a better understanding of the equipment and processes I was developing control solutions for. To this end, the course is still proving invaluable to me in my day to day role in that I can contextualise the control solutions I am developing, and see the bigger picture when making design decisions. The course content was a good balance of theory and practice which covered all the relevant processing steps for pre-culture through to final purification.*

## Ciaran O'Drisceoil

*Manufacturing Execution Systems Engineer, Eli Lilly SA*