



# MSc. in Cellular Manufacturing and Therapy

Full time 1-year programme

Part time 2-year programme

The clinical-grade production of advanced medicinal therapeutics, such as cellular therapy, is quickly evolving as the **future of medicine**. These therapeutics utilize immune cells, mesenchymal progenitor cells or induced pluripotent stem cells to treat injured or diseased tissues. The MSc in Cellular Manufacturing and Therapy will provide **scientific and practical training** in the production of these cells as **therapeutics for clinical application**.

## Employment & Career Opportunities

Graduates will be well positioned for careers in advanced medicinal therapy development and manufacturing, biotechnology and biopharmaceutical manufacturing in academic, regulatory, quality or industrial settings. Our graduates have successfully secured employment domestically and internationally in positions as team leaders or production assistants.

## Course Facts:

**Course Level:** Level 9

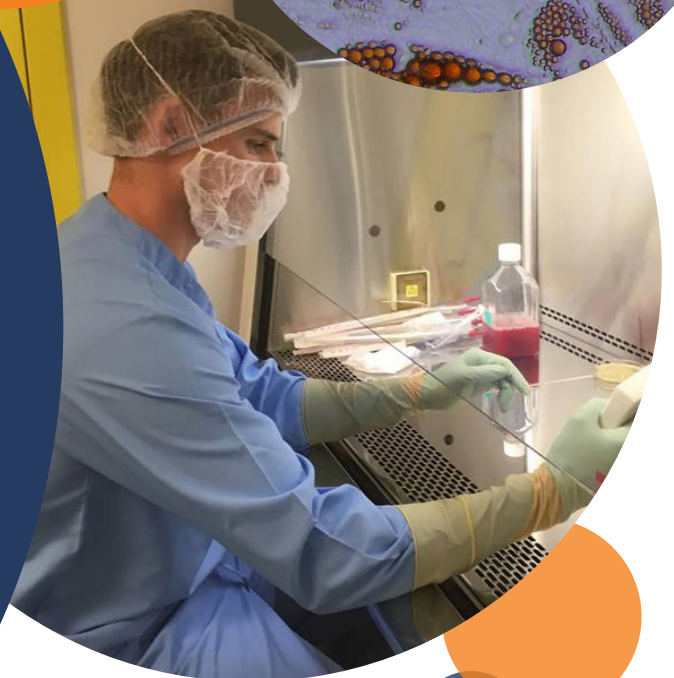
**Duration:** 1 year full time or 2 years part time

**Fees:** <http://www.nuigalway.ie/cmtfees>

**Applying:**  
<http://www.nuigalway.ie/postgraduateapplications>

**Closing Date:** Applications are considered on a continuous, rolling basis.

**Entry Requirements:**  
Students must have completed a biomedical science-related undergraduate degree with a minimum of 2nd Class Honours. If applicable, IETLS scores should have an average of 6.5 with no less than a 6.5 in any individual component.



## Compulsory Modules (80 ECTS)

Module:	ECTS:
Cellular Manufacturing I	10
Cellular Manufacturing II	10
Immune Cell Therapy	10
Mesenchymal Stromal Cell Therapy	10
Induced Pluripotent Stem Cell Therapy	10
Individual Research Project and Dissertation	30

## Full Time Programme Optional modules (10 ECTS)

Module:	ECTS:
Project Management	05
Molecular & Cellular Biology of Cancer	10
Tissue Engineering (alternating years)	05
First In Human: Early Phase Clinical Trials	10
Economic Evaluation of Healthcare	10
Fundamental Concepts in Pharmacology	05
Introduction to Business	10

## Part Time Programme Optional modules (10 ECTS)

Module:	ECTS:
Translational Research	10
First In Human: Early Phase Clinical Trials	10
Informatics 1: Retrieval and	
Appraisal of Scientific Literature	10



## Why choose this course?

Lecture-based and hands-on instruction in GMP-grade cellular manufacturing, key advancing technologies and the regulatory process.

Modules in the therapeutic application of mesenchymal stromal cells, immune-therapy and induced pluripotent stem cells as the future of ATMPs.

Tutoring from experts in the Centre for Cellular Manufacturing Ireland, professors coordinating international clinical trials and scientists actively researching the application of cells as biotherapeutics.



“This course gave me great exposure to the technical biological concepts, the relevant research techniques, and the GMP processes that allow promising cell candidates advance from “bench to bedside”. The knowledge that I acquired throughout the programme, and the skills that I picked up during my summer placement in CCMI, enabled me to strengthen my CV and ultimately get a job in CAR T cell manufacturing. “

**James O'Brien | Production Associate  
Programme Graduate, Class of 2018**



“The MSc in Cellular Manufacturing and Therapy at NUI Galway is a wonderful programme providing graduates with the professional skills they require for employment in the research, development, translation and manufacturing of novel advanced therapeutic products. In particular, this course provides the laboratory-based skills and training in the techniques required for GMP-manufacturing of cell products. It delivers a solid scientific rationale underpinning the development of cellular therapies; the very skills and knowledge that I require in future employees.”

**Andrew Finnerty | General Manager of Centre for Cell Manufacturing Ireland  
Potential Employer**



“Cellular therapy is transitioning from preliminary lab-based research into real-world medical treatments. In addition to examining the theory behind cellular therapy, CMT explores the practical issues that arise during this transition. As a CMT graduate, these dual perspectives provide insight that employers highly value when attempting to deliver their perspective cellular therapies to their patients.”

**Killian Brennan | Plant Technologist, Regenerative Medicines  
Programme Graduate, Class of 2018**



<http://www.nuigalway.ie/cellular-manufacturing-therapy>

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