

PHARMACEUTICAL AND BIOPHARMACEUTICAL ENGINEERING

Part-Time Engineering Masters (MEngSc)

MEngSc in Pharmaceutical and Biopharmaceutical Engineering is a **part-time (24-months over 2 years) programme** (maximum 5 years) aimed at providing a formal Level 9 Engineering qualification for working professionals in the Engineering and Manufacturing Sectors.

Primary focus areas in pharma/ biopharma manufacturing include product containment, powder/ particle technology, design of API and secondary production facilities, current Good Manufacturing Practice (cGMP), design of classified facilities, aseptic processing facility design, utilities and services, data analysis and process validation.

With this programme, participants will be able to:

- Gain **hands-on training** at the **National Institute for Bioprocessing Research and Training (NIBRT)**
- Learn from **industry lecturers** from **Eli Lilly, MSD and Janssen**.
- **Upskill/ Re-skill** for the fast-growing pharmaceutical and biopharmaceutical sectors
- Access multidisciplinary learning environment and **project-based learning**

Individual Modules or Microcredits

Candidates who satisfy the programme eligibility criteria may take **up to 6 modules as microcredits**.

See details on the [programme webpage](#).



FEES

- Part-time Per 30 Credits: €4,700
- MEngSc Thesis: €4,100
- Individual module (Microcredits): €1000

For detailed information on fees check our [Fees Page](#)

PROGRAMME CONTENT AND DELIVERY

Mandatory Modules (9 modules worth 5 credits each)

- PE6010 Pharmaceutical Engineering
- PE6011 Biopharmaceutical Engineering (NIBRT)
- PE6012 Pharmaceutical Process Equipment, Materials and Mechanical Design
- PE6013 Powder & Particle Technology & Unit Operations
- PE6016 Pharmaceutical Industry; Manufacturing and Optimisation
- PE6022 Aseptic Manufacturing Design
- PE6024 Process Safety Engineering
- PE6026 Project Engineering - From Concept to Completion
- PE6027 Advanced Biopharmaceutical Engineering

Elective Modules (3 out of 4 modules, 5 credits each)

- PE6004 Biopharmaceutical Support Systems
- PE6018 Pharmaceutical Process Validation & Quality
- PE6019 Process Analytical Technology
- CM6010 Introductory Pharmaceutical Chemistry

Research Thesis or work-related research project

- PE6021 - Dissertation in Pharmaceutical and Biopharmaceutical Engineering (30 credits).

All modules employ blended learning with a maximum of two in-person lectures per semester to facilitate participation of working professionals based in and outside of Cork.

ENTRY REQUIREMENTS

Applicants must have background in Engineering either through experience or primary degree to be eligible for the course. Refer to [programme webpage](#) for detailed entry requirements .