



University College Dublin  
Ireland's Global University

## Chemical & Bioprocess Engineering 5-Year Integrated ME Programme

### What is Chemical & Bioprocess Engineering?

Chemical & Bioprocess Engineering involves the transformation of matter and energy into products and services. More specifically, it addresses the design and operation of facilities needed to achieve this transformation in a technically, economically and environmentally acceptable manner.

### Why study Chemical & Bioprocess Engineering at UCD?

For more than 60 years, UCD has led the way in the design and delivery of innovative, internationally-recognised programmes in Chemical and Bioprocess Engineering. Our graduates are amongst the best-paid engineering professionals, sought after for employment in sectors from chemical to (bio)pharmaceutical and from energy to consultancy and design. UCD offers taught and research Masters and PhD opportunities, and our graduates also enter Masters and PhD programmes in leading international universities.

### 5-Year Integrated ME Programme

UCD has now introduced the first 5-year Integrated Masters programme in Chemical & Bioprocess Engineering in Ireland. This programme

has been designed to reflect the changing skills needs of Chemical and Bioprocess Engineers in global industries, including chemicals, pharmaceuticals, biotechnology, food, energy, advanced materials and ICT.

### 5-Year Integrated ME Programme Content

The ME programme, which is structured to address the most up-to-date theoretical and conceptual aspects, alongside practical and industrial elements of Chemical and Bioprocess Engineering practice, includes extensive project work in both design and research, along with significant Professional Work Experience (PWE). PWE placements, of 6-8 months in duration, commence in Jan/Feb of Year 4 (starting in Jan 2018). Where a company can host a research project, this placement may be extended to 12 months (Jan-Dec).

The programme will prepare graduates for careers in a wide range of industries, while also offering the opportunity to work alongside leading researchers in world-class laboratories. The School works closely with its industrial advisors and adjunct staff to ensure the programme meets the highest international standards in the teaching and training of Chemical & Bioprocess Engineers.

Course Code: DN150

### CAO Points Range

2015: 500-625

### Length of Course

4 Years (BE) Hons or  
5 Years (Integrated ME)

### Entry Requirements

English • Irish • Mathematics (Min H4 in LC or equivalent) • One laboratory science subject (Min H6 in LC or equivalent) • Two other recognised subjects

### Leaving Certificate

You must obtain a minimum of Grade H5 in two subjects and a minimum of Grade O6/H7 in the remaining four subjects

### A-Level/GCSE

See [www.ucd.ie/myucd/alevel](http://www.ucd.ie/myucd/alevel)

### Other EU Applicants

See [www.ucd.ie/myucd/eu](http://www.ucd.ie/myucd/eu)

### Non-EU Applicants

It is recommended that the Laboratory Science subject should be one of Chemistry, Physics or Biology. See [www.ucd.ie/myucd/nonEU](http://www.ucd.ie/myucd/nonEU)

## Programme Structure

Year 1: Engineering (Omnibus)

Year 2 & 3: Chemical & Bioprocess Engineering (Decision Point\*)

4-year BE Pathway  
Year 4

5-year Integrated ME Pathway  
Year 4 & 5

Professional internship commencing Jan of Year 4 for 8 months (Jan-Aug) or 12 months (Jan-Dec) including in-company project

BE Degree Level 8<sup>†</sup>

ME Degree Level 9<sup>‡</sup>

## Key Fact

The 5-Year Integrated ME programme is designed to meet the accreditation requirements of both Engineers Ireland and the Institution of Chemical Engineers (IChemE).

\* Min. GPA requirement for admission to ME Programme; postgraduate fees apply in Year 5  
† BE programme accredited to IChemE Masters level until intake year 2018  
‡ Engineers Ireland and IChemE accreditation will be sought for ME programme

## Professional Work Experience Internships

The UCD 5-year Integrated ME Programme in Chemical & Bioprocess Engineering incorporates a credit-bearing Professional Work Experience (PWE) Internship, designed to integrate students' academic and career interests with practical work experience. ME students in Chemical & Bioprocess Engineering are available for placement from Jan/Feb of Year 4, for periods of 6-8 months (i.e. Jan/Feb-Aug). Where a company can support a student in undertaking an appropriate research project, as part of his/her internship, the placement may be extended to 12 months (i.e. Jan-Dec).



### PWE Intern Recruitment Process

Typical recruitment process timelines are indicated below. The School is pleased to work with companies based on their individual needs.

#### April-Aug: Initial Contact

Companies contacted by UCD with a view to arranging Internships for following year

#### Sept: Applications begin

Students submit CVs & companies shortlist

#### Sept/Oct: Interviews

Ideally, interviews completed by mid-Nov

#### Nov/Dec: Contracts finalised

Contracts ideally finalised before students break for Semester 1 exams at end Nov

#### Jan/Feb: Internships begin

### What are the benefits to your company?

**Level:** Students will have completed three and a half years of Chemical & Bioprocess Engineering studies before commencing their internship.

**Duration:** Students are available from Jan/ Feb for a 6-8 month period. This ensures they can contribute to the company and undertake meaningful work. Where a research project can be incorporated into the placement, students are available for 12 months (Jan-Dec).

**Cost-effective:** A PWE Internship could provide your company with a simple, cost-effective way to meet short-term recruitment/project needs, by providing you with additional resources.

**Graduates:** Internships provide companies with the opportunity to develop a pipeline of talented, trained, future employees, in a low risk way.

## UCD Engineering Professional Work Experience (PWE) Internships

### What is the company's role in the PWE Internship?

The role of the company is to provide students with a meaningful work placement which complements their education and broadens their skillset. Your expectations of the student should not differ from that of any other employee and we ask that you provide a safe, relevant and challenging work environment.

### Does the company have to enter into an agreement with UCD?

Yes. All placements come under a standard UCD contract known as a Work Placement Agreement that will be signed by the University and the internship provider. This agreement will be sent to you once you have appointed an intern and must be returned prior to the intern commencing the internship.

### What is the typical remuneration involved?

We recommend that students are paid at least the minimum wage. We have found that the level of pay can impact an employer's degree of success in recruiting the best candidate.

### Are there any restrictions hiring international students?

No, there are no work permits required for international students (non-EU/EEA citizens) who wish to undertake an internship in Ireland. Students enrolled on degree programmes are allowed to undertake an internship where this forms part of their course. Further information can be found at: [www.inis.gov.ie/en/JELR/BookletA4.pdf/files/bookletA4.pdf](http://www.inis.gov.ie/en/JELR/BookletA4.pdf/files/bookletA4.pdf)

### Are there any insurance requirements?

The host company will be expected to have in place appropriate insurance cover in relation to their use of student interns. UCD Engineering students on PWE internships will be covered by the University's Public Liability Policy, details of which will be supplied to you with the University Work Placement Agreement.

### How are students assessed?

- An Academic Supervisor will be assigned to the student and a site visit will be arranged to ensure the student's progress during the internship.
- Students are required to keep a diary of their experience, to be shown to the academic supervisor, on request.
- Chemical & Bioprocess Engineering students must

complete interim & final reports, summarising their experiences, with specific reference to their general learning, technical learning and personal learning.

- A brief letter will be sought from the employer commenting on the engagement of the student with the process and highlighting any particular achievements.

### Under what circumstances may a Chemical & Bioprocess Engineering placement be extended to 12 months?

Between Sept and Dec of Year 5, students must complete a research project, preceded by a literature review. Where a company can support a student in conducting an appropriate research project, related to his/her internship, it may be undertaken in industry, as part of the internship.