

# School of Biotechnology

## Structured Doctoral Pathway 2021-22

### School Overview

BioTranslate is the School of Biotechnology's structured PhD programme. It is research-focused, flexible and student-centred. Graduate students registered on the BioTranslate programme will conduct a major laboratory research project, over a period of 3-4 years, in laboratories in the School of Biotechnology and/or associated Research Centres. In addition to acquiring discipline-specific research knowledge over the period, BioTranslate students will partake in a range of generic and scientific support modules across multiple subject areas and will thus experience an individualised programme that is tailored to their specific needs.

### Programme structure

Upon completion of the BioTranslate programme, the student's original research work presented as a written thesis, is the sole means of assessment for the award of PhD. Graduates of the BioTranslate programme will also have accumulated at least 30 ECTS to be awarded following the successful completion of core and elective Graduate Training Element (GTE) modules, the latter chosen in conjunction with the student's supervisory panel.

Module BE550 (5 credits), which concerns Induction/Laboratory Safety and Practice, is compulsory and is to be taken in year 1. It is also the policy of the School of Biotechnology that all students who are assigned teaching-related responsibilities must complete BT607 Laboratory Tutoring, a 10-credit module to be taken over at least two years. There is an expectation that module loads be evenly distributed across the first three years, with a minimum of 10 credits being taken in any one year. A typical overall balance consists of 1-3 generic (transferable skills) modules and 2-3 discipline-specific modules over the first three years, with year 4 focused exclusively on research. Progress regarding GTEs will be monitored on an annual basis as part of the DCU annual postgraduate progress review system, however there will be no compulsory minimum number of modules required to be completed in order to progress to the next year. In addition, students will be encouraged to engage with centrally-offered workshops & seminars on academic, software or transferable skills which align with their development needs.

Once approval from the supervisor has been granted, students should register for their approved Faculty GTE modules during the online registration process. However, if you wish to take a non-FSH GTE module you **MUST** first email the module coordinator listed to check that you are eligible to register for this module, then email [science@dcu.ie](mailto:science@dcu.ie) providing:

- confirmation and proof of approval from module coordinator
- module code and title
- student id number
- qualification code

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Core  
Modules

Year 1

### Induction & Laboratory Safety

BE550: Biosafety and Laboratory Procedures in Biotechnology (5 ECTS)

### Research Integrity

Research Integrity Online Training Module (Biomedical Sciences stream) (non-credit)

Year  
1-3

### Teaching & Learning Skills

BT607: Laboratory Tutoring (10 ECTS)

Year  
1-3

### Research Skills & Integrity

CS608: Strategies for Academic Writing (5 ECTS)

TP602: Research Ethics (5 ECTS)

Elective  
Modules

### Communication Skills

CS608: Strategies for Academic Writing (5 ECTS)

CS609: Strategies for Getting Published (5 ECTS)

LC600: English for Academic Purposes (5 ECTS)

PSYC523: Science Communication for Graduate Researchers (5 ECTS)

### Business/Management

GS601: Intellectual Property & Commercialisation (5 ECTS)

### Discipline-Specific Research Techniques

BE515: Fundamentals of Bioreaction Engineering (5 ECTS)

BE516: Bioseparations (5 ECTS)

BE517: Recombinant DNA Technology (5 ECTS)

BE519: Fundamental and Applied Immunology (5 ECTS)

BE533: Molecular Biology Methods & Genes; The Basics (5 ECTS)

BE535: Precision Medicine I (10 ECTS)

BE536: Precision Medicine II (10 ECTS)

BE537: Professional Skills for Scientists (5 ECTS)

BE538: Introduction to Cell Biology and Biotechnology (5 ECTS)

BE570: Computational Science (5 ECTS)

BE580: Introduction to Bioprocess Engineering (5 ECTS)

BE581: Bioprocess Scale Up and Technology Transfer (5 ECTS)

BE583: Biopharmaceutical Industry Regulations and Management (5 ECTS)

BE584: Bioreactor Design, Modelling and Monitoring (5 ECTS)

PS522: Microfluidics 2 (5 ECTS)

BE521AU: Applied Biostatistics (5 ECTS)

BE539AU: Translational Bioinformatics (5 ECTS)