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# Programmes

## PhD Education



**The nature of PhD education is changing, both nationally and internationally. While original research has always been and will remain the core component of all PhD programmes, today's PhD graduates need a broad range of skills to equip them to develop careers in a range of employment sectors and in an increasingly challenging employment environment.**

The [Irish Universities Association, PhD Graduates' Skills Statement](#) states:

*"The availability of skills development opportunities in Irish universities reflects student and discipline needs. Consequently, the skills outlined are not a rigid standard, but rather a guideline which is fully compatible with the EUA's Salzburg Principles<sup>1</sup>, elaborated upon in the Salzburg II Recommendations in 2010<sup>2</sup>. These principles recognise that advancement of knowledge through original research is the core component of PhD education, but PhD education must also facilitate additional skills development opportunities."*

*"Consistent with the National Strategy for Higher Education to 2030<sup>3</sup> and the EU Directorate-General for Research & Innovation's Principles for Innovative Doctoral Training<sup>4</sup> the Irish universities, Quality and Qualifications Ireland (QQI) and the Higher Education Authority of Ireland, support the objective of developing PhD graduates with the skills necessary to develop and manage their careers across a broad range of employment sectors, including academia. To achieve this, Irish universities provide structured support for students, incorporating research and generic skills development opportunities, empowering them to make a significant impact in their chosen career and contribute to Ireland's 'social, cultural and economic development. This support will also aid students in the successful completion of their studies."*

## **PhD Engineering Science, Structured PhD Programme**

Tyndall leads an exciting new research-led structured PhD programme, PhD Engineering Science. The programme recognizes that today's engineering and science graduates need a wide range of skills in order to build successful careers in academia, research or industry. The doctoral training is inter-institutional and developed and delivered by the national graduate education programmes coordinated by Tyndall. The new programme provides students with structured training in;

### **Technical Subjects:**

Focussed, relevant technical training aimed to equip students with the technical background required to pursue their research topics quickly.

### **Transferable and Generic Skills**

Providing training on skills necessary to communicate research work including: presentation skills, technical writing training and information literacy.

### **Innovation, Commercialisation & Entrepreneurship (ICE)**

One of the unique aspects of this programme is that it provides students with the opportunity to gain a graduate certificate in ICE in parallel with their doctoral studies. This is facilitated by the UCC College of Business and Law. Speaking of the ICE training, Dr. Brian O'Flaherty of the Department of Business and Information Systems said;

*"The embedded PG Cert (Innovation, Commercialisation and Entrepreneurship) takes doctoral*

*entrepreneurial education in Tyndall to a whole new level. The initiative is flexible and complements research in a seamless way. The curriculum is dedicated to unleashing the entrepreneurial potential in Tyndall research students to create bold innovators with the knowledge, skills, and mindset to contribute to economic and societal prosperity.”*

Further details of the PhD Eng Sc programme can be found [here](#).

## PAC Codes

Programme	PAC Code
PhD Engineering Science	CKT60
PhD (Science) Physics	CKT17
PhD (Engineering) Electrical and Electronics Engineering	CKT33
PhD (Engineering) Microelectronics	CKT35
PhD (Science) Chemistry	CKT39

## PhD Programmes

[Postgraduate Programmes in Electrical and Electronics Engineering.](#)

[Posgraduate Programmes in Chemistry.](#)

[Postgraduate Programmes in Physics.](#)

CIT Postgraduate Programmes. [Details of CIT programmes can be found here.](#)

## Who can Study at Tyndall?

Our students come from a wide variety of multi-disciplinary backgrounds and disciplines including:

- **electrical and electronics engineering**
- **microelectronics**
- **physics**
- **chemistry**
- **life sciences**
- **mathematics**
- **computer science**
- **other relevant science and engineering disciplines**

Most Tyndall students are registered on academic programmes in University College Cork, UCC or Cork Institute of Technology, CIT. However, Students from any University/3<sup>rd</sup> level college can undertake some or all of their research in Tyndall. The university/institute that you are registered

with will award your degree.

Research and supervision is performed at Tyndall and students are required to fulfill the regulations for the awarding of the degree as set forth by their University/3rd level college, the department in which they are registered, and Tyndall.

## **Masters Degree Programmes**

There are a number of programmes available. These include:

- **Research-based programmes leading to masters and doctoral (PhD) degrees.**
- **Taught masters programmes**

More details on all the postgraduate programmes available within UCC can be found [here](#).

## **Contact**

- [Orla Slattery](#)  
Graduate Studies - Graduate Studies  
[+353 \(0\)21 2346174](tel:+353(0)212346174)  
orla.slattery (at) tyndall (dot) ie
- [Jim Greer](#)  
Graduate Studies - Graduate Studies  
[+353\(21\)234 6345](tel:+353(21)2346345)  
jim.greer (at) tyndall (dot) ie