School of Electronic Engineering

Structured Doctoral Pathway 2020-21

Overview

With 40 years of expertise, state-of-the-art laboratories, and a diverse team supervised by globally-recognised faculty members, the DCU School of Electronic Engineering is firmly embedded in the national and international research network. Much of our research involves collaboration with academic institutions, private companies and public bodies. Our structured PhD programmes enable postgraduate students to complement their research with critical skills like communication, commercialisation and entrepreneurship.

This document details a suggested structured doctoral pathway for graduate researchers in the School of Electronic Engineering. While the main focus for each research candidate is to complete a piece of original research presented in thesis format, students are also supported in developing a range of skills and competencies through taught modules and other learning opportunities.

During their registration, all research students may take a mix of credit-bearing modules (Graduate Training Elements or GTEs), and other non-accredited education opportunities such as workshops, seminars and short courses. These opportunities provide both discipline-specific and transferable skills and knowledge to support students in their research and enhance their research qualification. Engagement in these activities is an important aspect of the graduate researcher experience.

Typical modules taken by Electronic Engineering PhD students are shown in the listing overleaf. Students may also choose modules from the complete list of Electronic Engineering modules available to PhD students which can be viewed at:

http://ece.eeng.dcu.ie/postgraduate/postgraduate-module-selection/

Students who complete a minimum of 20 GTE credits, in addition to the 270-ECTS thesis, will be recognised as having completed a structured PhD. At least one module should be from the list of discipline-specific modules and one from the list of transferable skills modules. The modules chosen on the structured pathway should be discussed and agreed in the first instance with the supervisor and progress reported on the annual PGR2 form. Once approval has been given, the student can register for their chosen GTE(s) during the online registration process.

Induction and non-accredited training

Students are encouraged to take advantage of the additional training opportunities offered by the Graduate Studies Office (GSO) and by the School as appropriate. All students are required to attend the orientation and induction sessions organised by GSO during year one. GSO communicates details of their training schedule to each student at the beginning of each semester. First-year students are also required to take the Online Research Integrity Training module during year one of their studies.

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Elective Discipline-Specific Skills

- EE513: **Connected Embedded Systems** - 7.5 ECTS (Sem 2)
- EE500: **Network Performance** - 7.5 ECTS (Sem 1)
- EE506: **Photonic Devices Devices** - 7.5 ECTS (Sem 2)
- EE535: **Energy System Decarbonisation** - 7.5 ECTS (Sem 1)
- EE544: **Computer Vision** - 7.5 ECTS (Sem 2)

Elective Transferable Skills

- EE507: **Entrepreneurship for Engineers** - 7.5 ECTS (Sem 2)
- GS602: **Postgraduate Tutoring Principles & Practice** - 5 ECTS (Sem 1)
- TP602: **Research Ethics** - 5 ECTS
- GS606/A: **Enterprise Experience for Graduate Research Students** - 10 ECTS
- LC600: **English for Academic Purposes** - 5 ECTS (Year Long)
- CA637: **Advanced Scientific Communication Skills** - 5 ECTS (Year Long)
- **Online Research Integrity Training Module** (Engineering and Technology stream)(non-accredited)

Students are also encouraged to engage with centrally- and locally-offered workshops and seminars that align with their development needs.