



Waterford Institute *of* Technology

INSTITIÚID TEICNEOLAÍOCHTA PHORT LÁIRGE

POSTGRADUATE

# Master of Engineering in Electronic Engineering

LEVEL **9**

Department of Engineering Technology



The Masters Degree in Electronic Engineering provides tuition and practice in state of the art technology areas such as Wireless Communications, Nanotechnology, Mixed-Signal IC Design. It will extend the student's capabilities in a number of established topic areas, e.g. Semiconductor Engineering and Digital Communication Systems.

# Master of Engineering in Electronic Engineering

## Course Outline

The Masters Degree in Electronic Engineering provides tuition and practice in state of the art technology areas such as Wireless Communications, Nanotechnology, Mixed-Signal IC Design. It will extend the student's capabilities in a number of established topic areas, e.g. Semiconductor Engineering and Digital Communication Systems.

A module entitled Mathematical Modelling will enhance the analytical skills of students while important engineering management skills will be dealt with in the Technology Management module. The programme is designed to develop the student's knowledge and skills through a study programme which links theory and practice. The programme will also provide students with experience of carrying out post-graduate level research in selected topic areas. The Masters degree requires successful completion of ten compulsory modules and two out of four elective modules. The student must also complete an applied programme consisting of the design project plus dissertation, the mini-project and the workshop seminar series.

## Programme Structure

The programme is delivered in a modular format as follows:

Semester 1 (Sep - Dec)	Semester 2 (Jan - Apr)	Semester 3 (May - Aug)
Technology Management Mathematical Modelling Analogue IC Design Embedded Systems Design Advanced DSP Semiconductor Process Engineering	HDL Digital Design Semiconductor Device Engineering Digital Communication Wireless Communication Mixed-Signal IC Design (elective) Nanotechnology (elective) Optoelectronics (elective) Communication Networks (elective)	Project & Dissertation

## Key Features

- Taught Masters Degree in Electronic Engineering with central theme of Microelectronic and Communications Engineering
- Programme reflects leading-edge industry developments
- Full-time and part-time modes
- Bologna 5-year programme compatible
- Emphasis on "Design" & "Project" approach
- Industry-aware programme through Workshop Seminar series

## Career Opportunities

Career opportunities for graduates of this programme can be found in the following industry sectors: computer engineering, computer networking, telecommunications, semiconductor devices, IC circuit design, analogue and digital system design, and many others. Typical job functions include Design Engineer, Research Engineer, Project Engineer, Project Manager and Technical Manager.

# Entry Details

Students wishing to apply for this course will normally require an honours degree or equivalent. The course is ideally suited for graduates of electronics degree programmes and other cognate disciplines, e.g. computer science, computer engineering, electrical engineering, telecommunications, physics with electronics, etc. International students are required to meet the WIT postgraduate TOEFL (600)/IELTS (6.5) English Language requirement standard. The programme is available in both full-time and part-time modes.

## Fees

For information on fees please visit our web page at [www.wit.ie/pg](http://www.wit.ie/pg)

[www.wit.ie](http://www.wit.ie)

# Contacts

## Admissions queries contact:

Graduate Admissions,  
Registrar's Office,  
Waterford Institute of Technology  
Tel: +353 (0) 51 302670  
Email: [pgadmissions@wit.ie](mailto:pgadmissions@wit.ie)

## Academic queries contact:

Course Leader: Dr. Paul O'Leary  
School of Engineering  
Waterford Institute of Technology  
Tel: +353(0)51 302630  
Email: [poleary@wit.ie](mailto:poleary@wit.ie)