



Ollscoil Chathair  
Bhaile Átha Cliath  
Dublin City University



## BEng Mechatronic Engineering - INTRA Programme (DC193)

The Mechatronics BEng degree combines Electronic, Mechanical and Software engineering covering theory and practise with an emphasis on teamwork and communication skills.

### Programme Outline

In the first three years of study (i.e. prior to their INTRA work placement) Mechatronics students complete three significant team projects; one in their first year (a mechatronic project combining mechanical, electronic and software elements) and two in their third year (a mechanical design-and-build project, and an embedded-system programming/mobile robotics project). They complete modules in Design and CADD (using SolidWorks), Object-Oriented Programming, Data Analytics for Engineers (including Statistical Quality Control), Image Processing, Measurement and Signal Processing and Pneumatics and Control.

### INTRA (INtegrated TRaining) Work Placements

Relevant work experience through DCU's internship programme "INTRA" (INtegrated TRaining) is a mandatory element of the BEng Mechatronic Engineering. Students are required to complete a six month INTRA placement at the end of third year, from April to September. INTRA Students are available for Interview from October onwards.

### Work Areas

They have the ability to work in the following areas:

- Product/Process design
- Automated production systems
- Process control systems
- Robotics
- Embedded systems integration
- Embedded systems programming
- Quality assurance/management
- Instrumentation and calibration
- Research and development
- Test engineering
- Technical documentation





Students are available for interview from early October onwards. For more information, contact:

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Year 1	Year 2	Year 3	Year 4
Fundamentals of Professional Development	Engineering Mathematics III	Mobile Robotics	Fourth Year Project
Project and Technical Drawing	Energy – An Intro to Thermodynamics	Product Design	Industrial Electronics
Numerical Problem Solving for Engineers	Strength of Materials I	Electromechanical Systems	Image Processing and Analysis
Software Development for Engineers	Digital and Analogue Electronics I	Analogue Circuits and Design	Control Systems Analysis
Materials Engineering	Circuits	New Enterprise Development Project	Project and Quality Management
Engineering Mechanics - Statics	Mechanics of Machines 1	Mechanics of Machines 2	Manufacturing Automation
Introduction to Electronics	Design and CADD	Measurement and Signal Processing	Mechatronic System Simulation and Control
Engineering Mathematics I	Systems	Data Analytics for Engineers	Design for Manufacture and Assembly
Engineering Mathematics II	Embedded Systems	<b>INTRA</b>	Robotics
Basic Sciences for Engineering	Object Oriented Programming I	<b>INTRA</b>	
	Engineering Mathematics IV		
	Pneumatics and Control		