

ENGINEERING & BUILT ENVIRONMENT

**“THIS IS YOUR GUIDE TO A
CAREER IN ENGINEERING,
TO A LIFE OF ADVENTURE,
ACHIEVEMENT AND DISCOVERY”**



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AITIREACHT ARCHITECTURE

BArch Leibhéal 8 / Level 8

LEAVING CERT ENTRY REQUIREMENTS:

| Minimum N° of | | Minimum Grade in | |
|---------------|---------|------------------|------------------|
| Subjects | Honours | Maths | English or Irish |
| 6 | 2H5's | 06/H7 | 06/H7 |

Other Requirements

Applicants must attend a suitability test & interview.
Suitability Test = 100 points
Interview = 100 points

QQI LEVEL 5 ENTRY REQUIREMENTS:

A QQI Level 5 entry route to this programme is available.
Please visit www.dit.ie/studyatdit/undergraduate/howtoapply

What is... Architecture?

Architecture is the art and science of designing space. Students considering this career should have a creative aptitude for architectural design and the organisational ability to implement their designs in practice. They should also have an interest in artistic and cultural aspects of society as well as an aptitude for technical and managerial challenges.

Learning Outcomes:

What will I Study?

This five year programme covers topics such as design studio, history theory and criticism of architecture, environment, construction, visual and digital communications, computer applications and law. The majority of the student experience centres around studio based design projects which allow the student to design buildings and explore the urban and rural context. There is a strong emphasis on studio work and exploring the students' own understanding of architecture throughout the programme.

The DIT degree in Architecture is recognised throughout EU member states. Following two years of postgraduate experience they may take the examination in Professional Competence and thus become members of the R.I.A.I and register as an architect.



Further Information

www.dit.ie/architecture

School of Architecture



01 402 3690 (Aileen Mullane - School Administrator)



dsa@dit.ie

COURSE CODE:

DT101

COURSE LENGTH:

5 YEARS

APPROX:

55 PLACES

LOCATION:

BOLTON ST (LINEN HALL)

POINTS 2017

635

(includes test & interview score)

Module Listing

Year One to Five

- Architecture Design Studio ● History Theory & Criticism
- Environment Services and Materials ● Building Technology & Structures ● Visual Communication ● Technical Studio ● Professional Studies ● Thesis Development ● Optional Modules

OPEN 2017
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9AM-2PM 01.12-02.12

What are my... Career Opportunities?

The qualification is for the profession of Architecture. Architects are concerned with the design and construction of buildings. They may practice in a personal professional capacity, or in employment in private and public sector organisations. The field of practice is quite extensive in Ireland and abroad and may offer alternatives of general practice or specialisation throughout a career. Many graduates have pursued very successful careers abroad and others have gone on to become prominent architects in Ireland.

*For more career development options please see inside front cover

What other options do I have after completion?

Entrants to the programme have the option of completing the five year continuous B.Arch Degree with full professional accreditation under the government 'free fees scheme' or - subject to reaching the required academic standard - they can choose to study the year and a half Masters of Architecture programme after completing four years successful study.



You might also be INTERESTED IN:

- ♦ Architectural Technology - DT175 Pg 130

TEICNEOLAÍOCHT NA hAILTIREACHTA ARCHITECTURAL TECHNOLOGY

BSc Leibhéal 8 / Level 8

LEAVING CERT ENTRY REQUIREMENTS:

| Minimum N° of | | Minimum Grade in | |
|---------------|---------|------------------|------------------|
| Subjects | Honours | Maths | English or Irish |
| 6 | 2H5's | 06/H7 | 06/H7 |

Other Requirements

AT least H4 in one of Art, Construction Studies, Design & Communication Graphics, Engineering or Technology

QQI LEVEL 5 ENTRY REQUIREMENTS:

A QQI Level 5 entry route to this programme is available. Please visit www.dit.ie/studyatdit/undergraduate/howtoapply

What is... Architectural Technology?

An Architectural Technologist is a technical designer skilled in the application and integration of architectural and construction technologies in the building design process.

The DT175 BSc (Honours) Architectural Technology programme is professionally accredited by the Royal Institute of the Architects of Ireland (RIAI).

Learning Outcomes:

What will I Study?

The DT175 BSc (Honours) Architectural Technology is a studio-based programme. Studio provides a structured setting in which the student is exposed to a variety of teaching and learning experiences. Project work is undertaken against the background of lectures, critiques, one to one tutorials, seminars, group work and construction skills classes.

Technical Design Studio provides a focus for the development of skills in three-dimensional problem solving. These skills include freehand drawing, hard line mechanical drawing and model making. Studio project work also allows the development of skills in Building Information Modelling (BIM) to produce 3D digital models and 2D working drawings. The presentation of studio projects in crits encourages the development of the student's verbal communication skills.

The studio format offers flexibility for students to attend project related site visits and field trips away from the college environment, thereby widening their understanding of the context of their project work. These experiences are supplemented by industry and professional presentations, specialist structural engineering and mechanical & electrical engineering design workshops, and visits to building exhibitions.

In studio, students have unrestricted access to a dedicated workspace and work alongside one another for long periods of time, both during timetabled contact hours and beyond. Studios are equipped with both manual drawing facilities and PCs, allowing students to carry out their project work using a variety of media and approaches.

The programme includes work placement in Semester 2 of Year 3.

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9AM - 2PM 01.12-02.12

Further Information

www.dit.ie/architecture

School of Architecture



01 402 3691 (Cormac Allen - Assistant Head of School (Architectural Technology))



cormac.allen@dit.ie

COURSE CODE:

DT175

COURSE LENGTH:

4 YEARS

APPROX:

50 PLACES

LOCATION:

BOLTON ST

POINTS 2017

380

Module Listing

Years One - Four

Technical Design Studio 1-5 • Building Technology 1-5 •
Building Performance 1-6 • Building Information Modelling
1-5 • Professional Development • Professional Practice
Placement - Architectural Technology m • Technical Design
Dissertation

What are my... Career Opportunities?

The Architectural Technologist is a highly skilled technical professional trained to play a leading role in the increasingly complex technical design process which drives contemporary architecture and building.

With the rapid development of digital information technologies, DIT Architectural Technologists have emerged as leaders in the creation, integration and management of technical information through the medium of Building Information Modelling (BIM).

Working in multidisciplinary and collaborative design teams, technologists have the skills to communicate with and coordinate the work of other building design professionals. DIT architectural technologists are technical professionals and are highly sought after in the Architectural Engineering and Construction (AEC) industry in Ireland and abroad.

*For more career development options please see inside front cover

What other options do I have after completion?

Graduates of the DT175 BSc (Honours) Architectural Technology programme will be eligible to progress to various Level 9 programmes such as the DIT MSc in Applied Building Information Modelling & Management, and following practice experience to the DIT MSc Building Performance (Energy Efficiency in Design) and CPD Diploma in Thermal Bridge Assessment.



You might also be INTERESTED IN:

- ♦ Architecture - DT101 Pg 128

INNEALTÓIREACHT SHEIRBHÍŚÍ FOIRGNÍOCHTA (HVACR)

BUILDING SERVICES ENGINEERING (HVACR)

BE Leibhéal 8 / Level 8

ENTRY REQUIREMENTS:

Successful completion of DT066 - Engineering (General Entry) Year 1

What is... Building Services Engineering (HVCAR)?

The buildings in which we live and work use about half our national energy. This energy use contributes to the CO₂ [greenhouse gas] emissions. Building Services Engineers together with architects and structural engineers design environmentally-friendly new buildings and retrofit existing buildings and are responsible for the many mechanical and electrical systems that make our buildings work including heating, ventilation, air-conditioning, refrigeration, water supply, fire protection, power, lighting and data communication systems. Creating such buildings that function effectively makes for a challenging and rewarding career. This year the programme is 31 years in existence.

What our Students say!

- Dominic MacA'Choiligh graduate of the DT026 programme and currently working as a senior design engineer in Building Services Engineering in Sydney.
"Having worked in the industry for the past six years both in Ireland and internationally I have found that the DIT Building Services Engineering Honours Degree Programme has given me both the practical and technical skills needed to work on a wide variety of interesting and significant projects, including the Sydney Opera House. The programme portability was key in giving me the background needed to work overseas where without having to sit any additional local examinations I have been able to easily transition to working with different design conditions, climate and environments. The fact that in Australia CIBSE design standards are also used was very beneficial. I have always found that employers, both domestically and internationally, have a very high regard for the course and its graduates."

Learning Outcomes:

What will I Study?

While there is a strong emphasis in the programme on the applied technology of mechanical and electrical systems (M&E) this delivery is complemented by a solid education in the underlying principles. As an honours degree programme with a 30 year unbroken history of accreditation by Engineers Ireland (the statutory body for regulation of the engineering profession) the programme delivery covers the four key areas necessary to produce a fully rounded professional engineer: (i) fundamental engineering education (ii) applied M&E modules in the discipline (iii) systems design skills through projects and software (iv) communication and management skills.

Contained within the programme are a number of modules which are virtually unique at undergraduate level in Ireland such as Refrigeration, Lighting and Acoustics, Facilities and Fire Engineering, and Energy in Buildings. The student is provided with an opportunity to study these areas to a depth not generally encountered at undergraduate level and as a result many go on to specialise in these specific areas.

Another unique feature of the programme is our three layered approach to the delivery of the increasingly important area of the dynamic thermal modelling of buildings and system performance. This involves the underlying principles, followed by computer modelling modules and finally the application is taught using industry standard software (such as IES).

The design of this programme results in a graduate who is well positioned to gain rewarding employment directly on graduation and is unlike many generic programmes which require further post graduate qualifications to gain employment.

Further Information

www.dit.ie/civilengineering

School of Civil Engineering

- ☎ 01 402 3826 (Dr B. Costelloe, Head of Department)
- ☎ 01 402 3635 (School Office)

✉ cbse@dit.ie

COURSE CODE:

DT026

COURSE LENGTH:

3 YEARS

APPROX:

30 PLACES

LOCATION:

BOLTON ST

POINTS 2017

(SEE DT066)

Module Listing

Year Two

Mathematics • Fluid Mechanics • Thermodynamics •
Electrical Engineering & Electronics • Building Fabric Load
Assessment & Computer Modelling • Engineering Economics &
Management • Design of Systems Assignments • Engineering
Materials • Fuels Combustion Gas & Sanitary Services • Air
Conditioning & Refrigeration • Emerging & Renewable Energy
Technologies

Year Three

Mathematics & Engineering Computation • Lighting and
Acoustics • Fluid Mechanics • Heating Systems Design •
Electrical Power Systems • Heat Transfer in Buildings •
Systems Design Practice (Project) • Systems Design Practice
(Software Utilisation) • Air Conditioning & Ventilation •
Refrigeration • Technical Investigation Report • Emerging and
Renewable Energy Technologies

Year Four

Computer Modelling & Simulation • Heat & Mass Transfer
• Engineering Project Management • Air Conditioning
Engineering • Fire Engineering • Control Engineering •
Facilities Engineering • Energy & Buildings • Major Design
Project (15 credits)

In all years of the programme there is a strong emphasis on
low energy solutions.

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9AM - 2PM 01.12-02.12

What are my... Career Opportunities?

Career opportunities are found in four key areas: (i) in the exciting field of Low Energy Systems and utilising Renewable Energy from solar, geothermal and ambient sources (ii) in design of modern industrial facilities for clean room manufacturing in Pharmaceuticals, Microprocessors, Medical Devices (iii) in Energy and Facilities Management and in (iv) Project Management and statutory validation. Graduates are traditionally employed with blue chip organisations such as: ARUP, Hoare Lea, Jones Engineering Group, AXISENG, PM Group, Hevac, Grundfos, HSE, OPW.

*For more career development options please see inside front cover

What other options do I have after completion?

Generally graduates who reach an appropriate honours level have access to a range of taught masters degrees. Past graduates have progressed to PhD level in specialist research in Fire, Electrochromic Glazing and Low Energy Solutions. As a graduate with an accredited degree by Engineers Ireland you will have opportunities to progress to registered professional engineer status in Ireland and abroad.

Are there study abroad options?

Through the Erasmus Exchange Programme there are established links with continental colleges in Germany, France and Finland. There are particularly long established exchanges with the Hochschule Munchen (University of Applied Sciences in Munich). As a centre for Building Services Engineering in Germany this university is equipped with nine specialist laboratories covering all aspects of the discipline.

You might also be INTERESTED IN:

- ♦ Building Services Engineering (HVACR) - DT005 **Pg 174**
- ♦ Civil Engineering - DT027 **Pg 134**
- ♦ Civil Engineering - DT004 **Pg 176**

INNEALTÓIREACHT SHIBHIALTA

CIVIL ENGINEERING

BE Leibhéal 8 / Level 8

ENTRY REQUIREMENTS:

Successful completion of DT066 - Engineering (General Entry) Year 1

What is... Civil Engineering?

Civil Engineering is a broad professional discipline that includes the planning, design, construction, operation and maintenance of the physical and naturally built environment that our society depends on. Civil Engineers design roads, bridges, airports, railways, ports, roads, buildings, water, waste and energy systems.

Learning Outcomes:

What will I Study?

Students will study a wide variety of subjects including fluid mechanics, structural engineering, geotechnical engineering, hydraulics, mechanics, highway engineering, construction management, materials, environmental engineering and scheme design.

OPEN 2017
DAY **DIT AUNGIER ST.**
9AM-2PM 01.12-02.12



Further Information

www.dit.ie/civilengineering

School of Civil Engineering



01 402 4039 (Dr Niall Holmes, Assistant Head of School)



niall.holmes@dit.ie

COURSE CODE:

DT027

COURSE LENGTH:

3 YEARS

APPROX:

35 PLACES

LOCATION:

BOLTON ST

POINTS 2017

(SEE DT066)

Module Listing

Years Two to Four

Geotechnical Engineering • Civil Engineering Hydraulics
• Professional Development • Surveying • Engineering Mathematics • Concrete Technology • Environmental Engineering • Highway Engineering • Structural Mechanics • Design Project • Design of Structural Elements • Construction Management & Economics • Advanced Environmental Engineering • Hydraulic Structures • Advanced Highways & Transportation • Structural Design of Steel & Concrete • Civil Engineering Practice & Law

What are my... Career Opportunities?

Our graduates have gone on to gain employment in consulting engineering design offices, on-site with contractors and in surveying and construction management. Civil Engineers are also highly sought after in business and financial institutions.

**For more career development options please see inside front cover*

What other options do I have after completion?

Students who have reached the appropriate honours standard may have access to a wide range of Masters Degrees in DIT and elsewhere in Higher Education. The School of Civil and Structural Engineering in DIT offers Masters (Level 9) and PhD research degrees.

Are there study abroad options?

There are Erasmus opportunities to live and study abroad



You might also be INTERESTED IN:

- ♦ Civil Engineering - DT004 **Pg 176**
- ♦ Building Services Engineering (HVACR) - DT026 **Pg 132**
- ♦ Building Services Engineering (HVACR) - DT005 **Pg 174**
- ♦ Structural Engineering - DT024 **Pg 162**

BAINISTÍOCHT FOIRGNÍOCHTA CONSTRUCTION MANAGEMENT

BSc Leibhéal 8 / Level 8

LEAVING CERT ENTRY REQUIREMENTS:

| Minimum N° of | | Minimum Grade in | |
|---------------|---------|------------------|------------------|
| Subjects | Honours | Maths | English or Irish |
| 6 | 2H5's | 06/H7 | 06/H7 |

QQI LEVEL 5 ENTRY REQUIREMENTS:

ONE OF THE FOLLOWING AWARDS:

CCONT /5M5010 Construction Technology

FIVE DISTINCTIONS

What is... Construction Management?

This programme is designed for those who wish to make a career in management not only in the construction industry, but also in a wide range of growing areas such as in the sustainability, conservation and maintenance, retail and information technology management sectors.

This qualification has been accredited to the Chartered Institute of Building (CIOB) and, over the years, has become known and recognised internationally.

Learning Outcomes:

What will I Study?

The primary emphasis is in the education of the manager in the construction sector and in the development of a high level of competency in managing and planning the execution of projects in the most efficient, effective and safety conscious manner.

The programme will also cover the technical aspects of construction work, including quantity surveying, land surveying, CAD and construction related IT systems such as the emerging area of Building Information System. The different material, technologies and systems used on construction sites in Ireland and abroad are reviewed, including in the growing sustainability, conservation and renovation areas.

The overall programme provides a good balance between classes and practical work. In particular, the Work Experience module in the third year of the programme allows the student to experience at first hand the challenges and opportunities of working in the industry for a whole semester. A study field trip also takes place during the second year of the programme to introduce students to the principles of building conservation in other EU states in order to expand their employment potential and options.



Further Information

www.dit.ie/construction

School of Surveying & Construction Management



01 402 3676 (Ms. Kelly Nash)



surveying@dit.ie

Visit also our blog: <http://deptofconstruction.blogspot.com>



EUROPEAN SOCIAL FUND



Ireland's EU Structural Funds Programmes 2007 - 2013

Co-funded by the Irish Government and the European Union

COURSE CODE:

DT117

COURSE LENGTH:

4 YEARS

APPROX:

40 PLACES

LOCATION:

BOLTON ST

POINTS 2017

326

Module Listing

Year One

Construction Technology - Low Rise Buildings • Building Materials & Environmental Science • Land Surveying • Construction Mathematics • Construction Management • Self Development & Learning Skills • Graphics & Communication • Quantity Surveying • Land Surveying • Computer Graphics & Communication

Year Two

Setting out & Dimensional Control • Building Structures • Construction Management • Computer Aided Draughting • Professional Studies • Framed Structures • Maintenance & Conservation • Construction Safety Management • Financial Management for Construction • Estimating, Tendering & Measurement • Economics for Construction Managers

Year Three

Work Placement • Building Structures • Building Services • Construction Management • Quantity Surveying • Contract Administration • Legal Studies for Construction Managers

Year Four

Construction Management • Construction Project Finance • Construction Safety Management • Construction Planning • Sustainable Design & Building • Advanced Building Techniques • Commercial Management • Final Project

What our students say!

- Having worked in the construction industry before hand and after consulting my peers I chose this course last year because this programme is a widely recognised qualification
- This course provides a strong emphasis in project and general management, with opportunities to be employed in diverse growing sectors of activities such as in the sustainability area
- With my construction degree from DIT I find myself capable of fulfilling roles at a young age that traditionally required experience practitioners

What are my... Career Opportunities?

Graduates from this programme have found careers in large and small companies and across a range of occupations in both the public and private sectors, including working in sustainability, conservation, information technology, project management, and with building contractors or sub-contracting firms as Estimators, Quantity Surveyors, Programmers, Planners, Contract Managers and Site Managers. Many have attained high level management positions in a wide range of areas and have gone on to become executive directors or managing directors.

*For more career development options please see inside front cover

What other options do I have after completion?

Students who have reached the appropriate honours standard may have access to a wide range of Masters degrees in DIT and elsewhere in Higher Education.

Are there study abroad options?

Students have the opportunity to study in our Partner University in USA, Purdue University, or as an exchange student for one Semester.

Since the programme was developed to the status of Honours Degree in Construction (Management) and in line with the Bologna Agreement, students can apply for further postgraduate programmes abroad.

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9AM-2PM 01.12-02.12

You might also be INTERESTED IN:

- Property Economics -DT110 **Pg 158**
- Quantity Surveying & Construction Economics - DT111 **Pg 160**
- Geographic Science - DT112 **Pg 144**
- Auctioneering, Valuation & Estate Agency - DT104 **Pg 166**

SEIRBHÍSÍ LEICTREACHAIS & BAINISTÍOCHT FUINNIMH ELECTRICAL SERVICES & ENERGY MANAGEMENT

BSc Leibhéal 8 / Level 8

ENTRY REQUIREMENTS:

| Minimum N° of | | Minimum Grade in | |
|---------------|---------|------------------|------------------|
| Subjects | Honours | Maths | English or Irish |
| 6 | 2H5's | 04/H7 | 06/H7 |

QQI LEVEL 5 ENTRY REQUIREMENTS:

A QQI Level 5 entry route to this programme is available. Please visit www.dit.ie/studyatdit/undergraduate/howtoapply

What is... Electrical Services & Energy Management?

All aspects of daily life now require energy in the form of electricity, gas or oil to function. These facilities include data centres, hospitals, manufacturing facilities, large commercial buildings, sports stadiums, multi-national company's headquarters, wind farms, large solar installations, software companies, etc. The design and installation of electrical services and management of energy consumption are vital to the initial installation and ongoing facility management.

Companies now spend vast sums of money investing in their infrastructure to ensure the smooth running of their facilities. This is vital to the support the ongoing operation of their companies in a world-wide market environment. Key to the success is the electrical, lighting and energy design of their facilities, that ensure smooth operation with no interruption to their core business activities. Electrical Service and Energy Management graduates will work in design teams to deliver electrical services to buildings and will play an integral role in the ongoing operation and management of the energy facilities.

Learning Outcomes:

What will I Study?

Electrical Services and Energy Management graduates will be equipped with the fundamental engineering, management and design skills necessary to design electrical services for facilities, and manage the energy consumption within facilities.

Graduates will have a thorough knowledge of electrical services engineering, which includes, safety, power distribution and information network systems, cabling/wiring systems, energy management systems and the application of such systems to various industries such as data centres, manufacturing, large commercial and multinational facilities, etc.

Health & safety awareness and application to the design aspects within the programme, together with all relevant legislation is vital to this role. The management of these facilities is taught to the highest international standards to ensure graduates can operate and maintain large facilities.



Further Information

www.dit.ie/electricalelectronicengineering

School of Electrical & Electronic Engineering

- 01 402 4573 (Martin Barrett, Programme Chair)
- 01 402 4882 (Mr Keith Sunderland, Assistant Head)
- 01 402 4617 (Ms Frances Malone, Administration)

- martin.barrett@dit.ie
- keith.sunderland@dit.ie
- frances.malone@dit.ie

Module Listing

Year One

Engineering Maths • Electrical Principals • Renewable Energy Plant • Electrical Services Engineering • Engineering Practice • Physics • Applied Data Networking • Engineering Professional Practice • Energy & the Environment

Year Two

Engineering Maths • Lighting Applications • Life Safety Systems • BIM • Building Services • Electrical Services Plant • Renewable Energy Plant • Network Fundamentals • Introduction to Routing • Building Automation • Project Management

Year Three

Electrical Services Design • Building Services • Electrical Services Plant • Building Automation • Services Development & Management • Building Energy Assessment • Work Placement: In year 3 of the programme students can complete work experience/study for one semester in Ireland, Germany, France, Spain or Italy

Year Four

Alternative Energy Systems • Utilisation of Electrical Energy • Wind Energy for Electricity Supply • Data Acquisition • Energy Management • Facilities Management & the Environment • Management, Marketing & Law • Energy Policy & Economics • Research Methodologies • E-Learning Techniques

Are there study abroad options?

Students may have the opportunity of completing their work placement or study abroad in a European University under the Erasmus Exchange programme.

What are my... Career Opportunities?

Career opportunities are excellent. In recent years all of the graduates have gained excellent opportunities for employment or have opted to engage in research. The industrial links coupled with the work placement and the final year project mean that the BSc in Electrical Services and Energy Management is the 'go-to' programme for prospective employers in this sector.

Graduates have gained employment in a diverse range of industries that includes food production, manufacturing, data centres, wind farms, and electrical consultancy. Companies such as Intel, AECOM, Wind Prospect, ESB, ESB International, Mercury Engineering, JV Tierney and Amazon are among those who have employed our graduates, many of whom have progressed into technical management roles with high salaries.

*For more career development options please see inside front cover

What other options do I have after completion?

Students have the option of continued study for an MSc in Energy Management, an MPhil, which is a master's degree by research or a PhD. All these programmes are offered full time and part-time so our students can choose to work in industry and still continue their studies.

What our Students say!

- Cristina Coleman – Kenny graduated in 2012. She began her career as an electrician and went on to study in DIT. She started as a graduate engineer for ESB International in 2009. Cristina is a HV substation designer and has designed a number of 110/38 kV & MV AIS and GIS substations for ESB. She is also acting as Owners Engineer on behalf of ESB Networks for the construction of an Independent Processing Plant (IPP) as part of the Dublin Waste incinerator development.
- Mark Kelly - "I graduated from Electrical Services and Energy Management in 2014 and subsequently joined PM Group in Dublin.

Job opportunities were plentiful upon completion of the Level 8 in Electrical Services and Energy Management. I am employed as a graduate electrical engineer and I am currently enrolled in a part time Master's Degree while working for PM Group. Sectors I currently work in include Data Centre/Mission Critical Facilities, Waste to Energy Facilities, Med Tech and Pharma Projects.

- Niall McCoy graduated in 2010 and joined a renewable energy company. As the renewable industry has grown so did the opportunities. Currently I am responsible for wind farm development in a number of countries worldwide such as Canada, USA, South Africa, UK & Ireland. To date, I have successfully project managed and designed over 1.2 GW in installed wind farms.

You might also be INTERESTED IN:

- Electrical & Electronic/Computer & Communications Engineering - DT021A Pg 140

LEICTREACH & LEICTREONACH/INNEALTÓIREACHT RÍOMHAIREACHTA & CUMARSÁIDE

ELECTRICAL & ELECTRONIC/COMPUTER & COMMUNICATIONS ENGINEERING

BE Leibhéal 8 / Level 8

ENTRY REQUIREMENTS:

Successful completion of DT066 - Engineering (General Entry) Year 1

What is... Electrical & Electronic/ Computer & Communications Engineering?

This programme educates students to an honours level in electrical and electronic engineering and meets the educational standard required for chartered engineering membership of Engineers Ireland. The programme offers specialisation in the following areas:

Power Systems Engineering, Control Engineering, Communications Engineering, Electronic Engineering and Computer Engineering. Students entering this programme will follow the DT066 Engineering (General Entry) programme for the first year.

At the end of the first year students will normally progress to the second year of the DT021A programme which provides a general introduction to electrical and electronic engineering. At the beginning of the third year students commence their specialist options. During the second semester of the third year students will complete a 6 month work placement. In the fourth year, students undertake a major engineering project in Semester 2.

Learning Outcomes:

What will I Study?

Students select one major option from each of the following lists in third year:

Electrical Power Engineering: Analysis and design of modern power systems and associated plant.

Control Engineering: Design and application of control and automated systems, including robotics.

Electronic Engineering: Analysis and design of electronic systems.

Communications Engineering: Advanced communications, including emerging mobile systems & networks.

Computer Engineering: The programming and development of state-of-the-art computer systems.



Further Information

www.dit.ie/electricelectronicengineering

School of Electrical and Electronic Engineering



01 402 4905 (Prof. Max Ammann, Assistant Head of School)



max.ammann@dit.ie

Module Listing

Year Two

Mathematics • Programming • Electronic Systems • Control Engineering • Computer Architectures • Signals & Systems • Electrical Energy Systems • Communication Networks

Year Three

Mathematics • Business & Management Studies • Instrumentation & Measurements • Field & Circuit Theory • Project Management • Digital Signal Processing • Communications Networks • Work Placement

In addition, students study their selected major option modules

Year Four

Business & Management Studies • Engineering Project
One module from a list of possible elective modules which typically include; Image Processing • Wind Energy & PV for Electricity Supply • Wireless Communications • Network Security • Software Engineering • Internet of Things

What are my... Career Opportunities?

Engineering professionals are highly sought after by employers in a very wide range of fields, including power generation and distribution, telecommunications, transportation, information technology and renewable energy. Engineering professionals occupy senior positions in large multinationals, indigenous industry, SMEs, start-ups, government agencies and consultancy companies.

Electrical & Electronic Engineers would typically find employment in the power and energy sectors, the production and manufacturing industries, as well as the semiconductor and medical devices industries.

Communications & Computing Engineers would typically be found in communications, software development, and internet companies.

*For more career development options please see inside front cover

What other options do I have after completion?

Students who have reached the appropriate honours standard may have access to a range of Masters and PhD Degrees in DIT and elsewhere in Higher Education.



You might also be INTERESTED IN:

- Networking Applications & Services – DT080B **Pg 152**
- Networking Technologies – DT080 **Pg 190**
- Electrical Services Engineering – DT010 **Pg 180**

- Electrical & Control Engineering – DT009 **Pg 178**
- Electronics & Communications Engineering – DT008 **Pg 182**

INNEALTÓIREACHT (IONTRÁIL GHINEARÁLTA)

ENGINEERING (GENERAL ENTRY)

BE Leibhéal 8 / Level 8

LEAVING CERT ENTRY REQUIREMENTS:

| Minimum N° of | | Minimum Grade in | |
|---------------|---------|------------------|------------------|
| Subjects | Honours | Maths | English or Irish |
| 6 | 2H5's | H4 | 06/H7 |

Other Requirements

Or a grade H4 in Applied Mathematics if combined with a minimum grade of H6 in Mathematics

What is... Engineering?

DT066 is the common first year entry point for the majority of four year Level 8 Engineering Degrees in DIT. Students specialise in second and subsequent years and may choose:

- DT021A - Electrical & Electronic/Computer & Communication Engineering
- DT022 - Mechanical Engineering
- DT023 - Manufacturing & Design Engineering
- DT024 - Structural Engineering
- DT026 - Building Services Engineering (HVACR)
- DT027 - Civil Engineering

Learning Outcomes:

What will I Study?

DT066 Students learn fundamental principles (Mathematics, Physics and Chemistry), Engineering Applications (Mechanics and Electrotechnology) and Applied Skills (Technical Graphics, Computing and Professional Development). Throughout the year the theoretical subjects are supported by laboratories and a comprehensive programme of design projects including a robot building project, a bridge building project and an energy efficiency project.

What our Students say!

See "DIT Engineering General Entry" on Youtube to hear our students speak about DT066

- "Employers were definitely impressed by the fact that I came from DIT"
- "You learn a lot and they (projects) are really really fun"
- "If you like making things then this is the course for you"



Further Information

www.dit.ie/multidisciplinarytechnologies

School of Multidisciplinary Technologies



01 402 4014 (School Administrator)



multidisciplinaryadm@dit.ie

COURSE CODE:

DT066

COURSE LENGTH:

1 YEAR

APPROX:

160 PLACES

LOCATION:

**BOLTON ST
KEVIN ST**

POINTS 2017

371

Module Listing

Year One

Mathematics • Engineering Physics • Mechanics • Chemistry
• Technical Graphics • Electrotechnology • Engineering
Computing • Instrumentation for Engineers • Engineering
Professional Practice • Design Projects

What are my... Career Opportunities?

DT066 is the stepping stone to an exciting and rewarding career as a professional engineer. DIT's Engineering degrees are accredited by Engineers Ireland and our qualifications are recognised worldwide.

OPEN 2017
DAY **DIT AUNGIER ST.**
9AM-2PM 01.12-02.12

What other options do I have after completion?

Students who have reached the appropriate honours standard may have access to a wide range of Masters Degrees and Research Degrees in DIT and elsewhere in Higher Education



You might also be INTERESTED IN:

- ♦ Engineering (General Entry) - DT097 Pg 184

EOLAÍOCHT GHEOGRAFACH

GEOGRAPHIC SCIENCE

BSc Leibhéal 8 / Level 8

LEAVING CERT ENTRY REQUIREMENTS:

| Minimum N° of | | Minimum Grade in | |
|---------------|---------|------------------|------------------|
| Subjects | Honours | Maths | English or Irish |
| 6 | 2H5's | 04/H7 | 06/H7 |

QQI LEVEL 5 ENTRY REQUIREMENTS:

A QQI Level 5 entry route to this programme is available. Please visit www.dit.ie/studyatdit/undergraduate/howtoapply

What is... Geographic Science?

It is Geography brought to life! Another name for Geographic Science is Geomatics.

Locational (spatial) information must be collected, processed and managed to produce maps, construction drawings and models. The professional responsible for this is a Geomatics Surveyor. We model, analyse and manage information from many sources. This provides us with lots of exciting career opportunities at home and abroad. We use interesting cutting-edge technologies including satellites, drones, laser scanners, aerial cameras and advanced surveying and computing to collect and manage our data.

Learning Outcomes:

What will I Study?

Geographic Science involves three fields of activity - Spatial Data Provision (measuring the land), Geographic Information Science and Land Management.

Spatial Data Provision involves the collection of data relating to the Earth (spatial data). Instruments such as GPS receivers, terrestrial airborne (including drones) and spaceborne cameras and scanners, electronic distance and angle measuring instruments (total stations) and much more, are used to collect precise data which is then processed to create digital maps and 3D models of our landscape for development, monitoring and planning. We collect and apply these data on construction sites, on the land, offshore and underground to meet the needs of a range of users.

Geographic Information Science (GIS) lets us visualise, question, analyse and interpret data to understand relationships, patterns and trends that enable better decisions about location to be made. This involves 3D modelling, computer visualisation, spatial analysis in GIS and delivery of the results and products (including location based services) to the client.

The third activity of Geographic Science is Land Management. This deals with the four main Land Administration systems - Land Value for Taxation, Land Tenure for Ownership of Property, Land Use for Planning, and Land Development for Construction and Conservation.



Further Information

www.dit.ie/geographicsscience

School of Surveying & Construction Management



01 402 3676



surveying@dit.ie

Module Listing

Year One

Geodetic Surveying • Geo-Spatial Awareness • Mathematical Methods • Information Technology • Land Management • Professional Development

Year Two

Mathematical Methods • Information Technology • Geodetic Surveying • Land Management • Geographic Information Science • Remote Sensing – Mapping from the air

Year Three

Mathematical Methods • Information Technology • Geodetic Surveying • Land Management • Remote Sensing – Mapping from the air • Geographic Information Science • Professional Development • Work Placement

Year Four

Professional Development • Geodetic Surveying • Land Management • Geographic Information Science • Remote Sensing – Mapping from the air • Spatial Information Applications • Dissertation (on individual research project)

What our students say!

- I chose Geographic Science as I wanted more choices than just working in an office. The lecturers are all enthusiastic and that enthusiasm is passed onto the graduates. I work in the Lidar department of Ordnance Survey Ireland (OSi). It's an incredible place to work, and it makes great use of the skills I developed in college. The work is very diverse from quarry and flood mapping to forestry and road alignment projects.
- I'm working in the GIS Department in the National Parks and Wildlife Service of the Department of Environment, Heritage and Local Government. My principal duty is map creation. I chose to study Geographic Science for a number of reasons. There is a great balance between office and field work. The nature of the work allows you to be creative and artistic, as well as technical and precise. There is a large variety of specialised career paths available along with the possibility to travel and work in many parts of the world.

What are my... Career Opportunities?

Go to the following link to view an animation on the careers available to a Geographic Science graduate - a geomatics professional: www.dit.ie/surveyingconstructionmanagement

Graduates from the programme are highly sought after at home and abroad by private companies and government agencies. The BSc (Hons) degree is also accredited by the Society of Chartered Surveyors Ireland (SCSI), the Royal Institution of Chartered Surveyors (RICS) and the Institution of Civil Engineering Surveyors (ICES) which are internationally recognised. Graduates can become professional members and chartered surveyors.

*For more career development options please see inside front cover

What other options do I have after completion?

Geographic Science provides a solid basis for many technical and applied areas of research and as a graduate of Geographic Science, you are eligible to apply to any university for a wide range of Masters and other research level programmes.

Are there study abroad options?

The School has links with several European universities under the Erasmus/Socrates programmes. This facilitates the exchange of staff and students for study and research abroad.

You might also be INTERESTED IN:

- ♦ Planning & Environment Management - DT106 **Pg 154**

INNEALTÓIREACHT DÉANTUSAÍOCHTA & DEARTHA MANUFACTURING & DESIGN ENGINEERING

BE Leibhéal 8 / Level 8

ENTRY REQUIREMENTS:

Successful completion of DT066 - Engineering (General Entry) Year 1

What is... Manufacturing & Design Engineering?

Almost everything we touch in daily life is designed and manufactured. The fundamentals of the Manufacturing & Design Engineering discipline are manufacturing technology, design for manufacture combined with business and enterprise management.

Of the many disciplines in engineering and technology, Manufacturing & Design Engineers have the vital task of solving society's innovation and production tasks. Manufacturing & Design Engineers are involved in the design of the product and the efficient management of resources and technology to produce quality goods and services for society. A key role for Manufacturing & Design Engineers in advancing the knowledge economy will be to develop more innovative products resulting in a high value-added manufacturing sector. Manufacturing & Design Engineers have skills and knowledge which can be applied across a broad spectrum of the engineering sector.

Learning Outcomes:

What will I Study?

The Manufacturing and Design Engineering programme aims to provide graduates with the appropriate mix of technical, managerial and communication skills, in order to equip them for a wide range of careers within a broad spectrum of industries. The programme is designed to provide the graduate with a full understanding of the structure and operation of a manufacturing enterprise and equip them with relevant planning and simulation tools to help make cost effective decisions. It aims to give an appreciation of the need for competitiveness in manufacturing industry. It will provide the learner with well-developed team working skills as well as strong innovation and entrepreneurial skills. It also aims to produce environmentally responsible engineers, who will conduct manufacturing activities with due regard to the environment and the relevant regulatory and legal requirements.



Further Information

www.dit.ie/mechanicalanddesignengineering

School of Mechanical & Design Engineering



01 402 3823 (Robert Simpson – Assistant Head of School)



01 402 3841 (Dr. Colm O'Kane - Programme Leader)



01 402 3626 (School Administrator)



robert.simpson@dit.ie



colm.okane@dit.ie

Module Listing

Year Two

Engineering Mathematics • Manufacturing Engineering • Computing • Manufacturing Automation • Engineering Economics & Management • Fluid Mechanics • Mechanics • Thermodynamics • Engineering Materials • Electro-Mechanical Engineering • Engineering Design • Computer Aided Design

Year Three

Engineering Mathematics • Professional Development • Tool Design & Metal Forming • Mechanical Systems Design • Quality & Reliability • Engineering Design Projects • Thermofluids • Manufacturing Systems • Manufacturing Engineering • Design & Teambuilding Project • Materials Properties & Processing • Control Engineering

Year Four

Quality & Reliability • Engineering Materials • Advanced Design & Machining • Industrial Networks & Automation • Professional Development • Medical Devices • Micro & Nano Manufacture • Design & Manufacture • Projects • Operations Management

* A Major project is undertaken over the two final semesters. As part of this project students have the opportunity to become involved in the formula student competition which is to design and build a race car and compete against other Universities in Silverstone UK.

What are my... Career Opportunities?

Career opportunities are excellent. In recent years all of the graduates gained excellent opportunities or engaged in research work. The industrial links with the final year project work and the formula student team project have received very positive reviews from industry.

Graduates have gained employment in technical/design roles in the automotive, electronics, medical devices, pharmaceuticals and food industries. Companies such as HP, Intel, Braun, Siemens, Dromone, JCB and DAF. Many progress quickly into technical management roles with high salaries.

*For more career development options please see inside front cover

What other options do I have after completion?

Students who achieve the appropriate level have the option of continued study for an ME in Manufacturing Management & innovation. Alternatively they may complete a PhD by research.

Are there study abroad options?

Students may have the opportunity to study abroad under the Erasmus exchange programme.

In third year students will have the opportunity to attend a design workshop in Lucerne Switzerland.

What our Students say!

- Graduate & Winner of Best Manufacturing Engineering Project Award: Upon graduation I immediately took up a position as a process engineer in an automation company in Co. Cavan, Ualto Ltd, who specialise in electrical and automation solutions for industrial plants. My role within the company included designing and wiring panels, electrical drawings and programming of automated equipment.

I have now taken up a position working as a design

engineer with Combilift in Co. Monaghan who specialise in the manufacture of forklifts. The Manufacturing and Design Engineering programme gave me a great standing for the tasks required in such a demanding industry. Overall the programme gives a great insight into all areas of the manufacturing industry and with the mixture of design, practical, business, and the addition of such a rewarding and professional project as the Formula Student makes graduates prime candidates for any company in the manufacturing field.

You might also be INTERESTED IN:

- Automation Engineering - DT003 Pg 168

INNEALTÓIREACHT MHEICNIÚIL

MECHANICAL ENGINEERING

BE Leibhéal 8 / Level 8

ENTRY REQUIREMENTS:

Successful completion of DT066 - Engineering (General Entry) Year 1

What is... Mechanical Engineering?

Mechanical Engineering is one of the oldest, most broad-ranging and versatile engineering disciplines, covering all industry and many research sectors including: Power Generation, Aerospace, Engine Design, Pharmaceutical Processing, Biomedical Device Design, Renewable Energy Design, Transportation, and many more.

Mechanical Engineering is all about using science, mathematics and technology to find better ways of making mechanical and electro-mechanical things work. This may be designing electric vehicles to reduce pollution, designing enabling devices for people with a disability or improving the design of a wind turbine to catch the wind more efficiently, and doing all this in a sustainable, ethical and professional manner.

What our Students say!

- The Honours Mechanical Engineering Degree at DIT provided me with a wide array of theoretical knowledge, hands on experience and the necessary support whenever I needed it. In particular, I believe the degree's strong emphasis on the more practical, industry-oriented aspects of engineering was instrumental in me finding a position in my chosen profession during this difficult economic period. I would strongly recommend that anyone looking to pursue a career in Mechanical Engineering consider studying at DIT.
- The programme has equipped me with many useful skills. I found that my communications skills and my ability to work under my own initiative as well as part of a team have developed significantly as a result of completing this programme. The practical approach undertaken in this programme has enabled me to understand key aspects of mechanical engineering in a novel and engaging manner. The staff were particularly supportive throughout the duration of the programme. It has been an enjoyable, worthwhile degree that I would highly recommend.

Learning Outcomes:

What will I Study?

The classroom and practical activities of this high quality Mechanical Engineering programme provide useful skills, knowledge and competencies which can be applied in many fields of industry and research. These activities include an excellent foundation in engineering science and mathematics, advanced design theory and practice, high quality project work and practical workshop/laboratory hands-on skills, but to name a few. All of these activities are supported by dedicated, experienced and supportive DIT staff.

Graduates of the programme will be able to:

- ♦ Identify and define a mechanical engineering challenge, formulate and analyse effective and sustainable solutions, and subsequently implement the most appropriate solution.
- ♦ Design mechanical and mechanical related systems, components and processes to meet specific operating requirements.
- ♦ Utilise knowledge of fundamental science, mathematics, engineering science and technology, in tandem with a thorough knowledge of the mechanical engineering sciences to derive, develop and apply solutions to mechanical engineering and related challenges.
- ♦ Communicate effectively within the engineering community, professional environment and society in general.
- ♦ Identify and act upon their ethical responsibility, as members of the engineering profession, in all aspects of their professional practice.
- ♦ Conduct advanced mechanical engineering research involving the analysis and interpretation of research data for the attainment of useful empirical and scientific engineering knowledge.
- ♦ Sustain learning and educating within the mechanical engineering and related professional areas.
- ♦ Practice as a professional mechanical engineer on an individual basis, within team-based frameworks and as a contributor to multidisciplinary settings.
- ♦ The Mechanical Engineering Department at DIT has over 55 years of experience in delivering high quality programmes and continues to revise and expand its programmes by the introduction of advanced and modern technological content.

Further Information

www.dit.ie/mechanicalanddesignengineering

School of Mechanical & Design Engineering



01 402 3894 (Dr Patrick Wulliamoz)



01 402 3932 (Ms. Susan Doyle)



patrick.wulliamoz@dit.ie



susan.doyle@dit.ie

COURSE CODE:

DT022

COURSE LENGTH:

3 YEARS

APPROX:

30 PLACES

LOCATION:

BOLTON ST

POINTS 2017

(SEE DT066)

Module Listing

Year Two

Engineering Mathematics • Thermodynamics • Mechanics • Electro-Mechanical Engineering • Engineering Materials • Engineering Economics & Management • Engineering Computing • Fluid Mechanics • Engineering Drawing & Design • Manufacturing Automation • Manufacturing Engineering • Statistics

Year Three

Engineering Mathematics • Computer Modelling • Electrical & Electronic Engineering • Fluid Mechanics • Mechanics of Materials • Engineering Design • Professional Development • Applied Thermodynamics • Mechanics of Machines • Control Engineering • Materials Properties & Processes

Year Four

Capstone Project (year long) • Engineering Mathematics • Computer Modelling • Engineering Management • Control Engineering • Heat Transfer • Fluid Mechanics • Mechanics of Machines • Energy Systems • Mechanics of Materials

Are there study abroad options?

Students engaged in this programme have travelled to the U.S. and within Europe to study as part of this programme.

What are my... Career Opportunities?

New graduates may expect many career opportunities in mechanical, manufacturing and process engineering industries and some research areas, both within Ireland and worldwide. Local, national and multi-national companies find graduates of this programme get up to speed rapidly and many of these graduates progress to the highest levels of engineering and management because of their practical engineering abilities, sound technical and scientific knowledge and high quality communication skills. Employers are also attracted by the Chartered Engineer connection with this programme.

Chartered Engineer status: This programme is accredited by Engineers Ireland and graduates can become members of Engineers Ireland. Following further studies and work experience, graduates may apply for Chartered Engineer (C.Eng.)

**For more career development options please see inside front cover*

What other options do I have after completion?

Graduates may choose a Master's or Doctoral Degree in a Mechanical Engineering area at DIT or elsewhere. Due to the high-calibre of this qualification, third-level institutes in Ireland and abroad are readily interested in postgraduate applications from these graduates.

Many graduates choose to redirect their career towards consultancy, project-management, engineering education or entrepreneurship after some years of industry experience.



You might also be INTERESTED IN:

- ♦ Mechanical Engineering - DT006 Pg 188

NUÁIL i bhFEISTÍ LEIGHIS

MEDICAL DEVICE INNOVATION

BSc Leibhéal 8 / Level 8

ENTRY REQUIREMENTS:

Minimum NFQ Level 7 Degree in an Engineering or cognate Scientific discipline or equivalent. Candidates without relevant CAD background may, as a condition of entry, be required to undertake a support CAD module.

What is... Medical Device Innovation?

Medical Devices encompasses all products, except medicines, used in healthcare for the diagnosis, prevention, monitoring or treatment of illness or disability. Examples include contact lenses, orthopaedic joint replacement, programmable pacemakers, stents, ventilators and laser surgical devices. The medical technology industry in Ireland is changing from being predominantly manufacturing based to becoming increasingly complex, value added and driven by R&D. It now involves the extensive collaboration of a broad range of partners, including research institutions, clinicians, manufacturing companies and government agencies.

Learning Outcomes:

What will I Study?

The Programme is designed to provide students with a range of knowledge and skills for employment in a medical device environment. The medical device industry provides graduate opportunities in design, manufacturing, technical services, customer support and a range of other services that add value to the sector. The programme was formulated with industry input in response to a number of recommendations highlighted in the March 2008 Forfás Report on the Future Skills Needs of the Irish Medical Devices Sector. The programme specifically addresses the need to upskill scientists, engineers and technologists and the provision of professional development within this sector.

What our Students say!

- Ciarán Carney: "Graduating from the Medical Device Innovation course has provided me with the knowledge and skills required for the medical device industry. With lectures from a range of disciplines including 3D CAD, anatomy, biomechanics and medical device regulations, this programme has opened the doors to a multitude of career opportunities in this every expanding industry."
- Tim Jones: "I started the degree in medical device innovation not knowing what to expect. I found myself quickly getting drawn into the world of medical devices and wanting to find out more and more. With a focus on teamwork and personal development, the modules were extremely interesting and complemented each other. I'm now looking forward to my new career in the medical device sector!"

Further Information

www.dit.ie/mechanicalanddesignengineering

School of Mechanical & Design Engineering



01 402 3952 (Dr. Graham Gavin - Programme Chair)



01 402 3832 (Mr. Mark McGrath - Dept Head)



graham.gavin@dit.ie



mark.mcgrath@dit.ie

COURSE CODE:

DT710

COURSE LENGTH:

1 YEAR

APPROX:

32 PLACES

LOCATION:

BOLTON ST

POINTS 2017

ADVANCED ENTRY

Module Listing

Year Two

Semester 1: Anatomy & Physiology • Basic Principles of Medical Device Technology • Computer-Aided Design Analysis • Applied Biomaterials • Lean/ Six Sigma • Innovation/ Project Management

Semester 2: Medical Device Design & Analysis • Medical Device Manufacturing • Validation & Regulatory Affairs • Team Design Project

What are my... Career Opportunities?

Based on growth patterns in the sector, career opportunities are very positive. In Ireland, some 140 medical technology companies employ approximately 25,000 people, exporting in the region of €6.2b worth of products annually. Medical device products represent almost 10% of Ireland's exports and prospects for growth of the industry are good. Graduates may also pursue career in the pharmaceutical sector.

**For more career development options please see inside front cover*

OPEN 2017
DAY **DIT AUNGIER ST.**
9AM-2PM 01.12-02.12

What other options do I have after completion?

Students who have reached the appropriate level in final examinations may progress to Masters programmes in DIT or elsewhere in Higher Education.



FEIDHMCHLÁIR & SEIRBHÍSÍ LÍONRAITHE NETWORKING APPLICATIONS & SERVICES

BSc Leibhéal 8 / Level 8

ENTRY REQUIREMENTS:

Minimum NFQ Level 7 (Ordinary Degree) in a computer networking (e.g. DT080 – Networking Technologies) or engineering (e.g. DT008 – Electronics & Communications Engineering) or cognate scientific discipline or equivalent.

What is... Networking Applications & Services?

This is a one-year, NFQ (National Framework of Qualifications) Level-8, honours degree programme leading to the award of Bachelor of Science (Honours) in Networking Applications & Services of the Dublin Institute of Technology. Graduates of this programme will be key players in IT (information technology) and communications network management teams. The programme provides a solid grounding in the principles of network security and distributed systems, mobile applications, system administration, software development, and M2M (Machine-to-Machine) technology, together with knowledge of management, marketing and law. A significant technical project will complement students' academic learning outcomes and ensure that on graduation they can immediately apply their skills.

Learning Outcomes:

What will I Study?

The modules of the programme rely heavily on computer programming skills, with one module devoted entirely to developing skills in this area, including an examination of Object-Oriented (OO) programming and design techniques. Students will have the opportunity to build mobile applications for iOS, Android, Windows Phone and BlackBerry, and to learn how to deploy them in the market place. Students will also learn to install and configure a range of internet server applications such as a Web server and a mail server. They will study the principles of cryptography and network security, the architecture, algorithms and designs upon which modern distributed systems are based, and the interconnection of systems that employ microcontrollers. Students will learn of the lifecycle of production and delivery and the benefits of adhering to the 7 principles of Universal Design. Finally, a project will provide a challenging practical opportunity to demonstrate students' assimilation and integration of technical knowledge, analytical competence, aptitude for problem-solving, design creativity, organizational ability, awareness of commercial factors, and interpersonal and communication skills.



Further Information

www.dit.ie/electricelectronicengineering

School of Electrical & Electronic Engineering



01 402 4801 (Joseph Kellegher)



joseph.kellegher@dit.ie

COURSE CODE:

DT080B

COURSE LENGTH:

1 YEAR

APPROX:

20 PLACES

LOCATION

KEVIN ST

POINTS 2017

ADVANCED ENTRY

Module Listing

Year One

Software Development • Mobile Applications • Embedded Systems Connectivity • Universal Design and Assistive ICT • Management, Marketing and Law • Open Source Software in the Enterprise • Network & Wireless Security Principles • Distributed Systems • Project

What are my... Career Opportunities?

The Expert Group on Future Skills Needs (EGFSN)/Forfás report for 2013 has identified an increasing demand in the ICT (Information and Communication Technologies) sector for highly skilled professionals, particularly at NFQ Level 8. Every industry now requires professionals with IT skills, so whether you work in a dedicated ICT company or the IT department of a company in another industry, career opportunities are many and varied.

**For more career development options please see inside front cover*

What other options do I have after completion?

As with any student holding a level 8 degree, opportunities exist nationally and internationally for progression to higher levels of study and post-graduate research.



You might also be INTERESTED IN:

- ♦ Electrical & Electronic/Computer & Communications Engineering - DT021A **Pg 140**

PLEANÁIL & BAINISTÍOCHT COMHSHAOIL PLANNING & ENVIRONMENTAL MANAGEMENT

BSc Leibhéal 8 / Level 8

LEAVING CERT ENTRY REQUIREMENTS:

| Minimum N° of | | Minimum Grade in | |
|---------------|---------|------------------|------------------|
| Subjects | Honours | Maths | English or Irish |
| 6 | 2H5's | | 06/H7 |

QQI LEVEL 5 ENTRY REQUIREMENTS:

A QQI Level 5 entry route to this programme is available. Please visit www.dit.ie/studyatdit/undergraduate/howtoapply

This is a four year full time Level 8 Honours Degree programme which prepares students wishing to make their career in Planning or Environmental Management in Ireland or abroad.

There is a common first year on completion of which students select either spatial planning or environmental management options and graduate with a

- BSc Planning **OR**
- BSc Environmental Management.

What is... Planning?

The programme prepares individuals to be decision makers and leaders in planning our urban and rural environments.

What is... Environmental Management?

The programme prepares individuals to be decision makers and leaders in developing management solutions to environmental problems in our built and rural environments.

Learning Outcomes:

What will I Study?

Students take all subjects in year one and in second year select to study either spatial planning or environmental management areas and fully specialise in fourth year. Projects and fieldwork, under the supervision of practising professionals, are an integral part of the programme. In third year there is a field trip to another EU state. There is an opportunity for a work placement to be completed between third and fourth years.

Planning graduates will be able to prepare complex development plans, carry out sensitive environmental assessments and work with communities and developers to resolve difficult planning issues.

Environmental Management graduates will be equipped to carry out environmental audits, prepare and implement plans for waste and resources management, and prepare and evaluate environmental impact and risk assessment.



Further Information

www.dit.ie/steeep

School of Transport Engineering, Environment & Planning



01 402 3709 (Mr Conor Norton, Assistant Head of School)



01 402 3605 (Ms. Orla Hosford, School Office)



conor.norton@dit.ie



orla.hosford@dit.ie

COURSE CODE:

DT106

COURSE LENGTH:

4 YEARS

APPROX:

35 PLACES

LOCATION:

BOLTON ST

POINTS 2017

303

Module Listing

Year One

Geo – Spatial Awareness • Introduction to Environmental Management • Introduction to Spatial Planning • Built Environment • Data Management • Project – Settlement Analysis • Project – Layouts • Earth Sciences – Chemistry • Environmental Science – Biology • Society and Environment

Year Two (Core Modules)

Social Research Methods • Introduction to Economics • Public Administration & Law • Earth Sciences – Habitats

Year Three (Core Modules)

Buildings & Infrastructure • Environmental Assessment • European Context • Society & Governance

Year Four (Core Modules)

Professional Practice • Dissertation

Spatial Planning Modules: Collaborative Planning • Master Planning • Development Management • Project – Individual Spatial Plan • Regional/National Planning

Environmental Management Modules: Environmental Auditing • Environmental Licensing • Project – Licensing • Rural Management Plans • Project – Environmental Assessment

What are my... Career Opportunities?

Many **Planning** graduates specialise in urban design, retail, property development, transport and other specialist areas. Graduates of the programme may find employment in government agencies, local authorities, with industry or in private practice.

Environmental Management graduates may find employment in industry, environmental management consultancies, state agencies, local authorities, on environmental management audits, waste management, environmental impact assessment and conservation management.

*For more career development options please see inside front cover

What other options do I have after completion?

Students who have reached the appropriate honours standard have access to a range of Post Graduate Degrees in DIT and elsewhere in Higher Education at Universities in Ireland, Europe and further afield.

What our Students say!

- 'From working on field projects on water quality, to lab work, to learning about legislation and human interactions – this course was wide ranging and gave me a deep understanding and a new perspective on the environment. I work in health and safety now which is closely allied to environmental management and I wouldn't be where I am today if I hadn't studied this course.'
- 'My time spent studying Spatial Planning in DIT was stimulating, challenging and fun. The course struck the right balance between theory and practice, offering a rounded education. DT106 gave me the knowledge, skills and experience needed to compete with top graduates and to secure my preferred job. I highly recommend DIT's BSc in Spatial Planning to anyone aspiring to launch their career in the fields of planning, environment and urban studies.'

Are there study abroad options?

During the programme there are opportunities to study abroad through the ERASMUS Programme.

It is possible to spend one or two semesters abroad in either the second or third year of the programme at Hamburg or Dortmund (Germany) or Tampere (Finland).

OPEN 2017
DAY **DIT AUNGIER ST.**
9AM-2PM 01.12-02.12

You might also be INTERESTED IN:

- ♦ Architecture - DT101 **Pg 128**
- ♦ Architectural Technology - DT175 **Pg 130**
- ♦ Civil Engineering - DT027 **Pg 134**
- ♦ Geographic Science - DT112 **Pg 144**
- ♦ Property Economics - DT110 **Pg 158**

DEARADH TÁIRGÍ PRODUCT DESIGN

BSc Leibhéal 8 / Level 8

LEAVING CERT ENTRY REQUIREMENTS:

| Minimum N° of | | Minimum Grade in | |
|---------------|---------|------------------|------------------|
| Subjects | Honours | Maths | English or Irish |
| 6 | 2H5's | 06/H7 | |

QQI LEVEL 5 ENTRY REQUIREMENTS:

A QQI Level 5 entry route to this programme is available. Please visit www.dit.ie/studyatdit/undergraduate/howtoapply

What is... Product Design?

The ever-increasing requirement by industry, commerce, retail and domestic markets for new products of all varieties has resulted in a thriving industry for businesses in the area of product design. Dublin Institute of Technology has developed this programme in response to market demand to produce graduates with the necessary theoretical knowledge and practical skills to work in today's demanding design fields.

The role of the product designer is to oversee the complete development cycle of a product in industry. Graduates will be capable of applying engineering principles in order to evolve a product's development cycle from initial concepts to manufacturing stage.

Learning Outcomes:

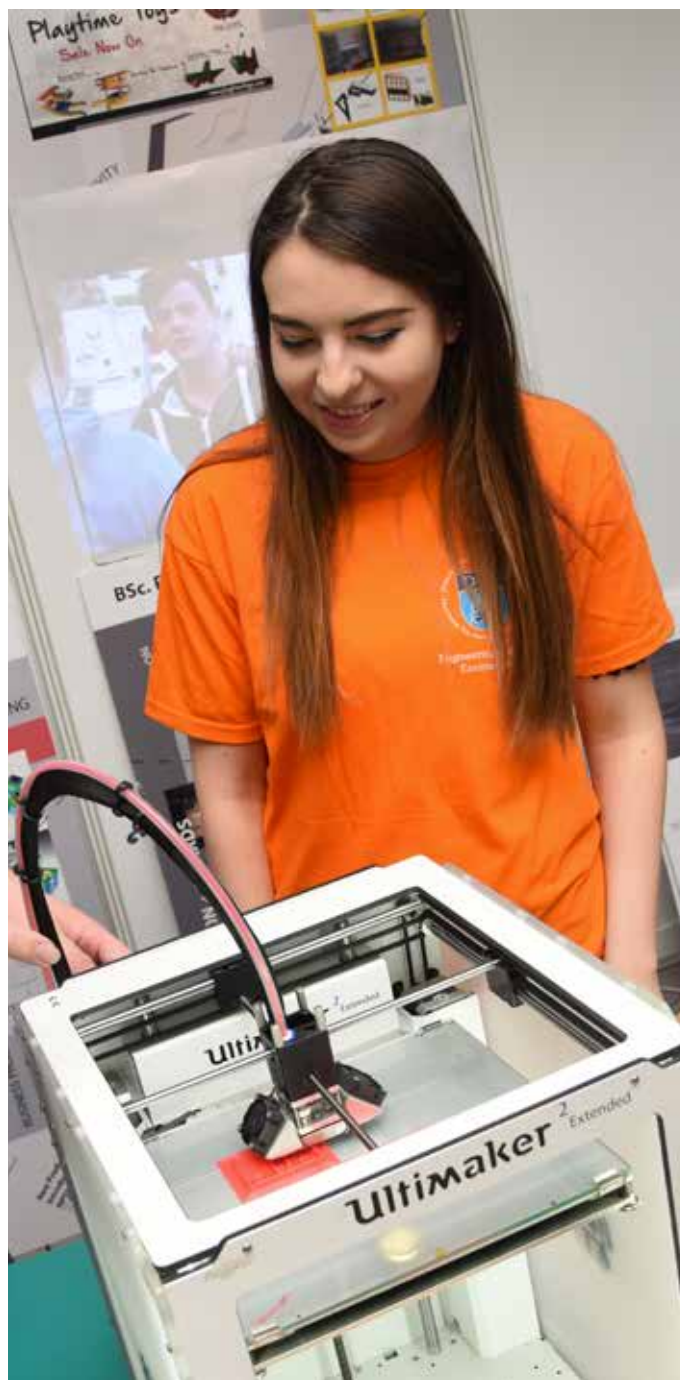
What will I Study?

During the course of the programme you will study how the creative aspect of design as developed in Creative Design Fundamentals and various Design Innovation Studios modules integrate with the manufacturing potential of your design supported by modules such as Manufacture and Materials through to analysis of your design as taught in Design Analysis.

The technologies involved in bringing a concept to market will be outlined and planned in modules such as Economics, Marketing and Legal Aspects of Product Design.

You will be supported by modules such as New Product Introduction and Business Process Management when you enter both National and International competitions.

Your final year project will allow you to bring all these various areas together in order to propose, conceptualise, design and develop your ideas to a professional and industrial standard.



Further Information

www.dit.ie/mechanicalanddesignengineering

School of Mechanical & Design Engineering



01 402 3841 (Dr. Colm O'Kane, Programme Leader)



01 402 3823 (Robert Simpson, Assistant Head of School)



01 402 3626 (Maeve Coyne, Secretary)



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robert.simpson@dit.ie

COURSE CODE:

DT001

COURSE LENGTH:

4 YEARS

APPROX:

40 PLACES

LOCATION:

**AUNGIER ST
BOLTON ST
GRANGEGORMAN**

POINTS 2017

440

Module Listing

Year One

Science ● Creative Design Fundamentals ● Design History ●
Economics ● Marketing ● Communications ● Manufacture
& Materials ● Computer Applications ● CAD & Drawing ●
Economics ● Mathematics

Year Two

Management and Strategy ● Applied Creativity in Design ●
Design Innovation ● Virtual Modelling ● Modelmaking and
Rendering ● Mathematics ● Applied Innovation in Design ●
Science ● Product Visualisation ● Rapid Product Development
● Design Tools and Technology ● Marketing Research

Year Three

Enterprise Development / Business Process Management ●
Creative Design Studio ● Design and Manufacturing Methods
● Design for Tooling and Manufacture ● Design Theory ● New
Product Introduction ● Product Development Studio ● Legal
Aspects of Product Design ● Design Analysis Electro Technology

Year Four

Integrated Design ● Time Compression Technologies ● Applied
Design Medical/Automotive ● Design Innovation Research
● Design Innovation Conceptualisation ● Final Year Project ●
Marketing Case Studies ● Professional Practice

What our Students say!

- The trilogy of knowledge this course offers including Engineering, Business and Creative Design is fundamental to producing an exceptional product designer and even an entrepreneur.
- After graduating from Product Design there were many job possibilities available to me. The area that I chose to look for work in was medical devices. The Product Design course enabled me to explore this line of work because as part of the curriculum there was a semester of classes that introduced the medical device industry and much of what I learnt is used daily in my job. Most of the work I do involves working closely with small groups of people, leading brainstorm sessions, using and developing new technologies. These are all skills that I learnt from Product Design at DIT.

You might also be INTERESTED IN:

- ♦ Manufacturing & Design Engineering - DT023 **Pg 146**
- ♦ Design - Visual Communication - DT545 **Pg 22**
- ♦ Interior Design - DT544 **Pg 38**

What are my... Career Opportunities?

Product Design offers a career which can be utilized in a broad array of industries. Every product moves through a development cycle, which some professions will have contact with as the design develops but the product designer oversees the complete development cycle.

From the electronic industry to the automotive, medical and aero industries, the product designer contributes his skill and expertise in helping to develop and drive these areas.

Those who qualify with a BSc(Product Design) Degree are eligible for full membership of the Institution of Engineering Designers.

**For more career development options please see inside front cover*

What other options do I have after completion?

Students who have reached the appropriate honours standard may have access to a range of Masters degrees in DIT and elsewhere in Higher Education.

Are there study abroad options?

An International exchange programme exists with Hong Kong Polytechnic University, San Francisco State University in the USA and Canberra University in Australia. Along with these, there are many exchange opportunities with Universities throughout the European Union through the ERASMUS program.

EACNAMAÍOCHT RÉADMHAOINE

PROPERTY ECONOMICS

BSc Leibhéal 8 / Level 8

LEAVING CERT ENTRY REQUIREMENTS:

| Minimum N° of | | Minimum Grade in | |
|---------------|---------|------------------|------------------|
| Subjects | Honours | Maths | English or Irish |
| 6 | 2H5's | 06/H7 | 06/H7 |

QQI LEVEL 5 ENTRY REQUIREMENTS:

| ONE OF THE FOLLOWING AWARDS: | FIVE DISTINCTIONS |
|--|-------------------|
| BBSAX/5M2468 Business Admin BBSXX/5M2102 Business Studies | |

What is... Property Economics?

The Property Economics course educates students for professional careers in commercial property investment and development i.e. retail (shopping), office and industrial. Graduates can work in valuation surveying, real estate, property investment and management, auctioneering and estate agency in Ireland and abroad. It is also suitable for those interested in property development, town planning and the general investment market.

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DAY **DIT AUNGIER ST.**
9AM-2PM 01.12-02.12

Learning Outcomes:

What will I Study?

The programme seeks to progressively develop and integrate the various core and complementary disciplines required for the professional education of a property economist or a property asset manager.

It particularly emphasises Property Valuations, which together with the other core modules of Economics, Planning and Investment Analysis gives the Property Economics programme its orientation. For the Property Asset Management & Valuation option in final year, the emphasis is changed somewhat to concentrate on property Asset Management, Housing Studies and Valuation.

Property Valuation is a skill based on the application of economic and financial evaluation techniques to land and buildings. This skill requires a broad knowledge of a wide range of subjects, and an understanding of the economic, physical and legal framework within which buildings are used and the property market operates. Thus, the programme is generalist in the sense that its scope is wide but specific in that it seeks to apply knowledge to a particular sector of the economy. The educational approach seeks to develop in the student the ability to evaluate and integrate information from diverse sources to arrive at a conclusion. This is a distinctive characteristic skill of the valuer.

In addition, the possession of wider business management and financial analysis skills is becoming an increasingly important requirement for property valuers and property asset managers who wish to develop their careers in the changing circumstances of private practice, in commercial organisations or in the public service. Consequently, this need is reflected in curriculum content and in the detailed study of the workings of the wider investment markets of which the property market forms part.

Alternatively with the Property Asset Management & Valuation option in final year, the focus is on property as an asset and how it can be used to benefit its owners, users and the general public.

Further Information

www.dit.ie/surveyingconstructionmanagement

School of Surveying & Construction Management



01 402 3675 (Mr Martin Hanratty)



martin.hanratty@dit.ie

Module Listing

Year One

Investment & Development Valuations • Professional Development / Integrated Project • Economics • Residential Construction Studies and Building Pathology • Quantitative Methods/Analysis • Financial Management • Law • Foundation German (option)

Year Two

Investment & Development Appraisal Valuations • Sustainable Development & Tort Law • Economics for Property • Commercial Building Studies • Quantitative Analysis for Property • Property Marketing • Land & Conveyancing Law • Planning • Architecture & Urban Societies • Applied Building • German for Engineering & the Built Environment (option)

Year Three

Statutory Valuations • Integrating Real Estate Investment Strategies • Planning • Urban Economics • Research Methods & Proposal Writing • Taxation of Property Transactions • German for Engineering and the Built Environment (option) • Work Placement

Year Four

Appraised Statutory Valuations • Planning • Urban Economics • Property Finance & Development • Investment Portfolio Analysis • Real Estate Challenge • Advanced Statutory Investment & Valuations • Thesis

In the fourth year each Investment & Valuation Surveying student prepares a major dissertation as part of the final examination.

Those choosing the Property Asset Management option take modules in • Housing • Project Management • Shopping Centre Management • Asset Management and an Individual Case Study

What are my... Career Opportunities?

Graduates are principally employed by property consultancy firms, such as Lisney, Savills, Jones Lang Lasalle, DTZ Sherry Fitzgerald and CBRE. They also find work with auctioneers & estate agencies, property development companies, local authorities and major property owning companies, both public and private such as the ESB, the Bank of Ireland, HSE and Irish Life in the area of property and asset management.

The skills you will obtain on the course are not just valued in the property and construction industries, but can be used to establish careers in business, accountancy, banking, law, marketing, investments etc. as well as their target industries.

The BSc (Hons) degree is accredited by the Society of Chartered Surveyors in Ireland (SCSI) and also by the Royal Institution of Chartered Surveyors (RICS). This accreditation is recognised internationally and means that graduates of the course can and do obtain employment throughout the world.

*For more career development options please see inside front cover

What other options do I have after completion?

Students who have reached the appropriate honours standard may have access to a range of Masters degrees in DIT and elsewhere in Higher Education.

Are there study abroad options?

Students have the opportunity to study abroad for a semester on Erasmus Exchange in Hanze University in Groningen, Holland and also to participate in the European Challenge Competition in Berlin.

From September 2016, students will have the option to:

- Complete a Work Placement module in Year 3
- Qualify with a BSc in Property Economics (with German)

As part of the German language option, students may undertake their Work Placement in Germany.

You might also be INTERESTED IN:

- ♦ Auctioneering, Valuation & Estate Agency - DT104 **Pg 168**
- ♦ Planning & Environmental Management - DT106 **Pg 154**
- ♦ Quantity Surveying & Construction Economics - DT111 **Pg 160**

SUIRBHÉIREACHT CHAINNÍOCHTA & EACNAMAÍOCHT FOIRGNÍOCHTA QUANTITY SURVEYING & CONSTRUCTION ECONOMICS

BSc Leibhéal 8 / Level 8

LEAVING CERT ENTRY REQUIREMENTS:

| Minimum N° of | | Minimum Grade in | |
|---------------|---------|------------------|------------------|
| Subjects | Honours | Maths | English or Irish |
| 6 | 2H5's | 06/H7 | 06/H7 |

QQI LEVEL 5 ENTRY REQUIREMENTS:

ONE OF THE FOLLOWING AWARDS:
CCONT /5M5010 Construction Technology

FIVE DISTINCTIONS

What is... Quantity Surveying & Construction Economics?

This programme prepares students for a career in the construction industry. It is designed for those who wish to work as quantity surveyors and economic advisors/managers in the construction industry or as building development co-ordinators and managers.

Quantity Surveyors are engaged in private practice as partners or employees in professional firms. They may also work for building/civil engineering contractors or sub-contractors. In addition there are Quantity Surveyors employed in government departments, semi-state bodies and public authorities.

Learning Outcomes:

What will I Study?

Students will gain a detailed knowledge and understanding of the framework within which the construction industry operates, namely the technical, economic, legal, financial, managerial and administrative framework. They will also have gained a detailed knowledge and understanding of the specialised areas of cost and value management, tender documentation, procurement, construction administration and management. They will have gained the ability to manage their own learning, in order that they may act in their employment in variable and unfamiliar contexts, and to do so with a clear understanding of the professional and ethical issues involved.



Further Information

www.dit.ie/surveyingconstructionmanagement

School of Surveying & Construction Management



01 402 3873 (Dr Alan Hore, Head of Quantity Surveying)
01 402 3997



alan.hore@dit.ie

Module Listing

Year One

Construction Studies • Measurement & Costing • Financial Management • Economics • Construction Law • Information Technology • Quantitative Methods • Professional Development/Integrated Project • Foundation German (Option)

Year Two

Construction Studies • Measurement & Costing • Financial Management • Construction Law • Construction Management • Programming & Planning • Pre-contract Practice • Post contract Practice • German (Optional) • German for Engineering & the Built Environment (Optional)

Year Three

Construction Studies • Construction Economics • Financial Management • Construction Law • Measurement & Costing • Construction Administration & Management • German for Engineering & Built Environment (Optional) • Work Placement

Year Four

Commercial Management • Construction Economics • Measurement & Costing • Development Project • Strategic Management & Ethics (Optional) • Conflict Avoidance & Dispute Resolution (Optional) • Project Management (Optional) • Corporate Property Asset Management (Optional) • Dissertation or Company Project

What our Students say!

- "This course hosts such a wide range of opportunities. It provides a broad knowledge of the construction industry and the economic world around us. I am currently working for KSN Quantity Surveyors and this course prepared and provided me with the skills required by the industry. Above all, the small class sizes and approachable lecturers in DIT are a massive advantage to the students."

What are my... Career Opportunities?

Job titles may include quantity surveyor, construction cost consultant or commercial manager. While the name may vary, the job is the same.

Graduates normally enter the job market as a Graduate Quantity Surveyors who can work for general contractors, subcontractors, private practice consultants, local authorities or any employer that manages costs that are related to new building, civil engineering project, mechanical and electrical installations, oil or gas industry or refurbishment projects.

The common theme is that they seek to minimise costs while creating quality projects. Graduates of this programme are very versatile with transferrable skills who can enter into a variety of complimentary careers, such as, loss adjusting, legal profession, project management and property management to name a few.

*For more career development options please see inside front cover

What other options do I have after completion?

Students who have reached the appropriate honours standard may have access to a wide range of Masters Degrees in DIT and elsewhere in Higher Education.

Are there study abroad options?

There is an option to study German in years 1-3 and be placed in a German speaking company in semester 2 of year 3. There is also an option to partake in an Erasmus exchange programme.

You might also be INTERESTED IN:

- Auctioneering, Valuation & Estate Agency - DT104 **Pg 166**
- Planning & Environmental Management - DT106 **Pg 154**
- Property Economics - DT110 **Pg 158**

INNEALTÓIREACHT STRUCHTÚR STRUCTURAL ENGINEERING

BE Leibhéal 8 / Level 8

ENTRY REQUIREMENTS:

Successful completion of DT066 - Engineering (General Entry) Year 1

What is...Structural Engineering?

Structural engineers are involved in the design of buildings, bridges, factories, power stations, communication towers, dams, stadiums, oil and gas rigs and wind turbines.

Learning Outcomes:

What will I Study?

Students on this programme will study structural analysis, mechanics of materials, design of steel and concrete, geotechnical engineering, environmental engineering, concrete and material technology and design projects.

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DAY DIT AUNGIER ST.
9^{AM}-2^{PM} 01.12-02.12



Further Information

www.dit.ie/civilengineering

School of Civil Engineering



01 402 4039 (Dr Niall Holmes, Assistant Head of School)



niall.holmes@dit.ie

COURSE CODE:

DT024

COURSE LENGTH:

3 YEARS

APPROX:

35 PLACES

LOCATION:

BOLTON ST

POINTS 2017

(SEE DT066)

Module Listing

Years Two to Four

Engineering Mathematics • Professional Development •
Fluid Mechanics • Engineering Analysis • Structural Analysis
• Mechanics of Materials • Concrete Technology • Surveying
• Design of Steel and Concrete • Geotechnical Engineering •
Design Project • Construction Management and Economics •
Highway Engineering • Scheme Design • Final Year Project

What are my... Career Opportunities?

Structural engineers are typically employed in consulting engineering design offices, on-site with contractors and local authorities. Due to their extensive problem solving skills, structural engineers are highly sought after in business and financial institutions.

*For more career development options please see inside front cover

What other options do I have after completion?

Students who have reached the appropriate honours standard may have access to a wide range of Masters Degrees in DIT and elsewhere in Higher Education. The School of Civil and Structural Engineering in DIT offers Masters (Level 9) and PhD research degrees.

Are there study abroad options?

There are Erasmus opportunities available to live and study abroad.



You might also be INTERESTED IN:

- Civil Engineering - DT027 **Pg 134**
- Civil Engineering - DT004 **Pg 176**
- Building Services Engineering (HVACR) - DT026 **Pg 132**
- Building Services Engineering (HVACR) - DT005 **Pg 174**

OIBRÍOCHTAÍ & TEICNEOLAÍOCHT IOMPAIR

TRANSPORT OPERATIONS & TECHNOLOGY

BSc Leibhéal 8 / Level 8

LEAVING CERT ENTRY REQUIREMENTS:

| Minimum N° of | | Minimum Grade in | |
|---------------|---------|------------------|------------------|
| Subjects | Honours | Maths | English or Irish |
| 6 | 2H5's | 04/H7 | 06/H7 |

QQI LEVEL 5 ENTRY REQUIREMENTS:

A QQI Level 5 entry route to this programme is available. Please visit www.dit.ie/studyatdit/undergraduate/howtoapply

What is...Transport Operations & Technology?

Transport is a service industry involving the efficient movement of people and goods. It is of vital importance to the national economy. This honours degree programme, leading to a Bachelor of Science (Hons) Degree in Transport Technology, is interdisciplinary and embraces the fundamental principles and applications of technology, business and the management in order to provide a solid foundation for the management and operation of transport systems.

The main objective of the course is to produce a graduate capable of solving problems and making informed decisions in a modern technologically sophisticated transport industry. There is work placement in year 3 (whole of semester 2) which enables the student to gain real world experience in the transport industry and built relationships with potential employers. A graduate will require: A detailed knowledge of the transport industry; A thorough understanding of the technology of transport; The skills and knowledge required to manage people and other resources; Communication, problem-solving and decision-making skills.

Learning Outcomes:

What will I Study?

On successful completion of the programme the graduate will:

- Possess a knowledge and understanding of concepts and principles specific to the study of transport systems as they relate to road, rail, air and marine transport
- Have knowledge and understanding of the technical aspects of transport vehicles, with due regard to their efficient operation and maintenance
- Have a knowledge and understanding of business and management concepts, and principles, as they apply to the operation of transport systems
- Have a knowledge and understanding of the practical operation and management of transport systems

What our Students say!

- "The four years spent studying DT028 Transport Technology and Operations have been the most exciting, sometimes challenging but very well worth it. The students have an opportunity to gain insights into the transport industry from academic and professional perspectives, where the lecturers share their experiences from the road, sea, rail and aviation industries.

The work placement stage in the third year allowed us to step into the professional world and gain experience in the chosen industry. Many dedicated students have returned to the companies after the graduation and are currently working there. The course will prepare anyone willing to work in the transport industry to the best professional standard, allowing students to effectively engage in the transport operations at the early days of their professional careers.

The course has presented me with an opportunity to get involved in the area I have been always interested in, and I am currently working in an International Department coordinating road freight movements from and to Ireland, the UK, Europe and the rest of the World. The knowledge of national and international legislation, accounts, road transport, deep sea, aviation industry regulations and all other relevant topics covered during the course are certainly helping with day-to-day operations making the job enjoyable, manageable and relatively easy."

- 'I highly recommend DT028, Transport Operations and Technology to anyone considering it on their CAO. After 4 years we became knowledgeable in not only road, rail, sea and air, but many aspects that are essential in modern industry, from IT to communications and finance. The course had a perfect mix of lectures, field trips, assignments and work placement. We in the class of 2012, have all made friends for life and are in successful and varied careers in the transport industry across the globe'

Further Information

www.dit.ie/engineering

School of Transport Engineering, Environment & Planning



01 402 4068 (Roisin Murray Head of Transport / Asst. Head, School of Transport Engineering and Environment Planning)



roisin.murray@dit.ie

COURSE CODE:

DT028

COURSE LENGTH:

4 YEARS

APPROX:

40 PLACES

LOCATION:

BOLTON ST

POINTS 2017

261

Module Listing

Year One

Semester 1: Introduction to Transport • Road Vehicle Technology (Intro) • Mathematics & Science for Technology • Legal Studies • Communications • Information Technology

Semester 2: Road Transport Operations • Airport Operations • Marine Operations & Technology • Vehicle Electrical Systems • Mathematics & Science for Technology • Transport Economics • Management (Intro)

Year Two

Semester 1: Railway Operations • Engine Technology • Transport Economics • Management - Accounting • Legal Studies • Information Technology

Semester 2: Road Transport Operations (Legislation) • Materials Handling • Road Vehicle Technology • Railway Technology • Management - Accounting • Communications • Quantitative Methods

Year Three

Semester 1: Transport of Dangerous Goods • Airline Operations • Aircraft Technology • Communications • Information Technology • Road Vehicle Technology

Semester 2: Work Placement

Year Four

Semester 1: Road Transport Operations (Fleet Management) • Management (Financial Management) • Transport Marketing • Engine Technology (Fuels & Combustion) • Aircraft Technology

Semester 2: Road Transport Operations • Management (Strategic Management) • Transport Maintenance & Workshop Management • Vehicle & Engine Performance Testing • Dissertation

What are my... Career Opportunities?

Career prospects are excellent. The transport sector is one of the key sectors in Ireland and abroad. It is a growing industry and offers a vast range of career opportunities. There are many career opportunities for graduates in all branches of transport, in both the private and public sectors. On completion of the course, graduates will be suitably qualified for a career in the transport industry where they will be able to apply and use the knowledge and skills gained on the course.

Typical positions following completion of the programme include: Transport Fleet Coordinator, Transport Planner, Freight Forwarding, Transport Maintenance Coordinator, Transport Scheduler and others. This is an internationally recognized programme so graduates have the opportunity to work abroad throughout the world.

*For more career development options please see inside front cover

What other options do I have after completion?

Students who have reached the appropriate honours standard may have the opportunity to pursue further study and progress to a level 9 programme in DIT or elsewhere in Higher Education.

Are there study abroad options?

Yes, graduates can progress onto other study abroad and this honours degree programme is recognised internationally.

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You might also be INTERESTED IN:

- ♦ Logistics & Supply Chain Management - DT358 **Pg 112**

CEANTÁLAÍOCHT, LUACHÁIL & GNÍOMHAIREACHT EASTÁIT AUCTIONEERING, VALUATION & ESTATE AGENCY

BSc Leibhéal 7 / Level 7

LEAVING CERT ENTRY REQUIREMENTS:

| Minimum N° of | | Minimum Grade in | |
|---------------|---------|------------------|------------------|
| Subjects | Honours | Maths | English or Irish |
| 5 | | 06/H7 | 06/H7 |

QQI LEVEL 5 ENTRY REQUIREMENTS:

A QQI Level 5 entry route to this programme is available. Please visit www.dit.ie/studyatdit/undergraduate/howtoapply

What is... Auctioneering, Valuation & Estate Agency?

This programme is suitable for those wishing to prepare for a career as an estate agent, property manager or property valuer and aims to give an understanding of the legal, economic and physical framework within which the property market functions.

To provide property services in the areas of sales, letting or property management, it is a legal requirement to obtain a licence from the Property Services Regulatory Authority (PSRA). Graduates of this programme are eligible to apply for this licence.

Students may leave with a graded Certificate in Auctioneering, Valuation and Estate Agency upon successfully completing year two of the programme (having gained 120 ECTS credits), allowing them to apply for their licence from the PSRA.

Learning Outcomes:

What will I Study?

A range of modules are taught to provide students with an understanding of selling, leasing, valuing and managing property. The programme also provides students with the analytical skills to understand financial areas that impact upon the job of an estate agent, property valuer and property manager.

The programme develops your skills in:

- interpersonal relationships
- logical thinking
- teamwork
- presentations and communication
- numeracy and computing
- managing tight deadlines
- self-motivation



Further Information

www.dit.ie/surveyingconstructionmanagement

School of Surveying & Construction Management



01 402 3675 (Mr Martin Hanratty - Head of Department)



01 402 3741 (Declan McKeown - Programme Chair)



martin.hanratty@dit.ie



declan.mckeown@dit.ie

COURSE CODE:

DT104

COURSE LENGTH:

3 YEARS

APPROX:

45 PLACES

LOCATION:

BOLTON ST

POINTS 2017

279

Module Listing

Year One

Valuations • Economics • Finance/Accounting • Law
• Construction Drawing & Cartography • Marketing •
Quantitative Methods /Information Technology (Financial &
Statistical Mathematics)

Year Two

Valuations • Property Management & Taxation • Marketing
& Taxation • Financial Management • Law • Construction
Studies • Planning • Quantitative Methods

Year Three

Valuations • Marketing & European Investment Markets •
Land Use Economics • Building • Housing • Feasibility Study
• Architecture & Urban Society

What are my... Career Opportunities?

Estate Agents and auctioneers are involved in the sale, letting, management and valuation of residential and commercial buildings. The programme provides students with the academic knowledge and vocational skills to function effectively in the built environment workplace.

Generally, graduates work in the larger firms or in small partnerships. The programme is very suited to those with an entrepreneurial spirit and also provides the skills to enable graduates, after gaining appropriate work experience, to open their own business.

The career is suitable for those who have an interest in people and the built environment. Other desirable traits are an outgoing nature and the ability to get on with people.

**For more career development options please see inside front cover*

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What other options do I have after completion?

Students who have reached the appropriate level at the end of their final year on the programme and who meet certain prerequisites have the opportunity to transfer to the third year of the Property Economics honours degree programme (DT110) or the third or final year of the BSc Property Studies Part Time honours degree programme (DT159).

Are there study abroad options?

Students have the opportunity in the third year of the programme to apply for a position on the ten-day International Real Estate Challenge which is a Third Level Institute Project, based in Berlin.

You might also be INTERESTED IN:

- ♦ Property Economics - DT110 **Pg 158**
- ♦ Planning & Environmental Management - DT106 **Pg 154**
- ♦ Quantity Surveying & Constructin Economics - DT111 **Pg 160**

- ♦ Geographic Science - DT112 **Pg 144**

INNEALTÓIREACHT UATHOIBRITHE

AUTOMATION ENGINEERING

BEngTech Leibhéal 7 / Level 7

LEAVING CERT ENTRY REQUIREMENTS:

| Minimum N° of | | Minimum Grade in | |
|---------------|---------|------------------|------------------|
| Subjects | Honours | Maths | English or Irish |
| 5 | | 06/H7 | 06/H7 |

QQI LEVEL 5 ENTRY REQUIREMENTS:

A QQI Level 5 entry route to this programme is available. Please visit www.dit.ie/studyatdit/undergraduate/howtoapply

What is... Automation Engineering?

Automation Engineering involves the design, development and implementation of sensor and robotic systems for applications across a wide range of technological sectors. Modern engineering systems employ a broad spectrum of technologies, which when integrated provide for improved efficiency, quality and reliability. The combination of Mechanical, Electrical and Electronic Engineering with Computer Technology, namely, Mechatronics, is core to this endeavour. This integrated approach is becoming increasingly important in modern technological environments. This programme is delivered from a multi-disciplinary perspective, thus equipping graduates for a diverse range of modern technological roles.

OPEN 2017
DAY DIT AUNGIER ST.
9AM-2PM 01.12-02.12

Learning Outcomes:

What will I Study?

Students will develop a range of skills in the design and implementation of automation solutions; from 3D Computer Aided Design (CAD, Solid-Modelling), sensor and instrumentation selection, programming of robotics to the management of the resulting systems. The study programme is designed to provide the student with the skills necessary to perform as a technologist in a range of industries.

The programme appropriately combines academic class-work and practical "hands-on" work in DIT laboratories and workshops. Work placement in a suitable industrial environment is undertaken in Semester 2 of Year 2.

On completion of the programme, students will be able to:

- ♦ Apply a body of knowledge and a range of skills to the integration of Mechanical, Manufacturing, Electrical and Electronics systems with Software Engineering and Computer Technology at a level appropriate to modern automation and manufacturing systems.
- ♦ Demonstrate a level of competency in design and construction of electromechanical systems operating under programmed control.
- ♦ Explain and assess the functionality, operation and integration of a variety of electro-mechanical hybrid devices, equipment and systems.
- ♦ Use tools, machines and materials in a safe manner, identify hazards and evaluate risks.
- ♦ Use a range of software based engineering tools and applications (Solid-Modelling software), as well as word processing, spreadsheet, database and presentation software.
- ♦ Locate, evaluate and utilize relevant information from technical manuals, drawings databases and other sources.
- ♦ Demonstrate relevant transferable and interpersonal skills, such as, communications, teamwork, project management and self-management skills.
- ♦ Distinguish between and be able to implement the management functions and the supervisory roles within manufacturing organisations.

Further Information

www.dit.ie/mechanicalanddesignengineering

School of Mechanical & Design Engineering



01 402 3823 (Robert Simpson)



robert.simpson@dit.ie



01 402 3659 (School Administrator)



Ireland's EU Structural Funds
Programmes 2007 - 2013

Co-funded by the Irish Government
and the European Union

COURSE CODE:

DT003

COURSE LENGTH:

3 YEARS

APPROX:

32 PLACES

LOCATION:

BOLTON ST

POINTS 2017

290

Module Listing

Year One

Mathematics • Mechanical Systems • Electrical Systems • Automation Technology • Communications Studies • CAD & IT • Electronic Systems • Manufacturing Systems

Year Two

Mathematics • Mechatronics • Automation Systems • Manufacturing Systems • Communications Studies • 3D CAD & IT • Team Project

Work Experience in a High Tech Manufacturing Environment

Year Three

Mathematics • Manufacturing Management • Mechatronics • Systems Integration • CAD and Information Technology • Project • Industrial Automation • Business & Management Project - The final stage of the programme includes a major practical project which runs throughout the academic year.

Are there study abroad options?

Yes. There are Erasmus agreements with many third level institutes across Europe where 1 and 2 semester student exchanges can be facilitated.

What are my... Career Opportunities?

Excellent! The qualification is appropriate to those wishing to take up employment in high tech. sectors as high calibre technologists. Typical industries include Medical Device, Pharmaceutical and Electronics Manufacturing. Many graduates are now finding employment with high technology companies across Europe and beyond.

*For more career development options please see inside front cover

What other options do I have after completion?

Students who reach the appropriate level in final examinations and meet certain subject prerequisites may progress to Level 8 Honours Degree programmes (typically enter at Year 3 of the 4 year programmes at DIT or elsewhere). Those who graduate with this Bachelor of Engineering Technology Degree (BEng Tech) degree qualify for the Associateship membership (AMIEI) of EI.

What our Students say!

- David White: "I would highly recommend anyone interested in engineering to do Automation Engineering. The first year of the programme gives you a general overview of the different sciences and technologies for study in Automation and Robotics. The Maths and science classes are delivered to small groups of students so the lecturers can give additional help as you need it. I did my work placement with PAK Automation/ A.C.I. (Automated Components Ireland), this was a great opportunity to get my hands dirty and apply the knowledge gained in college, wonderful experience. The automation equipment in the laboratories is industry-standard which puts us at a major advantage when we go out into the workplace and I am excited by my employment prospects both in Ireland and abroad".
- Pedro DaSilva: "I chose Automation Engineering as I have always been interested in automation technology and robotics. This brought me into a different environment, a building with active and busy people, laboratories and workshops where components and systems move automatically. Staff are very helpful and approachable and the programme includes interesting classes in science, technology, PLC programming and Computer Aided Design. My work placement in 2nd year brought me to the Bioengineering Department in Trinity College Dublin. Being part of a work environment was great and my work included testing experimental projects, assembling of electrical systems, working in clean room environment, and brainstorming design sessions. My final year project involved the design and manufacture of a system for the packaging of medical devices. This programme opens up employment opportunities across a wide range of industries and I am looking forward to embarking on this journey".

You might also be INTERESTED IN:

- Manufacturing & Design Engineering - DT023 **Pg 146**
- Electrical & Control Engineering - DT009 **Pg 178**
- Electrical Service Engineering - DT010 **Pg 180**
- Engineering System Maintenance - DT002 **Pg 186**
- Electronics & Communications Engineering - DT008 **Pg 182**
- Engineering (General Entry) - DT097 **Pg 184**

BAINISTÍOCHT & TEICNEOLAÍOCHT GHLUAISTEÁN

AUTOMOTIVE MANAGEMENT & TECHNOLOGY

BEngTech Leibhéal 7 / Level 7

LEAVING CERT ENTRY REQUIREMENTS:

| Minimum N° of | | Minimum Grade in | |
|---------------|---------|------------------|------------------|
| Subjects | Honours | Maths | English or Irish |
| 5 | | 06/H7 | 06/H7 |

QQI LEVEL 5 ENTRY REQUIREMENTS:

A QQI Level 5 entry route to this programme is available. Please visit www.dit.ie/studyatdit/undergraduate/howtoapply

What is... Automotive Management & Technology?

The motor industry is an exciting and dynamic place to work. This programme is tailored to prepare graduates to perform in senior technical, administrative, supervisory and management positions. It will equip them with the necessary mix of academic and practical skills, giving them an inter-disciplinary approach to carrying out tasks. An important part of the programme is the final year Automotive Engineering Technology Project.

What our students say!

- Graduate 2009 - Commercial Vehicle Sales Administrator: "DT007 has provided all the fundamentals necessary to jump start my career in the automotive industry and has made working in such a complex and dynamic industry an enjoyable and rewarding experience."
- Graduate 2010: "DT007 was a very interesting and challenging programme, upon completion of DT007, I progressed onto a level 8 programme DT028."
- Third Year Student: "DT007 is a very interesting and challenging programme, I particularly enjoyed the final year Automotive Engineering Technology project as this brought all aspects of the programme together."

Learning Outcomes:

What will I Study?

Automotive management and technology prepares learners for careers in the motor industry, it is a combination of management, business and technology studies that are ideally suited to the wide range of technical administrative, supervisory and management roles available in this huge and dynamic industry. On successful completion of the programme the graduate will be able to demonstrate knowledge and understanding of:

- The roles, responsibilities and requirements of different activities across the multifunctional areas of an automotive business
- The characteristics of the management role; the management and development of people within organisations; organisational behaviour; and human resource management
- The use of relevant communication techniques for application in an automotive business
- The uses of accounting for managerial and reporting applications
- The development, management and use of information systems and technologies and their impact on automotive operations
- The legislative and regulatory framework in which the automotive industry operates
- The maintenance and servicing techniques required for modern vehicles
- The principles and operation of the mechanical systems found in motor vehicles
- The principles and operation of electrical/electronic systems found in motor vehicles
- Automotive diagnostic and testing procedures
- The health and safety aspects of working in a vehicle servicing and repair environment
- Engineering science principles and their application to motor vehicle technology

Further Information

www.dit.ie/engineering

School of Transport Engineering, Environment & Planning



01 402 4068 (Roisin Murray Head of Transport / Asst. Head, School of Transport Engineering and Environment Planning)



roisin.murray@dit.ie

Module Listing

Year One

Semester 1: Automotive Technology • Management Studies • Legal Studies • Communications • Information Technology • Automotive Workshop Practice

Semester 2: Marketing • Automotive Electrical Systems • Vehicle Body Repair Technology • Management (Supervisory) • Maths • Automotive Science

Year Two

Semester 1: Engine Technology • Maths • Automotive Service & Repair Operations • Information Technology (AutoCad) • Legal Studies • Automotive Workshop Practice

Semester 2: Automotive Technology • Automotive Science Laboratory • Automotive Bodyshop Management • Automotive Science • Communications • Automotive Sales Operations

Year Three

Semester 1: Automotive Technology • Management (HRM) • Financial Maths and Statistics • Communications • Automotive Workshop Practice • Automotive Engineering Technology Project

Semester 2: Automotive Science • Automotive Electrical Systems • Automotive Science Laboratory • Information Technology • Automotive Design • Automotive Engineering Technology Project

What are my... Career Opportunities?

Graduates of the programme have a wide range of career options. Employment prospects are good as there is a continuously strong demand for suitably qualified graduates to fill the many technical, administrative, supervisory and management positions available in all sectors of the motor industry.

*For more career development options please see inside front cover

What other options do I have after completion?

Students who have reached the appropriate level in final examinations and meet certain subject prerequisites may have the opportunity to access honours degree programmes at the Year 3 or 4 level in DIT and elsewhere in Higher Education.

Are there study abroad options?

The Department has links with a number of Erasmus partner institutions, currently in France, Germany and Poland. These allow students the opportunity to undertake an Erasmus exchange abroad. The Department is currently establishing links and building relationships with a number of partner institutions in the United States.



You might also be INTERESTED IN:

- Transport Operations & Technology - DT028 **Pg 164**
- Mechanical Engineering - DT006 **Pg 188**
- Engineering (General Entry) - DT097 **Pg 184**

TEICNEOLAÍOCHT EITLÍOCHTA AVIATION TECHNOLOGY

BEngTech Leibhéal 7 / Level 7

LEAVING CERT ENTRY REQUIREMENTS:

| Minimum N° of | | Minimum Grade in | |
|---------------|---------|------------------|------------------|
| Subjects | Honours | Maths | English or Irish |
| 5 | | 06/H7 | 06/H7 |

QQI LEVEL 5 ENTRY REQUIREMENTS:

A QQI Level 5 entry route to this programme is available. Please visit www.dit.ie/studyatdit/undergraduate/howtoapply

What is... Aviation Technology?

The Bachelor of Engineering Technology in Aviation Technology prepares learners for careers in the aviation industry. The programme is aimed at meeting the employment needs of the aviation sector by providing graduates with a degree level qualification. The programme offers an interdisciplinary approach in which the students obtain a mix of technological, business and management skills specifically related to the aviation industry.

Learning Outcomes:

What will I Study?

Students learn to develop the following skills:

- Develop individual skills by enhancing the conceptual and analytical abilities of the graduate for application within the context of the civil aviation industry framework.
- Develop an understanding of the importance of Training and Education within the Aviation Industry by fostering an ethos within the graduate to be self-motivating and pursue personal development and lifelong learning skills.
- Develop an intricate technical knowledge and understanding of the Principles of Flight.
- Develop personal and interpersonal skills to enable managing oneself, and others within the industry.
- Develop competence in information systems integral to aviation/ aircraft operations, management and maintenance.
- Provide the graduate with an understanding of the complex inter-relationships existing within the various sub-sectors of the Aviation Industry (Legislative design, Manufacturing, Commercial, Operations and Maintenance)



Further Information

www.dit.ie/engineering

School of Transport Engineering, Environment and Planning



01 402 2962 (Dr Eoin Plant)
01 402 3991



Eoin.Plant@dit.ie

Module Listing

Year One

Semester 1: Maths for Technology • Electricity & Electronics • Materials Hardware & Maintenance Practices • Aerodynamics • Structures & Systems • Aircraft Engines • Aeronautical Workshop Practice

Semester 2: Electricity and Electronics • Aerodynamics • Structures & Systems • Engineering Mechanics • Avionics • Thermo-fluids • Electricity & Electronics Lab

Year Two

Semester 1: Electricity & Electronics • Information Technology • Electricity & Electronics Lab • Avionics • Aircraft Engines • Aviation Legislation

Semester 2: Human Factors • Aerodynamics • Structures & Systems • Aeronautical Workshop Practice • Communications • Employment Law & Employee Relations • Health & Safety

Year Three

Semester 1: Financial Management & Accounting • Avionics • Materials Hardware & Maintenance Practices • Commercial Maintenance Management • Project Management • Group Project

Semester 2: Technical Services • Planning • Spares & Logistics • Airline Operations • Quality Assurance • Professional Development • Group Project

What are my... Career Opportunities?

Graduates will find employment in a range of areas including airline operations - maintenance planning - scheduling - quality assurance and control - fleet management - technical administration - purchasing - spares trading and provisioning - maintenance repair and overhaul operations.

*For more career development options please see inside front cover

What other options do I have after completion?

There is an opportunity to progress to DT028 – Transport Operations and Technology (Level 8 Honours Degree) after successful graduation, subject to conditions. Students who have reached the appropriate standard may also have access to other programmes in DIT and elsewhere at third level.



You might also be INTERESTED IN:

- ♦ Mechanical Engineering - DT022 **Pg 148**
- ♦ Mechanical Engineering - DT006 **Pg 188**
- ♦ Automotive Management & Technology - DT007 **Pg 170**
- ♦ Transport Operations & Technology - DT028 **Pg 164**
- ♦ Engineering (General Entry) - DT097 **Pg 184**

INNEALTÓIREACHT SHEIRBHÍŚÍ FOIRGNÍOCHTA (HVACR)

BUILDING SERVICES ENGINEERING (HVACR)

BEngTech Leibhéal 7 / Level 7

LEAVING CERT ENTRY REQUIREMENTS:

| Minimum N° of | | Minimum Grade in | |
|---------------|---------|------------------|------------------|
| Subjects | Honours | Maths | English or Irish |
| 5 | | 06/H7 | 06/H7 |

QQI LEVEL 5 ENTRY REQUIREMENTS:

A QQI Level 5 entry route to this programme is available. Please visit www.dit.ie/studyatdit/undergraduate/howtoapply

What is... Building Services Engineering (HVACR)?

Building Services Engineers are responsible for designing the engineering systems in buildings. These systems consume almost half of all the energy we use today. Building Services Engineers together with architects design energy efficient and environmentally-friendly buildings.

All the mechanical and electrical systems inside a building which make it safe, make it work and make it a great place to be, come under the title of 'Building Services Engineering'.

How do we design buildings that consume much less or even no energy at all? This is the challenge that you'll face as a modern Building Services Engineer.

What our Students say!

- The ordinary degree in Building Services Engineering is a very practical course, with great project work. It gave me the opportunity to move up onto the honours degree, something which wasn't possible when I was first looking for a place at college.
- I wasn't completely sure that building services was what I wanted to do at first but I find the BEng Tech course very interesting. We're in the middle of our second semester project at the moment, which should be good preparation for the larger third year design project.

Learning Outcomes:

What will I Study?

There is a strong emphasis throughout the course on low energy design and the application of what you learn through practical and project work. When you've completed the course you will have a detailed knowledge of the design of energy efficient engineering systems in modern buildings.

In the first year you'll complete a "design, make and test" project. An example of this could be to design, make and test a solar collector. You will learn about how energy is used in buildings, how to design heating and ventilation systems and undertake mini project work. You will also study physics and maths.

In the second year you'll learn more about the design of mechanical and electrical engineering systems and buildings using computer aided design. You will learn about assessing the energy performance and energy rating of buildings. Projects are an important part of the second year allowing you to apply what you have learnt during the lectures to an actual building. You will complete two design projects in the second year working in a group with other students.

The third year of the course includes the major design project and dissertation. The main design project builds on the project in the second year. You will design all the engineering systems for a large commercial building including design drawings and calculations. The dissertation is a detailed study into one area of your project that you find interesting. This might be about solar energy or a new method of air conditioning.

Are there study abroad options?



The School has links with a number of Erasmus partner institutions, currently in France, Germany and Finland. These allow students the opportunity to undertake an Erasmus exchange abroad. To discuss study options that are available, contact the Erasmus Coordinator of the School of Civil Engineering.

Further Information

www.dit.ie/mechanicalanddesignengineering

School of Mechanical and Design Engineering

- 01 402 3833 (Mr Chris Montague, Course Head)
- 01 402 3826 (School Administration)

-  chris.montague@dit.ie
-  cbse@dit.ie

Module Listing

Year One

Energy & Buildings • Design Make & Test Project • Thermal Performance of Buildings • Natural & Mechanical Ventilation of Buildings • Engineering Mathematics • Engineering Physics • Engineering Design & Communication • Computing & Engineering Graphics • Thermal Insulation, Cladding & Fabrication Technology

Year Two

Management Studies • Computer Aided Design & Energy Performance • Electrotechnology, Electronics & Measurement • Engineering Mathematics • Heating Systems • Engineering Water Services • Engineering Team Project • Heating System Design • Fluids & Thermodynamics • Ventilation & Air-conditioning • Construction Technology • Team Project • Ventilation System Design

Year Three

Electrical Distribution & Control Systems • Dissertation & Design Project • Air Conditioning Systems • Engineering Renewable & Low Energy Technologies • Building Load Assessment & Computer Modelling • Fuels, Combustion & Gas Services • Acoustics & Vibration Engineering • Engineering Mathematics • Engineering Management

What are my... Career Opportunities?

Graduates work with Ireland's top engineering design and high technology companies such as ARUP, Project Management Group, Intel, Hewlett Packard, Pfizer, Dublin Airport Authority, Boston Scientific and RTE.

There is a need for Building Services Engineers who are experts in improving the energy performance of buildings and opportunities exist in the expanding fields of energy management and renewable energy from solar and geothermal energy sources. Many past graduates are successfully working abroad in the UK, America and Australia.

**For more career development options please see inside front cover*

What other options do I have after completion?

Students who reach the appropriate level in the final year have the opportunity to join the third year of the Building Services Engineering Level 8 degree programme within DIT and elsewhere in Higher Education.

Many of the Departments best students graduating from the Level 8 degree have started their studies on the BEngTech in Building Services Engineering.



You might also be INTERESTED IN:

- ♦ Building Services Engineering (HVACR) - DT026 **Pg 132**
- ♦ Civil Engineering - DT027 **Pg 134**
- ♦ Civil Engineering - DT004 **Pg 176**
- ♦ Engineering (General Entry) - DT097 **Pg 184**

INNEALTÓIREACHT SHIBHIALTA

CIVIL ENGINEERING

BEngTech Leibhéal 7 / Level 7

LEAVING CERT ENTRY REQUIREMENTS:

| Minimum N° of | | Minimum Grade in | |
|---------------|---------|------------------|------------------|
| Subjects | Honours | Maths | English or Irish |
| 5 | | 06/H7 | 06/H7 |

QQI LEVEL 5 ENTRY REQUIREMENTS:

A QQI Level 5 entry route to this programme is available. Please visit www.dit.ie/studyatdit/undergraduate/howtoapply

What is... Civil Engineering?

Civil Engineering Technologists design and construct roads, bridges, railways, dams, water supply systems and sanitary services.

Recognition by Professional Bodies

Those who successfully complete this programme meet the Technician Engineer academic requirements of Engineers Ireland and may qualify for the Associateship grade of membership after they have completed a suitable period of practical training.

Learning Outcomes:

What will I Study?

This programme presents applicants with an opportunity to develop their mathematical and analytical skills to solve many of the problems encountered in the broader civil engineering industry. Civil Engineering is an ideal choice for aspiring graduates looking for a high-tech career that offers opportunities to work both indoors and outdoors.

This programme equips graduates with the necessary skills to work as civil engineering technologists, carrying out much of the detailed analytical and design specifications on a building project. An interest in problem solving, computation and mathematics is important. Each year of the programme is delivered over two semesters with examinations at the end of each semester.

At the end of Year 2 students are offered a choice of entering options in Civil/Environmental or Structural Engineering in Year 3.




Further Information

www.dit.ie/civilengineering

School of Civil and Structural Engineering

- 01 402 3638 (Una Beagon, Assistant Head of School)
- 01 402 3635 (School Administrator)

 una.beagon@dit.ie

Module Listing

Year One

Mathematics & Computation • Structural Mechanics • Engineering Science • CAD/Graphics • Building Technology & Geology • Engineering Communications & Practice • Introduction to Civil Engineering

Year Two

Mathematics & Computation • Surveying • Engineering Communications • Management & Practice • CAD/Graphics • Civil Engineering Procedures & Practice • Structural Analysis & Design • Environmental Engineering

Year Three

Core Mathematics & Computation • Engineering Economics & Management • Soil Mechanics • Main Project
Structural Option: Structural Analysis • Structural Design Steel/Concrete
Civil/Environmental Option: Highway & Transportation • Water/Environmental Engineering

What are my... Career Opportunities?

Civil Engineering graduates can expect excellent employment prospects with recognised career path opportunities in consulting engineering design offices, contracting, materials supply and as building site managers. Some graduates can expect to be in private practice or working on behalf of national and local authorities. Graduates can expect a varied and challenging career with good salaries, secure employment and good promotion opportunities.

Some graduates will expect to continue their studies onto Level 8 programmes either within DIT or elsewhere.

Students who successfully complete year two of this programme and who do not wish to progress to third year will receive a Higher Certificate award.

**For more career development options please see inside front cover*

What other options do I have after completion?

Students who have reached the appropriate level in final examinations and meet certain subject prerequisites may have the opportunity to access Honours Degree programmes at the Year 3 level in DIT and elsewhere in Higher Education.



You might also be INTERESTED IN:

- Civil Engineering - DT027 **Pg 134**
- Building Services Engineering (HVACR) - DT026 **Pg 132**
- Building Services Engineering (HVACR) - DT005 **Pg 174**
- Structural Engineering - DT024 **Pg 162**
- Engineering (General Entry) - DT097 **Pg 184**

INNEALTÓIREACHT LEICTREACH & RIALÚCHÁIN

ELECTRICAL & CONTROL ENGINEERING

BEngTech Leibhéal 7 / Level 7

LEAVING CERT ENTRY REQUIREMENTS:

| Minimum N° of | | Minimum Grade in | |
|---------------|---------|------------------|------------------|
| Subjects | Honours | Maths | English or Irish |
| 5 | | 04/H7 | 06/H7 |

QQI LEVEL 5 ENTRY REQUIREMENTS:

A QQI Level 5 entry route to this programme is available. Please visit www.dit.ie/studyatdit/undergraduate/howtoapply

What is... Electrical & Control Engineering?

Electrical and Control Engineering involves a variety of engineering roles from the day to day running of ECG machines and ventilators in hospitals to engineering technologist positions in manufacturing plants and in the electrical power industry to name but a few. Graduates can be responsible for the electricity supply and electronic systems in unusual and exciting work environments such as cruise liners and aircraft. They also develop and install high-security alarm systems, advanced lighting, and automated production equipment.

Electrical and Control Engineering involves analysing complex electrical and electronic circuits and power systems. In addition, computing skills, ranging from ECDL to advanced level programming in control and automation systems are required in order for students to enter careers in the many areas of electrical power, automation, robotics, pharmaceutical and manufacturing industries.

Learning Outcomes:

What will I Study?

In the first year the student is introduced to a broad range of foundation courses that underpin modern Electrical Engineering.

At the start of the second year the student is offered the choice of one of two streams in either Control and Automation Systems or Electrical Energy Systems.

In addition there are a number of option courses available to allow the student broaden his/her knowledge base.

Electrical Energy Systems: techniques used and the equipment required for the efficient generation, transmission and use of electricity.

Control and Automation Systems: design and programme robotic production lines and other automated systems.

An important feature of the programme is that of building the students communication, professional development and management skills.

In the final year all students complete their studies by engaging in a substantial engineering project in their chosen specialist field.

OPEN 2017
DAY DIT AUNGIER ST.
9AM-2PM 01.12-02.12

Further Information

www.dit.ie/electricalelectronicengineering

School of Electrical & Electronic Engineering



01 402 4938 (Mr. Colm Murray)



01 402 4874 (Mr Michael Farrell)



colm.murray@dit.ie



michael.farrell@dit.ie

COURSE CODE:

DT009

COURSE LENGTH:

3 YEARS

APPROX:

32 PLACES

LOCATION:

KEVIN ST

POINTS 2017

251

Module Listing

Year One

Mathematics • Engineering Science • Electrical Principles • Professional Development • AutoCAD • Electrical Services • Electronic Systems • Electrical Practice

Year Two

Mathematics • Electrical Systems • Control and Automation Systems • Electrical Energy Systems • Engineering Computing • Electronic Systems • Instrumentation & Measurement • Engineering Design & Practice • Industrial Computing

Year Three

Sustainable Energy Systems • Project Management • Engineering Project • Control Systems & Automation • Electrical Energy Systems

Options: three subjects from a group including: Electrical Services, Systems Engineering, Mathematics, Signals & Systems, Robotics, Industrial Electronics, and Business Entrepreneurship

Are there study abroad options?

Students have the opportunity of completing their final year project abroad in a European University under the Erasmus Exchange programme.

What are my... Career Opportunities?

Because of the broad nature of the programme, Electrical and Control Engineering graduates from DIT have found employment in a variety of engineering roles in the following industries: Electrical Power Systems, Renewable Energy, Automation, Robotics, Pharmaceutical Industries, Process and Manufacturing Industries, Medical Devices and many more.

**For more career development options please see inside front cover*

What other options do I have after completion?

Students who have reached the appropriate level in their award have the opportunity to gain advanced entry to the 3rd year of DIT honours degree programmes, and programmes at other Higher Education Institutions.

Students who successfully complete Year 2 of this programme and who do not wish to progress to the third year will receive a Higher Certificate award.



You might also be INTERESTED IN:

- ♦ Automation Engineering - DT003 **Pg 168**
- ♦ Electronics & Communications Engineering - DT008 **Pg 182**
- ♦ Electrical Services Engineering - DT010 **Pg 180**

- ♦ Engineering System Maintenance - DT002 **Pg 186**
- ♦ Engineering (General Entry) - DT097 **Pg 184**

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INNEALTÓIREACHT SHEIRBHÍŚÍ LEICTREACHA

ELECTRICAL SERVICES ENGINEERING

BEngTech Leibhéal 7 / Level 7

LEAVING CERT ENTRY REQUIREMENTS:

| Minimum N° of | | Minimum Grade in | |
|---------------|---------|------------------|------------------|
| Subjects | Honours | Maths | English or Irish |
| 5 | | 06/H7 | 06/H7 |

QQI LEVEL 5 ENTRY REQUIREMENTS:

A QQI Level 5 entry route to this programme is available. Please visit www.dit.ie/studyatdit/undergraduate/howtoapply

What is... Electrical Services Engineering?

The field of Electrical Services Engineering and Sustainable Design incorporates engineering disciplines employed both in modern buildings as well as the broader concerns associated with the green economy. These environments require graduates with a high degree of knowledge capability and diversity in an ever expanding engineering context with an ability to apply such skills in the retrofit and upgrade of facilities.

Learning Outcomes:

What will I Study?

The disciplines covered by the programme include environmental control and communication, power distribution, standby generation, lighting, emergency services (lighting and fire), access control, data services, automation, building management systems and many more. As well as expertise in these areas, graduates from this programme will have expertise in the application of low carbon technologies including green generation technologies.

Students will have a keen interest in how things work and in problem solving. There is plenty of scope for exercising innovation, creativity and flair when using new technologies to solve everyday problems.

Green building technology, efficient use of energy and sustainability are all areas that are addressed. The programme also includes modules covering project management, refrigeration, heating, ventilation & air-conditioning as well as renewable plant technologies.



Further Information

www.dit.ie/electricalelectronicengineering

School of Electrical & Electronic Engineering



01 402 4882 (Mr Keith Sunderland, Programme Chair)



01 402 4617 (Ms Frances Malone, Administration)



keith.sunderland@dit.ie



frances.malone@dit.ie

Module Listing

Year One

Engineering Mathematics • Energy and the Environment
 • Electrical Principles • Electrical Services Design •
 Safety Engineering • Engineering Science • Professional
 Development • Computer Applications & Professional
 development • Computer Aided Drawing (AutoCAD) •
 Electrical Standards

Year Two

Engineering Mathematics • Renewable Energy Plant
 • Electrical Services Plant • Life Protection Systems •
 Building Information Modelling • Electrical Services Design
 • Professional Development • Building Services • Project
 Management • Services Design Project

Year Three

Engineering Mathematics • Sustainable Building Engineering
 • Renewable Energy Plant • Electrical Services Plant •
 Industrial / Building Automation • Electrical Services Design
 • Building Services • Project Management • Services Design
 Project

What are my... Career Opportunities?

Electrical Services Engineers enjoy a very varied, interesting work environment.

There are many areas in which graduates can develop an interest and subsequently specialise. These include working in an electrical design office for a consulting engineer as engineering systems support in the manufacturing sector, technical sales support, project management, energy and environmental control or in the provision of industrial services. The work invariably involves both office based and site/location activity.

*For more career development options please see inside front cover

What other options do I have after completion?

Students who graduate from DT010 may progress to the BSc Honours Degree in Electrical Services & Energy Management - DT035 (Full Time) or DT018 (Part Time).

And from there to the MSc in Energy Management - DT711 (Full Time) or DT015 (Part Time).

Graduates may also gain Advanced Level Entry to other higher degree programmes in DIT and elsewhere in Higher Education.



You might also be INTERESTED IN:

- Electrical & Control Engineering - DT009 **Pg 178**
- Electronics & Communication Engineering - DT008 **Pg 182**
- Automation Engineering - DT003 **Pg 168**
- Engineering System Maintenance - DT002 **Pg 186**
- Engineering (General Entry) - DT097 **Pg 184**

INNEALTÓIREACHT LEICTREONACH & CUMARSÁIDE ELECTRONICS & COMMUNICATIONS ENGINEERING

BEngTech Leibhéal 7 / Level 7

LEAVING CERT ENTRY REQUIREMENTS:

| Minimum N° of | | Minimum Grade in | |
|---------------|---------|------------------|------------------|
| Subjects | Honours | Maths | English or Irish |
| 5 | | 04/H7 | 06/H7 |

QQI LEVEL 5 ENTRY REQUIREMENTS:

A QQI Level 5 entry route to this programme is available.
Please visit www.dit.ie/studyatdit/undergraduate/howtoapply

What is... Electronics & Communications Engineering?

Communications technology is one of the most sophisticated and rapidly changing application areas of electronics. It now pervades the daily lives of every person, through mass communication networks, as well as person-to-person communications based on fixed and wireless networks. A good example is the Internet which has undergone explosive growth in the last few years. Communications also now involves a wide range of information, not just data, but also voice, multi-media and video.

Learning Outcomes:

What will I Study?

The programme prepares students for challenging careers in Electronic and Communications Engineering in areas such as design support, development and production. The programme has a particular focus on Communications Engineering, particularly in the latter years.

Graduates of the programme who achieve a high average mark in the final examinations are eligible for transfer into the honours degree programme in Electrical & Electronic/Computer & Communications Engineering (DT021A).

What our Students say!

- I always had an interest in "how things work" which is why I choose this programme. There is a nice mix of applied work and lectures and the laboratory work is all relevant to real life examples such as "How a computer stores data on a USB key". My final year project is developing a digital CAD package with another student.
- Engineering covers such a wide area that I have a lot of choices available to me this year when I finish. Some of my choices would be to pursue further study and study for my honours degree and specialise in another area or work in industry for a while.
- I started this programme not knowing anyone in DIT, but that only lasted a short time as I have made some really great friends. In my three years in DIT I have become involved in societies, volunteering events and sports clubs. College life is nothing like secondary school, I love it!

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DAY **DIT AUNGIER ST.**
9^{AM}-2^{PM} 01.12-02.12

Further Information

www.dit.ie/electricalelectronicengineering

School of Electrical & Electronic Engineering



01 402 4576 (Dr Andreas Schwarzbacher)



01 402 4575/4665 (School Administrator)



andreas.schwarzbacher@dit.ie



info@electronics.dit.ie

Module Listing

Year One

Engineering Science • Mathematics • Digital Age Technology
• Communication Systems • Electric Circuits & Devices •
Electronic Systems & Practice • Communication Skills •
Software Systems • Computer Systems

Year Two

Mathematics • Electronics • Software Design • Digital
Communications Engineering • Digital Electronics & VLSI •
Signals & Systems • Microcomputer Systems

Year Three

Mathematics • Electronics • Software Design •
Communications Systems • DSP Applications, Business

Students also undertake an engineering project in the third year, which gives them a valuable insight into the solution of real-world engineering problems.

Students are required to choose one optional module in third year. The typical modules available are Microelectronic Materials and Devices, Wireless Systems, Digital System Integration, Microprocessors and Embedded Systems.

All of the technical subjects in the three years of the programme include a range of applied laboratory activities designed to enhance the knowledge and skills of the students.

What are my... Career Opportunities?

Graduates of this programme can pursue a highly satisfying, well-paid career path in areas of employment such as working as an engineer for example, as part of a design team or developing sophisticated test systems. After gaining some experience there are also management opportunities. This programme will find employment for our graduates in a wide range of industries such as electronics, communications, pharmaceuticals, and other related areas.

*For more career development options please see inside front cover

What other options do I have after completion?

The DIT 'Ladder System' allows students who reach the appropriate level in final examinations progress to honours degree programmes.

Students who successfully complete year two of this programme and who do not wish to progress to the third year will be eligible for a Higher Certificate award.



You might also be INTERESTED IN:

- Electrical Services Engineering - DT010 **Pg 180**
- Automation Engineering - DT003 **Pg 168**
- Electrical & Control Engineering - DT009 **Pg 178**
- Engineering System Maintenance - DT002 **Pg 186**
- Engineering (General Entry) - DT097 **Pg 184**

INNEALTÓIREACHT (IONTRÁIL GHINEARÁLTA)

ENGINEERING (GENERAL ENTRY)

BEngTech Leibhéal 7 / Level 7

LEAVING CERT ENTRY REQUIREMENTS:

| Minimum N° of | | Minimum Grade in | |
|---------------|---------|------------------|------------------|
| Subjects | Honours | Maths | English or Irish |
| 5 | | 04/H7 | 06/H7 |

QQI LEVEL 5 ENTRY REQUIREMENTS:

A QQI Level 5 entry route to this programme is available. Please visit www.dit.ie/studyatdit/undergraduate/howtoapply

What is... Engineering?

This 1-year programme provides a general access route to engineering programmes for those who have not decided which engineering discipline they would like to study.

On successful completion of the programme, students will have the mathematical and scientific basis to successfully enter the second year of eight different Level 7 discipline-specific programmes. In addition, in a limited number of cases, some students with proven ability may be permitted to progress to the first year of the Level 8 Bachelor of Engineering honours degree programme at DIT.

This course will suit students who have an interest in technology and in solving problems in the engineering world.

Students are assessed by a combination of examinations at the end of each semester and continuous assessment projects.

Learning Outcomes:

What will I Study?

You will study a combination of maths, science, engineering design, drawing and you will also be given a general introduction to the engineering profession. There is a strong emphasis on group projects within the programme.



Further Information

www.dit.ie/multidisciplinarytechnologies

School of Multidisciplinary Technology



01 402 4059 (Eddie Conlon, Assistant Head of Department)



edward.conlon@dit.ie

COURSE CODE:

DT097

COURSE LENGTH:

1 YEAR

APPROX:

64 PLACES

LOCATION:

BOLTON ST

POINTS 2017

370

Module Listing

Year One

Semester 1: Engineering Maths • Engineering Technology
• Mechanics & Engineering Material • Design Projects •
Introduction to the Engineering Profession • CAD

Semester 2: Engineering Maths • Engineering Physics •
Mechanics & Engineering Materials • Design Projects •
Elective Modules

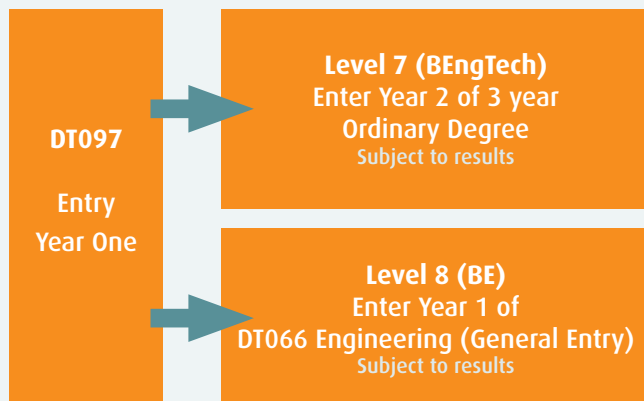
What other options do I have after completion?

After successfully completing first year, students are eligible for transfer into year 2 of one of our Level 7 (BEngTech) programmes. Those who achieve a high average mark in their examinations and a high mark in mathematics are also eligible for entry into year 1 of DT066 - Engineering (General Entry) Level 8

Level 7 - Bachelor of Engineering Technology (BEngTech) in the chosen Level 7 Degree.

or

Level 8 - Bachelor of Engineering (BE) Honours Degree DT066 - Engineering (General Entry) Level 8 in DIT.



Students who pass DT097 have a choice of entering 2nd year of the following Level 7 Bachelor of Engineering Technology (BEngTech) Degrees in DIT:

- DT002 - Engineering Systems Maintenance
- DT003 - Automation Engineering
- DT004 - Civil Engineering
- DT005 - Building Services Engineering (HVACR)
- DT006 - Mechanical Engineering
- DT008 - Electronic and Communications Engineering
- DT009 - Electrical and Control Engineering
- DT010 - Electrical Services Engineering

Students who pass DT097 with a high average mark and a high mark in mathematics may enter year 1 of DT066 – Engineering (General Entry) Level 8 and may then progress to year 2 of;

- DT021A - Electrical & Electronic/Computer & Communications Engineering
- DT022 - Mechanical Engineering
- DT023 - Manufacturing & Design Engineering
- DT024 - Structural Engineering
- DT026 - Building Services Engineering (HVACR)
- DT027 - Civil Engineering

You might also be INTERESTED IN:

- ♦ Engineering (General Entry) - DT066 [Pg 142](#)

COTHABHÁIL CÓRAIS INNEALTÓIREACHTA ENGINEERING SYSTEMS MAINTENANCE

BEngTech Leibhéal 7 / Level 7

LEAVING CERT ENTRY REQUIREMENTS:

| Minimum N° of | | Minimum Grade in | |
|---------------|---------|------------------|------------------|
| Subjects | Honours | Maths | English or Irish |
| 5 | | 06/H7 | 06/H7 |

QQI LEVEL 5 ENTRY REQUIREMENTS:

A QQI Level 5 entry route to this programme is available. Please visit www.dit.ie/studyatdit/undergraduate/howtoapply

What is... Engineering Systems Maintenance?

Engineering Systems Maintenance is an engineering activity which allows graduates to work in a mechanical /manufacturing/electrical engineering maintenance environment in high-tech multi-national companies as well as traditional indigenous industries and public utilities. These activities are a key component of an industry's competitiveness as well as ensuring efficiency, safety and reliability of production and service delivery of utilities. Graduates of the course will have acquired the requisite knowledge and skills to operate effectively in an environment where diagnostic and applied engineering skills will be valued and rewarded.

Learning Outcomes:

What will I Study?

The Engineering System Maintenance programme was specifically designed to meet the increasing demands on maintenance technologists. The function of maintenance engineering personnel has changed in the past two decades. This has led to a demand in modern industry for an integrated multi-skilled, flexible maintenance technologist, with expertise in the complementary disciplines of electrical, mechanical, fluid power and computer applications.



Further Information

www.dit.ie/mechanicalanddesignengineering

School of Mechanical & Design Engineering

- 01 402 3659 (Miriam Daly)
- 01 402 3761 (John Brennan, Programme Chair)
- john.brennan@dit.ie

Module Listing

Year One

Semester 1: Maths • Computer Software Applications • Communications • Power Conditioning • Maintenance Principles of Power Transmission • Electro-Technology

Semester 2: Maths • Electro-Technology • Applied Engineering Science • Applied Engineering Materials • Maintenance Principles of Power Transmission • Programmable Logic Controllers

Year Two

Semester 1: Maths • Facilities Operation Maintenance & Efficiency • Maintenance & Asset Management • Instrumentation • Maintenance Diagnostic Systems • Applied Engineering Science

Semester 2: Maths • Facilities Operation Maintenance & Efficiency • Computer Aided Design • Electrical Service Plant • Programmable Logic Controllers • Maintenance & Asset Management

Year Three

Semester 1: Maths • Reliability • Availability • Maintainability & Supportability • Electrical Facilities Maintenance • Mechatronics • Facilities Operation Maintenance & Efficiency • Project

Semester 2: Advance Maintenance Techniques • Business Management • Metrology & Quality • Computurised Plant Maintenance • Project

What are my... Career Opportunities?

Manufacturing industry in Ireland has expanded significantly over the past number of years, especially in the pharmaceutical and chemical industry. Promotion to higher positions within an organization is dependent on your ability, application and dedication. The option of self-employment is also a feasible and attractive one.

*For more career development options please see inside front cover

What other options do I have after completion?

Students who have reached the appropriate level in final examinations and meet certain subject prerequisites may have the opportunity to access honours degree programmes at the Year 3 level in DIT and elsewhere in Higher Education.

Those who qualify with a Bachelor of Engineering Technology Degree meet the Technician Engineer level requirement of Engineers Ireland and can qualify for the Associateship grade of membership after they have completed a suitable period of practical training.

Students who successfully complete Year 2 of the programme and who do not wish to progress to the third year will receive a Higher Certificate award.



You might also be INTERESTED IN:

- Mechanical Engineering - DT006 **Pg 188**
- Automation Engineering - DT003 **Pg 168**
- Electrical & Control Engineering - DT009 **Pg 178**

- Building Services Engineering (HVACR) - DT005 **Pg 174**
- Electronics & Communications Engineering - DT008 **Pg 182**
- Engineering (General Entry) - DT097 **Pg 184**

INNEALTÓIREACHT MHEICNIÚIL

MECHANICAL ENGINEERING

BEngTech Leibhéal 7 / Level 7

LEAVING CERT ENTRY REQUIREMENTS:

| Minimum N° of | | Minimum Grade in | |
|---------------|---------|------------------|------------------|
| Subjects | Honours | Maths | English or Irish |
| 5 | | 06/H7 | 06/H7 |

QQI LEVEL 5 ENTRY REQUIREMENTS:

A QQI Level 5 entry route to this programme is available. Please visit www.dit.ie/studyatdit/undergraduate/howtoapply

What is... Mechanical Engineering?

Mechanical engineering education and training involves learning how to creatively apply a strong scientific, mathematical and practical basis to the design of safe, reliable, environmentally sound and cost effective systems and equipment. Teamwork, communication skills and knowledge of how to apply and use modern computer simulations and control systems are important skills to all Mechanical Engineers. Mechanical Engineers perform the basic research needed to advance knowledge in the engineering sciences and Mechanical Engineering focuses on the skills needed to be an effective problem solver.

What our students say!

- I chose to study the Bachelor of Engineering Technology Degree in Mechanical Engineering as I have always had an interest in Engineering and Maths. With this qualification I can enter work in the engineering sector as a technologist or technician involved primarily in the design, manufacture, installation and maintenance of mechanical systems. Afterwards, I can pursue an Honours Degree in Mechanical Engineering through the ladder system in DIT to further my qualifications and I feel confident for the future.

Learning Outcomes:

What will I Study?

Students are exposed to a wide range of laboratory and practical mechanical engineering tasks that complement the theoretical modules. The Mechanical Engineering Programme maintains its traditional flexibility, allowing its graduates a wide choice of opportunity in all industries. It stresses the fundamentals while embracing the changes in advanced technology. It also provides the core transferable skills which prepare graduates for career changes when desirable.

During Year 1 of the programme, students undertake a wide range of practical skills including welding, metal fabrication, machining, technical drawing, computing and experimental work. These practical lifelong learning skills are developed further in year 3 of the programme when students undertake an individual project, combining research, design, mechanical development, testing, analysis, presentation and report writing skills.

The Mechanical Engineering Department places great emphasis on independent learning and learners develop their skills in this area through project work, independent assignments and team work activities. Students are encouraged to visit Industries as part of their studies and report on their findings to their peers and lecturers.




This three-year full-time programme prepares learners for the Bachelor of Engineering Technology (Mechanical Engineering) degree award. At the start of the third year, learners are offered a choice; Process Plant Technology or Manufacturing Technology.

Those who have successfully completed the programme satisfy the academic requirements for Associate Membership grade of Engineers Ireland.

Further Information

www.dit.ie/mechanicalanddesignengineering

School of Mechanical & Design Engineering

-  01 402 3605 (Head of Department)
-  01 402 3932 (Ms. Susan Doyle)
-  susan.doyle@dit.ie

COURSE CODE:

DT006

COURSE LENGTH:

3 YEARS

APPROX:

75 PLACES

LOCATION:

BOLTON ST

POINTS 2017

321

Module Listing

Year One

Mathematics • Energy & Technology • Instrumentation • Mechanics & Materials • Workshop Processes • Professional Development • Engineering Drawing • Computer Systems & Applications

Year Two

Mathematics • Applied Energy Systems • Applied Mechanics • Design CAD & Materials • Electrical Technology & Electronics • Control Systems & Instrumentation • Engineering Management Studies • Manufacturing Technology • Engineering Computing

Year Three

Mathematics • Mechanics & Materials • Electrical Technology & Electronics • Control Systems & Instrumentation • Engineering Management Studies • CAD 3D • Main Project (Design, Make and Test with Thesis)

Optional Modules: Select 3: Process Systems Analysis or Manufacturing Methods • Energy System Designs or Product Design • Unit Operations or Manufacturing Management

Are there study abroad options?

As part of the programme, students can avail of the ERASMUS scheme whereby they can study abroad for a semester or full year and gain credits that are relevant to their qualification.

What are my... Career Opportunities?

Mechanical Engineering technologists are involved in the design, prototyping, manufacture and installation of all types of plant and equipment ranging from small individual components to complete factories or process plants. Graduates have excellent prospects of employment with manufacturing, research, consulting and processing organisations along with state and semi-state agencies.

Mechanical Engineers design products and systems essential to everyday modern life from home appliances, motor vehicles, to satellites, wheelchairs, airplanes, robots, energy equipment, fuel cells, industrial equipment and environmental control systems.

*For more career development options please see inside front cover

What other options do I have after completion?

Many students combine the broad technical knowledge gained in their undergraduate studies with further study in Mechanical Engineering. Students can advance to the Third year of the Honours Degree in Mechanical Engineering (DT022) on completion of DT006.



You might also be INTERESTED IN:

- Mechanical Engineering - DT022 **Pg 148**
- Automotive Management & Technology - DT007 **Pg 170**
- Aviation Technology - DT011 **Pg 172**
- Engineering System Maintenance - DT002 **Pg 186**
- Automation Engineering - DT003 **Pg 168**
- Engineering (General Entry) - DT097 **Pg 184**

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TEICNEOLAÍOCHTAÍ LÍONRAITHE NETWORKING TECHNOLOGIES

BTech Leibhéal 7 / Level 7

LEAVING CERT ENTRY REQUIREMENTS:

| Minimum N° of | | Minimum Grade in | |
|---------------|---------|------------------|------------------|
| Subjects | Honours | Maths | English or Irish |
| 5 | | 04/H7 | 06/H7 |

QQI LEVEL 5 ENTRY REQUIREMENTS:

A QQI Level 5 entry route to this programme is available. Please visit www.dit.ie/studyatdit/undergraduate/howtoapply

What is... Networking Technologies?

Networking Technology is about designing and building computer networks. It involves the physical installation and commissioning of networks and connection to the Internet. Networking Technologists are able to maintain networks, including redesigning and upgrading them. This particular programme incorporates modules on CISCO network systems. CISCO is the leading networking company and you will have the opportunity to acquire the valuable industry standard qualification, 'CISCO Certified Network Administrator', CCNA, during your course of studies.

What our students say!

- 3rd year Student : I am currently studying my final year in DT080 - BTech in Networking Technologies. After three years, I feel I am now equipped with valuable skills which I have learned in my labs and lectures and through my project work. The CISCO qualification is an additional industry recognised qualification with this programme and as this sector is thriving at the moment, I look forward to starting my future career in this area.

Learning Outcomes:

What will I study?

You will be provided with a grounding in computer networking technologies, electronics and communications and web development, together with a knowledge of business operations, management and finance. Expertise and practical experience is gained to enable you to diagnose, repair and maintain computer and network hardware and system software. For example, you will be able to evaluate and upgrade computer systems. You will also be able to support all peripheral equipment which connects to computer networks, so that you will be able to support the services that this equipment provides to users. You will also gain experience in controlling external devices using computers, e.g. surveillance systems, robots, industrial automation systems, etc.

Software is also an integral part of all networks so you will be able to install and maintain a wide range of network and system software, including operating systems, such as Windows, UNIX and Linux. You gain valuable skills in network security, web design and web services.

An industry standard education coupled with four to seven month work/business placement will complement your academic learning and ensure that on graduation you can immediately apply your skills.

This programme has an emphasis on continuous assessment. A great deal of your time will be spent working on assignments and projects. You will learn by doing and working on hands-on applications rather than from theory. You acquire the skills needed in these areas by using them in real life situations as part of your assignments and projects. Some modules still retain an end of semester exam.

The programme is structured to permit exit after successful completion of Year 2 with a Higher Certificate.

Further Information

www.dit.ie/electricalelectronicengineering

School of Electrical & Electronic Engineering



01 402 4799 (Mr Dermot Clarke)



01 402 4575 (School Administrator)



dermot.clarke@dit.ie

Module Listing

Year One

Applied Data Networking • Computer Hardware & Security • Digital Age Technology • Electronics • Information Literacy Project • Network Fundamentals (CCNA-1) • Physical Computing • Routing & Switching Essentials (CCNA-2) • Web Development

Year Two

Business Management • Fund. Wireless Tech. (CCNA-W) • Scaling Networks (CCNA-3) • Microcontrollers & Electronics • Operating Systems • Problem Solving with C • Server-side Web Development • Connecting Networks (CCNA-4)

Year Three

Financial Management • Fund. of Network Security (CCNA-S) • Network Management • Networked Embedded Systems • Programming for Networked Systems • Team Assignment Project • Project Management • Work Placement

Are there study abroad options?

The work placement is an integral part of the programme, in which you will learn to apply within the workplace the knowledge and skills already gained in the programme. Your work placement period could be undertaken abroad, or you could participate in the Erasmus Programme.

What are my... Career Opportunities?

Computer networks are everywhere. As a student you will acquire the technical skills and knowledge necessary for a career in IT and computer networking. These skills cover the design, planning, installation, configuration, administration, maintenance and management of local and Internet connected networks. Virtually every organisation in every area of work (such as commercial, industrial, service, educational, everywhere!) has computer networks and needs the services of network technicians and engineers.

The industry recognised CCNA qualification ensures a high demand for graduates of this programme and they will be key players in communication network management teams in all industrial, commercial and service organisations.

*For more career development options please see inside front cover

What other options do I have after completion?

Graduates will be equipped to progress through the DIT ladder system to the Honours Degree programmes within the Institute or elsewhere in Higher Education.



You might also be INTERESTED IN:

- Electrical & Electronic/Computer & Communications Engineering - DT021A **Pg 140**
- Computer Science (Infrastructure) - DT211 **Pg 208**
- Electronics & Communications Engineering - DT008 **Pg 182**
- Computer Science (International) - DT282 **Pg 210**
- Computer Science - DT228 **Pg 206**

TEICNEOLAÍOCHT TÁIRGE ADHMAID

TIMBER PRODUCT TECHNOLOGY

BTech Leibhéal 7 / Level 7

LEAVING CERT ENTRY REQUIREMENTS:

| Minimum N° of | | Minimum Grade in | |
|---------------|---------|------------------|------------------|
| Subjects | Honours | Maths | English or Irish |
| 6 | | 04/H7 | 04/H7 |

QQI LEVEL 5 ENTRY REQUIREMENTS:

A QQI Level 5 entry route to this programme is available. Please visit www.dit.ie/studyatdit/undergraduate/howtoapply

What is... Timber Product Technology?

Timber Product Technology suits students who love timber and wish to develop that interest into a successful career. The programme provides knowledge and skills for those that wish to manufacture, specify or sell timber products whether based in a small workshop or large company.

A degree in Timber Product Technology can lead to a range of careers in the timber-related sectors of the furniture and construction industries. These include furniture manufacturer, joiner, operations or drawing office manager in a timber factory, timber specifier, timber consultant, and secondary school woodwork teacher.

Learning Outcomes:

What will I Study?

The first year begins the student's development of necessary skills and knowledge: no previous experience with timber is required. Students will gain craft skills by using hand tools and machines to make a variety of objects, and learn how to represent those in hand and computer drawings. They will also learn about different types of timber, timber products, the timber industry and workshop safety. They will also improve their maths, communication and writing skills.

In the second year students develop their craft skills further using a wider variety of tools, machines, jigs and CNC, culminating in the production of a high quality product at the year's end. Students learn about furniture and joinery design and finishing. They also develop their maths and CAD skills and learn to estimate costs and tender for work. Advanced Entry to Year 2 is now available for graduates of cognate QQI Level 6 programmes and apprenticeships.

In year three students develop their skills in furniture, kitchen and joinery manufacture further. Furniture restoration provides additional skills and insights. While learning more about the business and law of timber product manufacture, students also learn about quality control in factories and processes, readying them for a range of future careers.

What our Students say!

- I came to this course straight from leaving certificate unsure of what to expect. A few weeks in I realised working with wood was exactly what I enjoyed doing. You could compare the first year of this course to your 1st to 3rd year woodwork classes which you focused on furniture and your joints. If you like working with wood and want to produce some beautiful and unique pieces of furniture then I would highly recommend doing this course.
- Having spent 8 years in this industry I have found that the TPT course gives a great education in all the areas of Woodwork, Machinery, Cabinetmaking and Joinery. By combining all three trades, it gives the students a much more diverse qualification on which to enter industry. Today's industry requires graduates with multiple skills and this course produces such graduates.



OPEN 2017
DAY **DIT AUNGIER ST.**
9AM - 2PM 01.12-02.12

Further Information

www.dit.ie/architecture

School of Architecture

- 01 402 3690 (School Administrator)
- 01 402 3692 (Joseph Little, Programme Chair)

-  dsa@dit.ie
-  joseph.little@dit.ie

COURSE CODE:

DT169

COURSE LENGTH:

3 YEARS

APPROX:

32 PLACES

LOCATION:

BOLTON ST

POINTS 2017

262

Module Listing

Year One

Applied Geometry • Timber Toolbox • Reg. Environment (H&S) • Materials • Academic Reporting Skills • Joining Technique & Furniture • Joinery • CAD 1 • Communications

Year Two

Timber Industry Mathematics • Materials • Machining Techniques & Furniture • Principles of Furniture & Joinery Design • Joinery • CNC Router & CAD/CAM • Estimating, Tendering & Measurement • Wood Finishing • 3D CAD

Year Three

Business & Finance • Marketing • Management Principles Timber Industry • Law • Joinery • Applied Materials, Finishes & Reproduction • Furniture • Restoration Project • Manufacturing Management

Are there study abroad options?

Links with educational institutes and industry leaders abroad are currently being investigated.

What are my... Career Opportunities?

The range of practical skills taught in the three years, coupled with managerial skills, provide the graduate with numerous career opportunities spread across the closely related disciplines of joinery, cabinet making and wood machining. They range from shop floor or operations manager in a large timber production facility suited to managing and making within a small or medium-sized timber product workshop. The economic recovery and the increased demand for prefabricated building components and for well-priced high quality furniture and joinery products are leading to growth in this field.

*For more career development options please see inside front cover

What other options do I have after completion?

Students who have reached the appropriate level in their final examinations of this Level 7 programme may progress to related Level 8 programmes. These are in Furniture Design, Product Design, Production Management, a range of Business Degrees or Secondary School Woodwork Teacher: most of these are available in DIT

